

محتويات الملف

- 1 محضر استلام الموقع ص 2
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محضر استلام موقع

عملية: تنفيذ اعمال تدعيم التربة أسفل الخط الأول للقطار الكهربائي السريع (السخنة - القاهرة - الإسكندرية - العلمين - مطروح) في المسافة من كم ٤٦٠ + ٣٤٠ الي كم ١٠٠ + ٣٤١ بطول ٦٤٠ م .

تنفيذ: - شركة السلام انترناشيونال للتجارة والمقاولات

إشراف: المنطقة الخامسة - منطقة غرب الدلتا

طبقا للعقد رقم (٩٧٨ / ٢٠٢٣ / ٢٠٢٤) بتاريخ (٢٠٢٤ / ١ / ١١)

أنه في يوم الأحد الموافق ١٤ / ١ / ٢٠٢٤ أجمع كل من:-

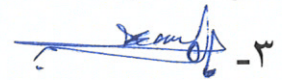
- | | |
|-----------------------------------|---|
| 1- السيد المهندس / محمد حسني فياض | مدير عام المشروعات - الهيئة العامة للطرق والكباري |
| 2- السيد المهندس / علاء أبو رحمه | مدير المشروع - الهيئة العامة للطرق والكباري |
| 3- السيد المهندس / محمد كمال حسين | مدير مشروع - شركة السلام انترناشيونال |

وذلك للمرور علي مسار العملية المذكورة عالية لاستلام الموقع :-

وقد تبين أن الموقع خاليا من العوائق الظاهرية ويسمح بالبدء في التنفيذ وبناء عليه يعتبر تاريخ ١٤ / ١ / ٢٠٢٤ هو تاريخ استلام الموقع وبدء أعمال الاشراف بالعملية

واقفل المحضر علي ذلك ووقع الحضور

التوقيعات:

٣- 

٢- 

١- 

رئيس الإدارة المركزية

منطقة غرب الدلتا

الإسكندرية - مرسى مطروح

عميد مهندس / 

"هاني محمد محمود طه"

مشروع اعمال تدعيم التربة في المسافة من المحطة ٤٦٠+٣٤٠ الي المحطة ١٠٠+٣٤١
القطار السريع منطقة الغربانيات

رقم البند و بيانه :	7	بالمقطوعة نقل ماكينه الخوازيق الى الموقع
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تنفيذ : شركة أسلام انترناشونال للتجارة و المقاولات

		عدد	٠,٠٠	مقدار العمل السابق :
الملاحظات	الإجمالي	عدد ماكينات الخوازيق		Bar Mark
	3	3		1
	3	الإجمالي (عدد)		
عدد	3	الكمية المنفذة خلال المدة		
عدد	3	اجمالي ما تم تنفيذه حتى تاريخه :		

الهيئة
م / علاء ابو رحمه
م انا دوا رحمه

الاستشاري العام
سيسترا

شركة السلام انترناشيونال
للمقاولات والتجارة



قائمة كميات بالمستخلص جاري (١)

مشروع اعمال تدعيم التربة في المسافة من المحطة ٣٤٠+٤٦٠ الي المحطة ٣٤١+١٠٠
القطار السريع منطقة الغربانيات

رقم البند و بيانه :	8	بالمتر الطولي تنفيذ خوازيق محفوره بالبر ومصبوبة بموقعها (bored piles) قطر ٦٠ سم وتصب بخرسانة مسلحة
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تنفيذ : شركة أسلام انترناشونال للتجارة والمقاولات

مقدار العمل السابق :		٠,٠٠٠	م.ط			
Bar Mark	متسوب التأسيس cut level	منسوب قاع الحفر	طول الخازوق	عدد الخوازيق	الإجمالي	الملاحظات
1	13.4	-12.3	25.7	378	9714.6	القطاع الأول ٤٠+٤٦٠ الي ٣٤٠+٧١٠
2	13.4	-14.5	27.9	289	8063.1	القطاع الثاني ٣٤٠+٧١٠ الي ٣٤٠+٩٦٠
		الإجمالي م.ط			17777.7	
		الكمية المنفذة خلال المدة		م.ط	17777.7	

اجمالي ما تم تنفيذه حتى تاريخه :	17777.70	م.ط
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الهيئة
م / علاء ابو رحمه
م.ط

الاستشاري العام
م.ط

شركة السلام انترناشيونال
م.ط
م.ط

مشروع اعمال تدعيم التربة في المسافة من المحطة ٤٦٠+٣٤٠ الي المحطة ١٠٠+٣٤١
القطار السريع منطقة الغربانيات

رقم البند و بيانه : 11	بالمتر المكعب توريد و صب خرسانة ويتم تصميم الخلطة الخرسانية مع الخلط و الدمك الميكانيكي على ألا تقل المقاومة المميزة للمكعب القياسي للخرسانة المسلحة بعد ٢٨ يوم من الصب بالطبيعة عن ٣٥٠ كجم/سم^٣ ومحتوى الأسمنت لا يقل عن ٤٥٠ كجم/م^٣ أسمنت بوزنلاندى نتيجة لوجود جيوب و خندق بالتربة
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تنفيذ : شركة السلام انترناشونال للتجارة و المقاولات

	٣م	٠,٠٠	مقدار العمل السابق :		
ملاحظات .	اجمالي الكمية	.	الكمية فعلي	الكمية هندسي	Bar Mark
	680		6100	5420	1
	680	إجمالي			

الكمية المنفذة خلال المدة	680	٣م
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٣م	680.00	اجمالي ما تم تنفيذة حتى تاريخه :
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الهيئة
م / علاء ابو رحمه
م. ا. ا. ا.

الاستشاري العام
سيسترا

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للمقاولات والتجارة

قائمة كميات بالمستخلص جاري (١)

مشروع اعمال تدعيم التربة في المسافة من المحطة ٣٤٠+٤٦٠ الى المحطة ٣٤١+١٠٠
القطار السريع منطقة الغربانيات

رقم البند و بيانه :	17	بالمتر المكعب خرسانة عادية للأساسات والبلاطات الأنتقالية والمقاومة المميزة
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تنفيذ : شركة أسلام انترناشونال للتجارة والمقاولات

ملاحظات	الإجمالي	سمك	مقدار العمل السابق :			Bar Mark
			عرض	طول	٠,٠٠	
	0.529	0.1	2.3	2.3	٣م	1
	0.529	اجمالي للقاعدة الواحده				
	102.097	اجمالي عدد القواعد = ١٩٣				

الكمية المنفذة خلال المدة	102.097	٣م
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اجمالي ما تم تنفيذه حتى تاريخه :	102.10	٣م
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الهيئة
م / علاء ابو رحمه
١٣

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سيسترا

شركة السلام انترناشونال
للمقاولات والتجارة



قائمة كميات المستخلص جاري (١)

مشروع اعمال تدعيم التربة في المسافة من المحطة ٤٦٠+٣٤٠ الى المحطة ١٠٠+٣٤١
القطار السريع منطقة الغربانيات

رقم البند وبيانه :	18	بالمتر المكعب توريد وصب خرسانة مسلحة للمخدرات والأساسات على أن يكون الخلط والدمك ميكانيكي
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تنفيذ : شركة السلام انترناشونال للتجارة والمقاولات

مقدار العمل السابق :	٠,٠٠	٣م
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Bar Mark	طول	عرض	سمك	الإجمالي	ملاحظات
1	2.1	2.1	0.7	3.087	فرش سفلي
				3.087	
				611.226	
					اجمالي القاعدة الواحدة
					اجمالي عدد القواعد = ١٩٨

الكمية المنفذة خلال المدة	611.226	٣م
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اجمالي ما تم تنفيذه حتى تاريخه :	611.226	٣م
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الهيئة
م / علاء ابو رحمه
م

الاستشاري العام
ميسر
م

شركة السلام انترناشونال
للمقاولات والتجارة



قائمة كميات بالمستخلص جاري (١)

مشروع اعمال تدعيم التربة في المسافة من المحطة ٣٤٠+٤٦٠ الى المحطة ٣٤١+١٠٠
القطار السريع منطقة الغربانيات

رقم البند و بيانه :	19	بالطن توريد وتشغيل وتركيب وتربيط حديد تسليح من الصلب ٦٠/٤٠ لتنفيذ جميع العناصر الانشائية
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تنفيذ : شركة أسلام انترناشونال للتجارة والمقاولات

Bar Mark	قطر السيخ (مم)	وزن المتر الطولي (كجم)	طول السيخ (متر)	طن	عدد	اجمالي عدد الاسياخ	اجمالي الطول (متر)	الإجمالي طن	شكل السيخ
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١- حديد الخوازيق

1	18	2	12	10	10	10	120	0.24	وصلة ١٨
2	16	1.58	12	10	10	10	120	0.1896	وصلة ١٦
3	10	0.617	12	113.04	113.04	113.04	113.04	0.070	سوستة الوصلة ١٨
4	10	0.617	9.6	90.432	90.432	90.432	90.432	0.056	سوستة الوصلة ١٦
								0.555142224	إجمالي الوزن لعدد خازوق واحد (الطن)
								370.2798634	إجمالي عدد الخوازيق المنفذه = ٦٦٧

٢- حديد القواعد

1	12	0.888	3	5	11	33	0.029304	فرش سفلي
2	12	0.888	3	5	11	33	0.029304	غطاء سفلي
3	16	1.58	3	10.00	21	63	0.100	فرش سفلي
4	16	1.58	3	10.00	21	63	0.100	غطاء سفلي
		إجمالي الوزن لعدد قاعدة واحدة (الطن)						
		إجمالي عدد القواعد المنفذه = ١٩٨						

طن	421.3020874	الكمية المنفذه خلال المدة
طن	421.3020874	اجمالي ما تم تنفيذه حتى تاريخه :

الهيئة
م / علاء ابو رحمه
رئيس اللجنة

الاستشاري العام

شركة السلام انترناشونال
للطرق والكباري
مصر

مشروع اعمال تدعيم التربة في المسافة من المحطة ٤٦٠+٣٤٠ الى المحطة ١٠٠+٣٤١
القطار السريع منطقة الغريباتيات

م	بيان الاعمال	الوحدة	الكميات	الفئة	الإجمالي
١	اعمال الرفع المساحي (الف متر طولي)	م ط	١٠٠٠	١٣	١٣٠٠٠
٢	بالمتر الطولي اعمال جسات بالبر (ثمانمائة متر طولي)	م ط	٨٠٠	٤٥٠	٣٦٠٠٠٠
٣	بالمتر المكعب - اعمال حفر باستخدام المعدات الميكانيكية لجميع أنواع التربة عدا التربة المتماسكة وشديدة التماسك و الصخرية بالعمق المطلوب بحيث يصل عمق الحفر الي المنسوب الصالح للتأسيس حسب الابعاد والمقاسات الموضحة بالرسومات التنفيذية والسعر يشمل إزالة أي عوائق تعترضه اذا لزم الامر ونقل نواتج الحفر الزائدة خارج الموقع والبند شامل مما جُمِيع طبقاً لأصول الصناعة والرسومات والمواصفات وتعليمات المهندس المشرف (اربعون الف متر مكعب)	م٣	٤٠٠٠٠	٦٠	٢٤٠٠٠٠٠
٤	بالمتر المسطح اعمال تسوية ± 20 سم للأرض الطبيعية طبقاً للمناسيب التصميمية والبند شامل مما جُمِيع طبقاً لأصول الصناعة والرسومات والمواصفات وتعليمات المهندس المشرف (عشرون الف متر مسطح)	م٢	٢٠٠٠٠	٢٥	٥٠٠٠٠٠
٥	بالمتر المكعب اعمال توريد وفرش طبقة أساس من الاحجار الصلبة المتدرجة ناتج تكسير الكسارات والمطابقة للمواصفات والتدرج الوارد بالإشتراطات العامة والخاصة بالمشروع لا تقل نسبة تحمل كاليفورنيا عن ٨٠% ولا يزيد نسبة الفاقد بجهاز لوس أنجلوس عن ٤٠% ولا يزيد الإمتصاص عن ١٠% وفردها على طبقتين باستخدام آلات التسوية الحديثة على أن لا يزيد سمك الطبقة بعد تمام الدمك عن ٢٠سم ورشها بالمياه الأضوية للوصول إلى نسبة الرطوبة المطلوبة والدمك الجيد بالهراسات للوصول إلى أقصى كثافة جافة قصوى (لا تقل عن ٩٥%) من الكثافة العملية والفئة تشمل إجراء التجارب العملية والحقلية ويتم التنفيذ طبقاً لأصول الصناعة والرسومات التفصيلية المعتمدة والبند بجميع مشتعلاته طبقاً لمواصفات الهيئة العامة للطرق والكباري وتعليمات المهندس المشرف - مسافة النقل ٢٠ كم - يتم احتساب علاوة ١,٢ جنية لكل ١ كم زيادة او النقصان وذلك حتى مسافة نقل ١٠٠ كم و ١ جنية لكل ١ كم زيادة عن مسافة نقل ١٠٠ كم. - السعر يشمل قيمة المادة المحجرية و على الشركة المنفذه تقديم ما يثبت من الجهات الرسمية المشرفة عن المحاجر. (عشرة الاف متر مكعب)	م٣	١٠٠٠٠	٢١٠	٢١٠٠٠٠٠
٦	بالمتر المكعب تكسير و إزالة اسفلت وطبقات أساس باي سمك ونقل المخلفات خارج الموقع ونهش العمل والبند شامل مما جُمِيع طبقاً لأصول الصناعة والرسومات والمواصفات وتعليمات المهندس المشروع مسافة نقل ١٠ كم ويتم احتساب علاوة ١ جنية لكل ١ كيلومتر (ستمائة متر مكعب)	م٣	٦٠٠	٧٠	٤٢٠٠٠
٧	بالمقطوعية نقل ماكينه الخوازيق الى موقع دقها ونقلها داخل الموقع ثم فكها ونقلها خارج الموقع بعد الانتهاء من كافة الاعمال والسعر يشمل المعدات والاوناش اللازمة للفك والتركيب بالموقع ومكان تخزينها والبند شامل مما جُمِيع على ان تتم جميع الاعمال طبقاً للشروط والمواصفات الفنية والرسومات وحسب تعليمات المهندس المشرف وحسب اصول الصناعة (خمس بالمقطوعية)	مقطوعية	٥	٢٧٠٠٠٠	١٣٥٠٠٠٠
٨	بالمتر الطولي تنفيذ خوازيق محفوره بالبر ومصوبه بموقعها (bored piles) قطر ٦٠سم وتصب بخرسانة مسلحة ويتم تصميم الخلطة الخرسانية مع الخلط و الدمك الميكانيكي على ألا تقل المقاومة المميزة للمكعب القياسي للخرسانة المسلحة بعد ٢٨ يوم من الصب بالطبيعة عن ٣٥٠٠ كجم/سم ^٣ ومحتوى الأسمنت لا يقل عن ٤٥٠ كجم/م ^٣ أسمنت بورتلاندى عادى والفئة تشمل الحفر فى أي نوع من أنواع التربة عدا الصخرية مع تكسير رؤوس الخوازيق العليا ويتم ربطها بالمخدرات فوقها مع نهش العمل نهوا كاملا (والسعر لا يشمل حديد التسليح أو القيسونات) والبند يشمل عمل اختبارات الفنية والصوتيه على كامل طول الخازوق على ان تتم جميع الاعمال والمواصفات الفنية والرسومات وحسب تعليمات المهندس المشرف (اثنان وثلاثون الف متر طولي)	م . ط	٣٢٠٠٠	٢٣٠٠	٧٣٦٠٠٠٠٠
٩	بالمتر الطولي تنفيذ خوازيق بموقعها CFA قطر ٦٠سم باستخدام المونة الاسمنتيه والقياس من سطح الأرض الطبيعية على ان تتم جميع الاعمال طبقاً للمواصفات الفنية والرسومات وحسب تعليمات المهندس المشرف (الف خمسة وستون متر طولي)	م . ط	١٠٦٥	١٥٠٠	١٥٩٧٥٠٠
١٠	بالمتر الطولي تنفيذ خوازيق بموقعها bored piles قطر ٦٠سم باستخدام المونة الاسمنتيه والقياس من سطح الأرض الطبيعية على ان تتم جميع الاعمال طبقاً للمواصفات الفنية والرسومات وحسب تعليمات المهندس المشرف (الفان ومائة وخمسة وثلاثون متر طولي)	م . ط	٢١٣٥	١٩٠٠	٤٠٥٦٥٠٠
١١	بالمتر المكعب توريد و صب خرسانة ويتم تصميم الخلطة الخرسانية مع الخلط و الدمك الميكانيكي على ألا تقل المقاومة المميزة للمكعب القياسي للخرسانة المسلحة بعد ٢٨ يوم من الصب بالطبيعة عن ٣٥٠٠ كجم/سم ^٣ ومحتوى الأسمنت لا يقل عن ٤٥٠ كجم/م ^٣ أسمنت بورتلاندى نتيجة لوجود جيوب وخذق بالتربة (ثلاثة الاف ومائتان متر مكعب)	م٣	٣٢٠٠	١٦٠٠	٥١٢٠٠٠٠
١٢	بالمتر المكعب توريد و صب مونة اسمنتيه ويتم تصميم الخلطة الخرسانية مع الخلط و الدمك الميكانيكي بمحتوى الاسمنت ١٥٠ كجم / م ^٣ اسمنت بورتلاندى نتيجة لوجود جيوب وخذاق بالتربة (الف خمسة وثلاثون متر مكعب) (المواصفات والمواصفات)	م٣	١٠٦٥	١٢٥٠	١٣٣١٢٥٠

سجل اعدادات: ٢٩٨٧٢٠ بمناقشة فورية: ٢٠٠١/١٢/٧٠٧
ملف: ٥٠٠١٦٥٠/٤١٠/٠٠/٠٠

م	بيان الاعمال	الوحدة	الكميات	الفئة	الإجمالي
١٣	بالعدد عمل تجربه تحميل على خازوق غير عامل قطر ٦٠ سم بنفس قطر الخوازيق المستخدمة بحمل ٢٠٠ % من الحمل التصميمي والفئة تشمل الألواح المعدنية الموقته وأجهزة القياس والسعر لا يشمل خازوق التجربة الذي يصب خارج الدعامات وكل ما يلزم نهو العمل طبقاً للشروط والمواصفات وتعليمات المهندس المشرف لا تشمل حديد التسليح (اثنان بالعدد)	عدد	٢	١١٥٠٠٠	٢٣٠٠٠٠
١٤	بالعدد تنفيذ اختبار تحميل على خازوق عامل قطر ٦٠ سم بالبر بحمل ١٥٠ % من حمل التشغيل والبند يشمل نهو العمل نهواً كاملاً طبقاً لأصول الصناعة والرسومات والمواصفات وتعليمات المهندس المشرف (غير شامل حديد التسليح) (سنة بالعدد)	عدد	٦	٨٥٠٠٠	٥١٠٠٠٠
١٥	بالمتر المكعب حفر ميكانيكي بين الخوازيق المصبوبه بالقواعد المسلحة بالعمق المطلوب لزوم الاساسات طبقاً للمنسوب الصالح لتأسيس حسب الابعاد والمقاسات الموضحة بالرسومات التنفيذية والفئة تشمل نزع أى مياه تطهير أثناء الحفر وسند الجوانب إذا لزم الأمر وإزالة أى عوائق تعترضه والقياس طبقاً لأبعاد الرسومات وكل ما يلزم نهو العمل طبقاً للشروط والمواصفات وتعليمات المهندس المشرف (خمس عشرة الف متر مكعب)	م³	١٥٠٠٠	١٠٠	١٥٠٠٠٠٠
١٦	بالمتر المكعب حفر استكشافى بعماله يديه فى ارض الموقع العام (رملية او طينية او ترابية شديدة التماسك) بالعمق المطلوب والقياس هندسى طبقاً للرسومات التنفيذية والفئة تشمل كل ما يلزم نهو الاعمال طبقاً للشروط والمواصفات وتعليمات المهندس المشرف (الفان متر مكعب)	م³	٢٠٠٠	١٢٠	٢٤٠٠٠٠
١٧	بالمتر المكعب خرسانة عادية للأساسات والبلاطات الانتقالية والمقاومة المميزة لمكعب الخرسانة بعد ٢٨ يوم عن ٢٥٠ كجم /سم² ولا يقل محتوى الأسمنت عن ٣٠٠ كجم/م³ والفئة تشمل كل ما يلزم نهو العمل طبقاً للرسومات والشروط والمواصفات وتعليمات المهندس المشرف (ثلاثمائة وعشرون متر مكعب)	م³	٣٢٠	٢١٠٠	٦٧٢٠٠٠
١٨	بالمتر المكعب توريد وصب خرسانة مسلحة للمخدرات والأساسات على أن يكون الخلط والدمك ميكانيكي على الا تقل المقاومة المميزه للمكعب القياسى للخرسانه المسلحه ٢٨ يوم من الصب بالطبيعه عن ٣٠٠ كجم / سم² والا يقل الاسمنت عن ٣٠٠ كجم/م³ اسمنت بورتلاندى عادى او مقاوم للكبريتات طبقاً للشروط والمواصفات مع معالجه الخرسانه بعد الصب طبقاً للمواصفات والسعر يشمل الفرغ الخشبي وكل ما يلزم نهو العمل كاملاً طبقاً للرسومات والشروط والمواصفات وتعليمات المهندس المشرف والفئة لا تشمل توريد وتشغيل وتركيب حديد التسليح (الف وخمسمائة متر مكعب)	م³	١٥٠٠	٢٨٥٠	٤٢٧٥٠٠٠
١٨-٢	فى حالة زيادة محتوى الاسمنت والإجهاد طبقاً لمتطلبات التصميم يتم زيادة سعر بند الخرسانة ١٢٥ جنيه / ٥٠ كجم اسمنت سواء بالزيادة او النقصان (الف وخمسمائة متر مكعب)	م³	١٥٠٠	١٢٥	١٨٧٥٠٠
١٩	بالطن توريد وتشغيل وتركيب وتربيط حديد تسليح من الصلب ٦٠/٤٠ لتنفيذ جميع العناصر الانشائية) والفئة تشمل كل ما يلزم طبقاً للشروط والمواصفات واللوحات وجدول تفريد الحديد المعتمده ومحمل على الفئة كراسى تثبيت الطبقات العلوية للتسليح والتخانات بين الأسياخ والأوتار وخلافة وعمل الاختبارات اللازمه وكل ما يلزم نهو العمل كاملاً طبقاً للرسومات والشروط والمواصفات وتعليمات المهندس المشرف. (الف وخمسمائة وستون طن)	طن	١٥٦٠	٤٤٠٠٠	٦٨٦٤٠٠٠٠
٢٠	بالمتر المسطح توريد وعمل طبقة عازلة من الببوتومين على البارد بوجه تحضيرى ووجهان للأساسات وجميع الأعمال المدفونة والسعر يشمل كل ما يلزم نهو الاعمال نهواً كاملاً وذلك طبقاً لأصول الصناعة وتعليمات المهندس المشرف وعلى المقاول اعتماد كافة المواد قبل التنفيذ وكل ما يلزم نهو العمل كاملاً والقياس هندسى طبقاً لأصول الصناعة وتعليمات المهندس المشرف. (خمس الاف متر مسطح)	م²	٥٠٠٠	٦٠	٣٠٠٠٠٠
الإجمالي					١٦٩,٠٢٤,٧٥٠

فقط مائة وتسعة وستون مليوناً وأربعة وعشرون ألف وسبعمائة وخمسون جنيهاً لا غير

ملاحظات:-

- ١- فى حالة المرور على الشركة الوطنية لأشياء وتنمية وإدارة الطرق يضاف اسعار القائمة قيمة تحصيل رسوم الكارثة والموازين طبقاً لائحة الشركة الوطنية كالتالى:
اعمال توريد الاتربة يتم اضافته مبلغ ١٣ جنيه / م³ هندسي
اعمال طبقات الاساس يتم اضافته مبلغ ٢٥ جنيه/م³ هندسي
اعمال طبقات الرصف الاسفلتي يتم اضافته مبلغ ٣ جنيه /م³
* أسعار البنود عاليه تقديرية لحين مفاوضة الشركة عليها.

١- يتم تعديل الاسعار سواء (بالزيادة / النقصان) للبنود المنوه عليها بالتعاقد (الحديد بجميع أنواعه - الأسمنت - الببوتومين - السولار) طبقاً لنشرة الأرقام القياسية للأسعار الصادرة من الجهاز المركزي للتعبئة والإحصاء طبقاً للمادة (٤٠) في الجزء الاول (الشروط العامة) بمراسة الشروط والمواصفات

- ٢- الاسعار المذكوره على اساس متوسط سعر الاسمنت هو ٢٠٠٠ جنيه للطن على ارض المصنع غير شامل النقل والتصنيع والصب
- ٣- الاسعار المذكوره على اساس متوسط سعر حديد التسليح ٣٠٠٠٠ جنيه للطن على ارض المصنع غير شامل النقل والتصنيع والتركيب

شركة السلام إنشوائى للمقاولات والتجارة
ش.م.م
سجل تجارى: ٢٩٨٧٢٠ بطاقة ضريبية: ٢٠١٧/١٢١/٧٠٧
مكتب فسيوى: ٥/٠١٦٥/٤١٠/٠٠/٠٠

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		27/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 033				Revision
					00
Received by ER	Name	Sign	TRF	DD	MM
				27	11
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A77 + A173 2- B424+ A*3 3- A64 + A164				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/450	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

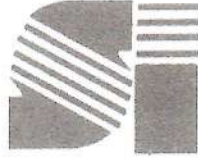
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		27/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		28-11-2023	A

A= Approved; AWC= Approved with Comments; R= Rejected

* Alignment / Bridges: Culvert Only



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	161
IR	033

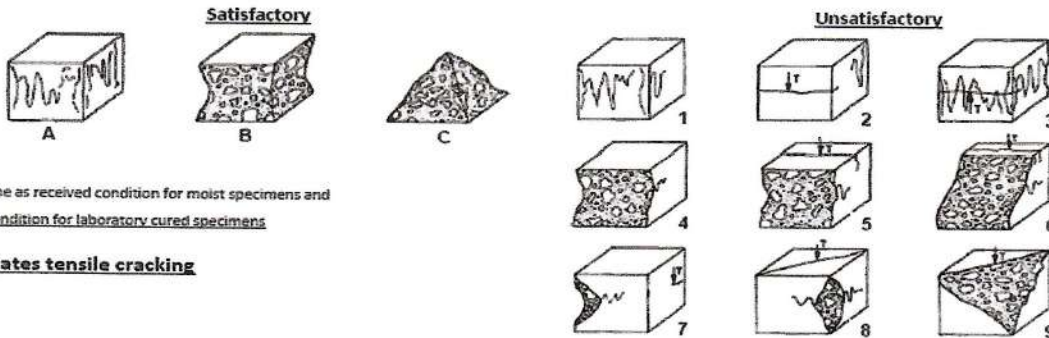
Pile	A77 + A173
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	29/10/2023	05/11/2023	7	8300	2.459	879.0	398	396	99%
2				8328	2.468	895.0	405		
3				8313	2.463	847.0	384		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	29/10/2023	26/11/2023	28	8350	2.474	1226.0	555	566	141%
2				8323	2.466	1284.0	582		
3				8298	2.459	1238.0	561		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد

المهندس الاستشاري

التوقيع / أحمد سالم

التوقيع /

مهندس شركة السلام

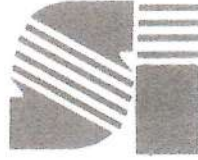
م / عبدالله وحدى

التوقيع /





HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	162
IR	033

Pile	B442 + A*3
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Test Results (7 Days) & Calculation :

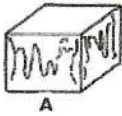
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	29/10/2023	05/11/2023	7	8298	2.459	837.0	379	386	97%
2				8447	2.503	854.0	387		
3				8417	2.494	866.0	392		

1

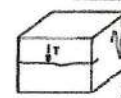
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	29/10/2023	26/11/2023	28	8339	2.471	1182.0	535	537	134%
2				8412	2.492	1141.0	517		
3				8365	2.479	1236.0	560		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

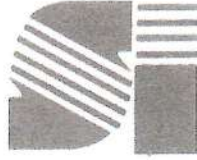
Note : T indicates tensile cracking



مهندس شركة السلام
م / عبدالله وجدى
التوقيع / 2023



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربية - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	163
IR	033

Pile	A64 + A164
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Test Results (7 Days) & Calculation :

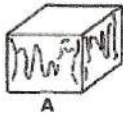
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	29/10/2023	05/11/2023	7	8308	2.462	817.0	370	375	94%
2				8426	2.497	826.0	374		
3				8363	2.475	839.0	380		

1

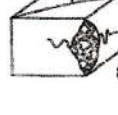
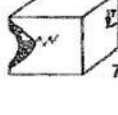
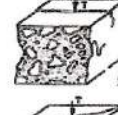
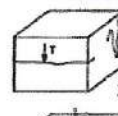
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	29/10/2023	26/11/2023	28	8319	2.465	1162.0	526	547	137%
2				8326	2.467	1294.0	586		
3				8411	2.492	1164.0	527		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد

المهندس الاستشاري



مهندس شركة السلام

م / عبدالله وجدى

التوقيع

التوقيع

Date:

Name:

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab – Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		27/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 034				Revision
					00
Received by ER	Name	Sign	TRF	DD	MM
				27	11
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A*30 + A61 2- A*6 + A168 3- B424 + B431 4- A*18 + A181 5- B451				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/450	7&28 days Compressive Strength	Attached		
2					
3					
4					
5	C 400/460				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		27/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		28-11-2023	A

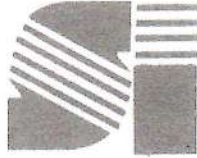
*

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	164
IR	034

Pile	A*30 + A61
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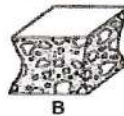
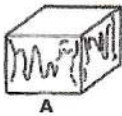
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/10/2023	06/11/2023	7	8357	2.476	886.0	401	392	98%
2				8493	2.516	844.0	382		
3				8204	2.431	863.0	391		

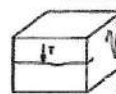
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/10/2023	27/11/2023	28	8370	2.480	1238.0	561	558	140%
2				8296	2.458	1185.0	537		
3				8315	2.464	1273.0	577		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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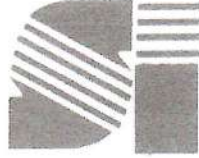
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Concrete Technology Centre

Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	165
IR	034

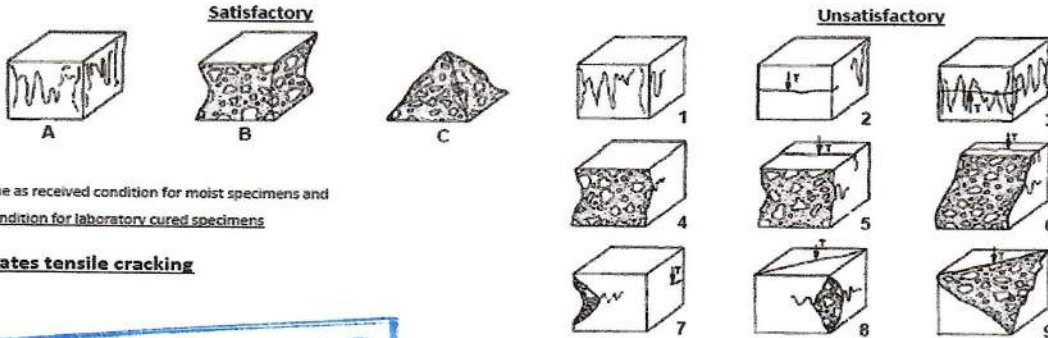
Pile	A*6 + A168
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	30/10/2023	06/11/2023	7	8348	2.473	853.0	386	388	97%
2				8283	2.454	839.0	380		
3				8406	2.491	877.0	397		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	30/10/2023	27/11/2023	28	8352	2.475	1219.0	552	559	140%
2				8421	2.495	1237.0	560		
3				8317	2.464	1246.0	564		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

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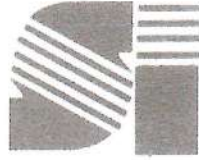
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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	166
IR	034

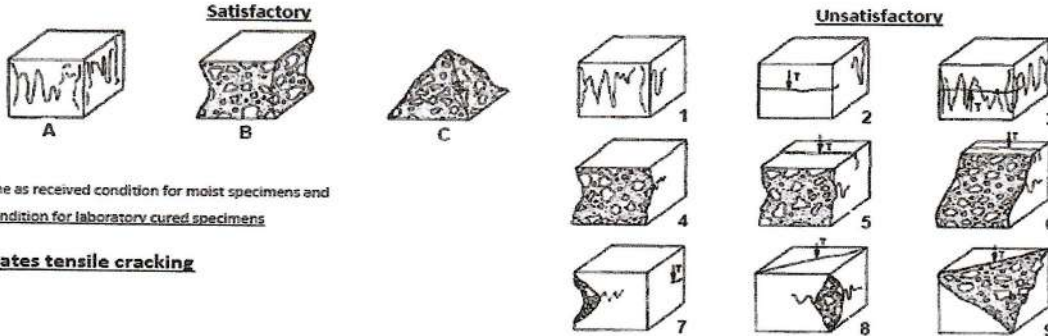
Pile	B424 + B431
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/10/2023	06/11/2023	7	8469	2.509	860.0	390	390	98%
2				8480	2.513	851.0	386		
3				8342	2.472	874.0	396		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/10/2023	27/11/2023	28	8437	2.500	1024.0	464	500	125%
2				8456	2.505	1066.0	483		
3				8411	2.492	1223.0	554		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



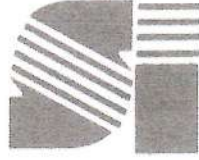
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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	167
IR	034

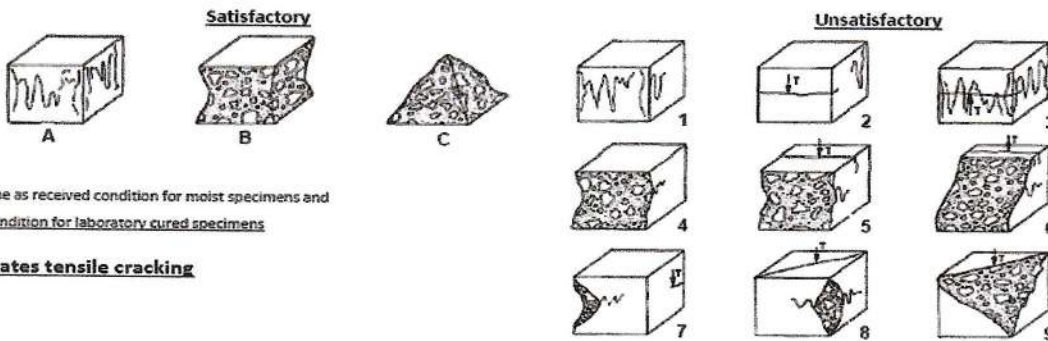
Pile	A*18 + A181
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	30/10/2023	06/11/2023	7	8347	2.473	874.0	396	394	98%
2				8251	2.445	849.0	385		
3				8138	2.411	884.0	400		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	30/10/2023	27/11/2023	28	8276	2.452	1256.0	569	569	142%
2				8132	2.409	1246.0	564		
3				8311	2.463	1263.0	572		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد

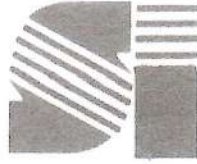


مهندس شركة السلام

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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	168
IR	034

Pile	B451
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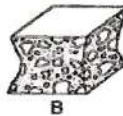
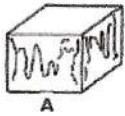
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	30/10/2023	06/11/2023	7	8329	2.468	827.0	375	246	61%
2				8414	2.493	411.0	186		
3				8336	2.470	388.0	176		

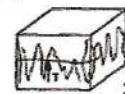
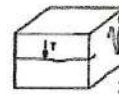
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	30/10/2023	27/11/2023	28	8332	2.469	1247.0	565	563	141%
2				8401	2.489	1232.0	558		
3				8326	2.467	1249.0	566		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م / عبدالله وجدى
التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		EISalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		11/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 001				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				12	10
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A6	1-
Location of Test :	Alexandria University (7 day) & site (28 day)	

Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	c400 / 460	7&28 days compressive strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		12/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	1
IR	1

Pile	A6
------	----

Test Results (7 Days) & Calculation :

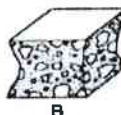
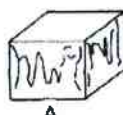
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	14/09/2023	21/09/2023	7	8050	2.385	1080.0	489	526	131%
2				8050	2.385	1315.0	596		
3				8000	2.370	1086.0	492		

Test Results (28 Days) & Calculation :

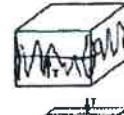
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	14/09/2023	12/10/2023	28	8203	2.431	1211.0	549	504	126%
2				8544	2.532	1030.0	467		
3				8230	2.439	1094.0	496		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة السلام
م. عبد الله د. م.
التوقيع



اختبار الضغط على المكعبات الخرسانية

- الجهة المالكة: الهيئة العامة للأنفاق - الهيئة العامة للطرق والكبارى
- الجهة المشرفة: سيسترا الفرنسية للاستشارات الهندسية
- العمليّة: مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية
من محطة 340+ 460 الى 340+ 341
- الجهة المنفذة: شركة السلام انترناشونال للمقاولات والتجارة
- تاريخ الصب: 2023/9/14
- تاريخ الكسر: 2023/9/24
- العنصر الانشائي: خازوق رقم P6
- تاريخ توريد المكعبات: 2023/9/24

نتائج الاختبار:

الرقم	وزن المكعب (كجم)	مساحة المقطع (سم ²)	حمل الكسر (kN)	مقاومة الضغط (كجم/سم ²)	ملاحظات
1	8050	225	1080	489	-----
2	8.050	225	1315	596	
3	8.000	225	1086	492	

• متوسط مقاومة الضغط = 526 كجم/سم²

• معامل التغير V = 11.58 %

مُحَوَّطَة: - تم صب المكعبات وتحديد العنصر الانشائي وميعاد الكسر بمعرفة المورد وعلي مسؤوليته.

مدير المعمل

المشرف على الاختبار

د. عبد اللطيف السيد أبو سن

د. إسماعيل أحمد محمد محروس

تحريرا في : 2023/9/24

رقم التقرير :-

٥٠٩٧٦



SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab – Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		14/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 002				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				15	10
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1-A4 2- A3			
Location of Test	Egept-Japan University of Scince and Technology (7 days) , site (28 days)			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		15/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	2
IR	2

Pile	A 4
------	-----

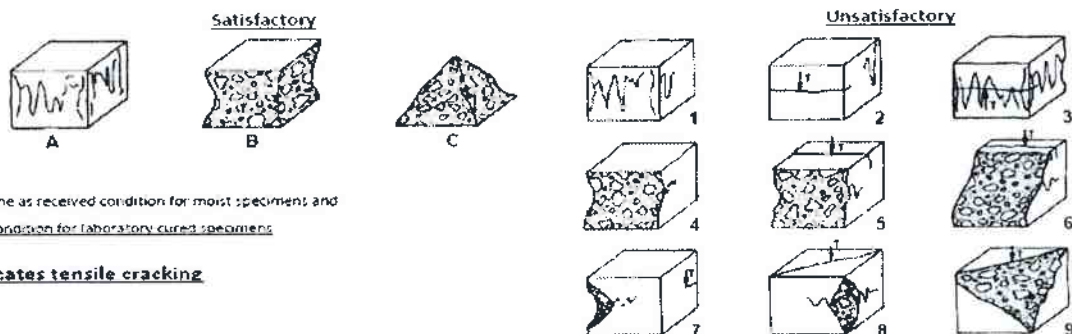
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/09/2023	24/09/2023	7	8285	2.455	1336.9	606	519	130%
2				8450	2.504	1041.0	472		
3				8077	2.393	1059.0	480		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/09/2023	15/10/2023	28	8282	2.454	1213.0	549	531	133%
2				8268	2.447	1131.0	512		
3				8232	2.439	1171.0	530		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks

BS 114 Part 114 in the as received condition for most specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة الملام

التوقيع / م



Technical Report

Cube Compressive Strength

(Pile No. 4)
(7 days)

Project
ELECTRIC EXPRESS TRAIN

El Alamein City on the Mediterranean Coast

Prepared for

Al-Salam International

(September 27, 2023)



بسم الله الرحمن الرحيم
أمين عام الجامعة
لواء مهندس / الأستاذة شمس





Cube Compressive Strength Report

Company : Al-Salam International
Owner: Egypt-Japan University for Science and Technology
Casting Date: 17/9/2023 As mentioned by the company
Ready mix concrete supplier محطة الصقوة للخرسانة الجاهزة
Curing condition and storing محطة الصقوة للخرسانة الجاهزة
The age at which the sample is required to be tested 7 days
Project ELECTRIC EXPRESS TRAIN
Structural element Pile No. 4
Design grade of concrete 400 kg/cm² (Provided by the company)
Mixing ratios
Cement (kg/m³) 460
Water (kg/m³) 160
Sand (kg/m³) 740
Gravel size 1 (kg/m³) 525
Gravel size 2 (kg/m³) 525
Add. (kg/m³) 8
Cement Type OPC
Additives type SIKA R4PN
Sample type Standard Cube
Sample receipt date 27/9/2023
Sample Testing date 27/9/2023
Sample age 10 Days

No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8285	225.0	1336.9	59.4	606	Pile No. (4)
2	8450	225.0	1041.7	46.3	472	
3	8077	225.0	1059.3	47.1	480	
Average Compressive Strength				50.9	519.4	
Standard deviation value				7.36	75.05	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar





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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	3
IR	2

Pile	A3
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Test Results (7 Days) & Calculation :

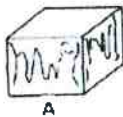
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/09/2023	24/09/2023	7	8323	2.468	830.0	376	469	117%
2				8238	2.441	1084.0	491		
3				8098	2.399	1189.0	539		

Test Results (28 Days) & Calculation :

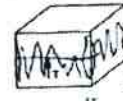
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/09/2023	15/10/2023	28	8120	2.406	1160.0	525	520	130%
2				8180	2.424	1169.0	530		
3				8565	2.538	1117.0	506		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks

BS1 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

م /
التوقيع



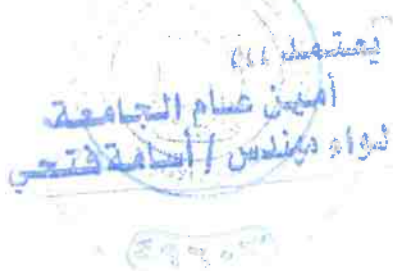
Technical Report

Cube Compressive Strength

(Pile No. 3)
(7 days)

Project
ELECTRIC EXPRESS TRAIN

El Alamein City on the Mediterranean Coast



Prepared for
Al-Salam International
(September 27, 2023)





Cube Compressive Strength Report

Company : Al-Salam International
Owner: Egypt-Japan University for Science and Technology
Casting Date: 17/9/2023 As mentioned by the company
Ready mix concrete supplier محطة الصفوة للخرسانة الجاهزة
Curing condition and storing محطة الصفوة للخرسانة الجاهزة
The age at which the sample is required to be tested 7 days
Project ELECTRIC EXPRESS TRAIN
Structural element Pile No. 3
Design grade of concrete 400 kg/cm² (Provided by the company)
Mixing ratios
Cement (kg/m³) 460
Water (kg/m³) 160
Sand (kg/m³) 740
Gravel size 1 (kg/m³) 525
Gravel size 2 (kg/m³) 525
Add. (kg/m³) 8
Cement Type OPC
Additives type SIIKA R4PN
Sample type Standard Cube
Sample receipt date 27/9/2023
Sample Testing date 27/9/2023
Sample age 10 Days

Test Results

No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8323	225.0	830.0	36.9	376	Pile No. (3)
2	8238	225.0	1084.8	48.2	492	
3	8098	225.0	1189.3	52.9	539	
Average Compressive Strength				46.0	468.9	
Standard deviation value				8.22	83.78	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar



SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		15/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 003				Revision
					00
Received by ER	Name	Sign	TRF	DD	MM
				16	10
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1-			
	A5 2-A18 3-A19			
Location of Test	Egept-Japan University of Scince and Technology (7 days) , site (28 days)			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		16/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre
Design - Quality Control - Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	4
IR	3

Pile	A 5
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Test Results (7 Days) & Calculation :

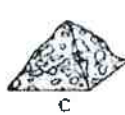
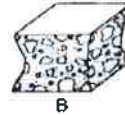
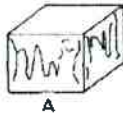
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/09/2023	25/09/2023	7	8815	2.612	1323.6	600	618	154%
2				8956	2.654	1418.1	642		
3				8237	2.441	1350.0	612		

Test Results (28 Days) & Calculation :

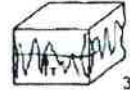
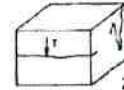
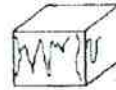
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/09/2023	16/10/2023	28	8345	2.473	1218.0	552	556	139%
2				8307	2.461	1227.0	556		
3				8296	2.458	1234.0	559		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد

مهندس شركة السلام

التوقيع /



Egypt-Japan University of Science and Technology
الجامعة المصرية اليابانية للعلوم والتكنولوجيا
エジプト日本科学技術大学

Civil Engineering Testing &
Consulting Unit

وحدة اختبارات واستشارات المهندسة
المدنية

Technical Report

Cube Compressive Strength

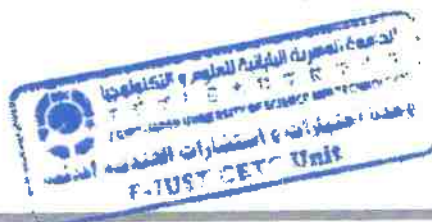
(Pile No. 5)
(7 days)

Project
ELECTRIC EXPRESS TRAIN

El Alamein City on the Mediterranean Coast



Prepared for
Al-Salam International
(September 27, 2023)





Cube Compressive Strength Report

Company : Al-Salam International
Owner: Egypt-Japan University for Science and Technology
Casting Date: 18/9/2023 As mentioned by the company
Ready mix concrete supplier محطة الصفوة للخرسانة الجاهزة
Curing condition and storing محطة الصفوة للخرسانة الجاهزة
The age at which the sample is required to be tested 7 days
Project ELECTRIC EXPRESS TRAIN
Structural element Pile No. 5
Design grade of concrete 400 kg/cm² (Provided by the company)
Mixing ratios
Cement (kg/m³) 460
Water (kg/m³) 160
Sand (kg/m³) 740
Gravel size 1 (kg/m³) 525
Gravel size 2 (kg/m³) 525
Add. (kg/m³) 8
Cement Type OPC
Additives type SIIKA R4PN
Sample type Standard Cube
Sample receipt date 27/9/2023
Sample Testing date 27/9/2023
Sample age 9 Days

Test Results

No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8815	225.0	1323.6	58.8	600	Pile No. (5)
2	8956	225.0	1418.1	63.0	643	
3	8237	225.0	1350.7	60.0	612	
Average Compressive Strength				60.6	618.2	
Standard deviation value				2.16	22.06	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar





HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	5
IR	3

Pile	A 18
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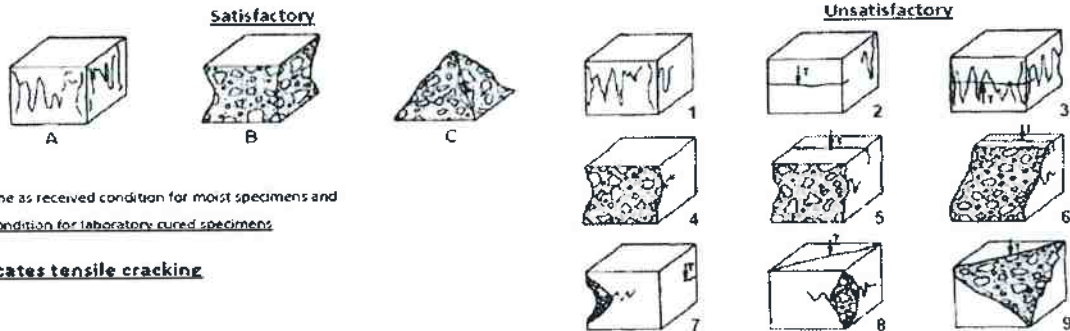
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/09/2023	25/09/2023	7	8235	2.440	1117.0	506	529	132%
2				8683	2.573	1170.9	530		
3				8585	2.544	1215.0	550		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/09/2023	16/10/2023	28	8145	2.413	1047.0	474	537	134%
2				8290	2.458	1254.0	568		
3				8617	2.553	1254.0	568		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة السلام

التوقيع /



Technical Report

Cube Compressive Strength

(Pile No. 18)
(7 days)

Project

ELECTRIC EXPRESS TRAIN

El Alamein City on the Mediterranean Coast

Prepared for

Al-Salam International

(September 27, 2023)





Cube Compressive Strength Report

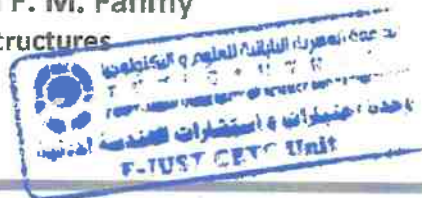
Company : Al-Salam International
Owner: Egypt-Japan University for Science and Technology
Casting Date: 18/9/2023 As mentioned by the company
Ready mix concrete supplier محطة الصفوة للخرسانة الجاهزة
Curing condition and storing محطة الصفوة للخرسانة الجاهزة
The age at which the sample is required to be tested 7 days
Project ELECTRIC EXPRESS TRAIN
Structural element Pile No. 18
Design grade of concrete 400 kg/cm² (Provided by the company)
Mixing ratios
Cement (kg/m³) 460
Water (kg/m³) 160
Sand (kg/m³) 740
Gravel size 1 (kg/m³) 525
Gravel size 2 (kg/m³) 525
Add. (kg/m³) 8
Cement Type OPC
Additives type SHIKA R4PN
Sample type Standard Cube
Sample receipt date 27/9/2023
Sample Testing date 27/9/2023
Sample age 9 Days

Test Results

No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8235	225.0	1117.0	49.6	506	Pile No. (18)
2	8683	225.0	1170.9	52.0	531	
3	8585	225.0	1215.0	54.0	551	
Average Compressive Strength				51.9	529.2	
Standard deviation value				2.18	22.25	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar





HELIOPOLIS
Concrete Technology Centre
Design - Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	6
IR	3

Pile	A 19
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Test Results (7 Days) & Calculation :

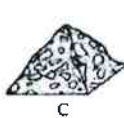
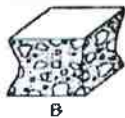
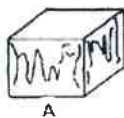
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/09/2023	25/09/2023	7	8479	2.512	1233.7	559	555	139%
2				8487	2.515	1132.5	513		
3				8587	2.544	1306.4	592		

Test Results (28 Days) & Calculation :

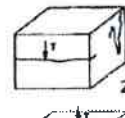
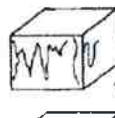
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/09/2023	16/10/2023	28	8430	2.498	1328.0	602	567	142%
2				8288	2.456	1244.0	564		
3				8200	2.430	1184.0	536		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks

1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة الملام

التوقيع /



Technical Report

Cube Compressive Strength

(Pile No. 19)
(7 days)

Project
ELECTRIC EXPRESS TRAIN

El Alamein City on the Mediterranean Coast



Prepared for
Al-Salam International
(September 27, 2023)





Cube Compressive Strength Report

Company : Al-Salam International
Owner: Egypt-Japan University for Science and Technology
Casting Date: 18/9/2023 As mentioned by the company
Ready mix concrete supplier محطة الصفوة للخرسانة الجاهزة
Curing condition and storing محطة الصفوة للخرسانة الجاهزة
The age at which the sample is required to be tested 7 days
Project ELECTRIC EXPRESS TRAIN
Structural element Pile No. 19
Design grade of concrete 400 kg/cm² (Provided by the company)
Mixing ratios
Cement (kg/m³) 460
Water (kg/m³) 160
Sand (kg/m³) 740
Gravel size 1 (kg/m³) 525
Gravel size 2 (kg/m³) 525
Add. (kg/m³) 8
Cement Type OPC
Additives type SIKA R4PN
Sample type Standard Cube
Sample receipt date 27/9/2023
Sample Testing date 27/9/2023
Sample age 9 Days

Test Results

No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8479	225.0	1233.7	54.8	559	Pile No. (19)
2	8487	225.0	1132.5	50.3	513	
3	8587	225.0	1306.4	58.1	592	
Average Compressive Strength				54.4	554.8	
Standard deviation value				3.88	39.59	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar



SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab – Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		16/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 004				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				17	10
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1- A1			
	2- A7 3- A8			
Location of Test	Egept-Japan University of Scince and Technology (7 days) , site (28 days)			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		17/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠٠+٥٠٠ الى ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	7
IR	4

Pile	A 1
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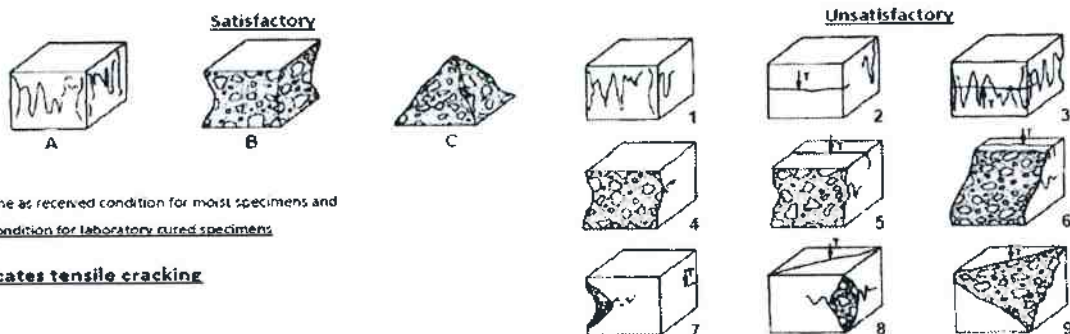
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	19/09/2023	26/09/2023	7	8370	2.480	1287.6	583	608	152%
2				8319	2.485	1386.6	628		
3				8299	2.459	1354.7	614		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	19/09/2023	17/10/2023	28	8514	2.523	1154.0	523	516	129%
2				8423	2.496	1127.0	511		
3				8295	2.458	1134.0	514		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة الصمام

التوقيع / م



Technical Report

Cube Compressive Strength

(Pile No. 1)

(7 days)



Project

ELECTRIC EXPRESS TRAIN

El Alamein City on the Mediterranean Coast

إمتهاد ٢٠٢٢
أمين عام الجامعة
أ. م. / أ. م. / أ. م.

Prepared for

Al-Salam International

(September 27, 2023)





Cube Compressive Strength Report

Company :	Al-Salam International												
Owner:	Egypt-Japan University for Science and Technology												
Casting Date:	19/9/2023 As mentioned by the company												
Ready mix concrete supplier	محطة الصقوة للخرسانة الجاهزة												
Curing condition and storing	محطة الصقوة للخرسانة الجاهزة												
The age at which the sample is required to be tested	7 days												
Project	ELECTRIC EXPRESS TRAIN												
Structural element	Pile No. 1												
Design grade of concrete	400 kg/cm ² (Provided by the company)												
Mixing ratios	<table> <tr> <td>Cement (kg/m³)</td><td>460</td></tr> <tr> <td>Water (kg/m³)</td><td>160</td></tr> <tr> <td>Sand (kg/m³)</td><td>740</td></tr> <tr> <td>Gravel size 1 (kg/m³)</td><td>525</td></tr> <tr> <td>Gravel size 2 (kg/m³)</td><td>525</td></tr> <tr> <td>Add. (kg/m³)</td><td>8</td></tr> </table>	Cement (kg/m ³)	460	Water (kg/m ³)	160	Sand (kg/m ³)	740	Gravel size 1 (kg/m ³)	525	Gravel size 2 (kg/m ³)	525	Add. (kg/m ³)	8
Cement (kg/m ³)	460												
Water (kg/m ³)	160												
Sand (kg/m ³)	740												
Gravel size 1 (kg/m ³)	525												
Gravel size 2 (kg/m ³)	525												
Add. (kg/m ³)	8												
Cement Type	OPC												
Additives type	SIKA R4PN												
Sample type	Standard Cube												
Sample receipt date	27/9/2023												
Sample Testing date	27/9/2023												
Sample age	8 Days												

Test Results

No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8370	225.0	1287.6	57.2	584	Pile No. (1)
2	8319	225.0	1386.6	61.6	628	
3	8299	225.0	1354.7	60.2	614	
Average Compressive Strength				59.7	608.6	
Standard deviation value				2.24	22.89	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar





HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM II 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	8
IR	4

Pile	A 7
------	-----

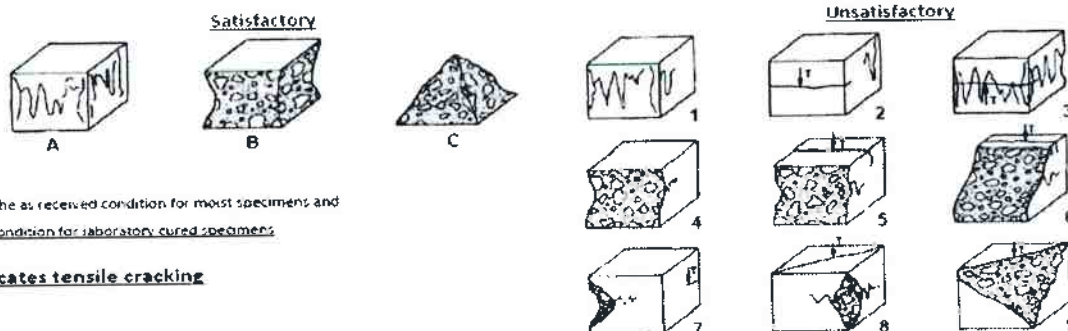
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	19/09/2023	26/09/2023	7	8343	2.472	1205.8	546	538	135%
2				8270	2.450	1142.9	518		
3				8435	2.499	1215.7	551		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	19/09/2023	17/10/2023	28	8470	2.510	1328.0	602	567	142%
2				8610	2.551	1244.0	564		
3				8592	2.546	1184.0	536		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع /



Egypt-Japan University of Science and Technology
الجامعة المصرية اليابانية للعلوم والتكنولوجيا
エジプト日本科学技術大学

Civil Engineering Testing &
Consulting Unit

وحدة اختبارات واستشارات الهندسة
المدينة

Technical Report

Cube Compressive Strength

(Pile No. 7)

(7 days)



Project

ELECTRIC EXPRESS TRAIN

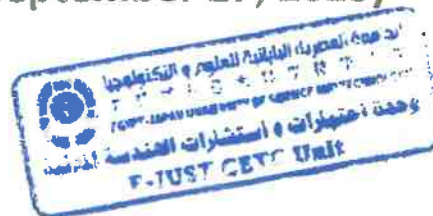
El Alamein City on the Mediterranean Coast

إمضاء
أمين عصام الجمال
رئيس / أسامة الشاذلي

Prepared for

Al-Salam International

(September 27, 2023)





Cube Compressive Strength Report

Company : Al-Salam International
Owner: Egypt-Japan University for Science and Technology
Casting Date: 19/9/2023 As mentioned by the company
Ready mix concrete supplier محطة الصفوة للخرسانة الجاهزة
Curing condition and storing محطة الصفوة للخرسانة الجاهزة
The age at which the sample is required to be tested 7 days
Project ELECTRIC EXPRESS TRAIN
Structural element Pile No. 7
Design grade of concrete 400 kg/cm² (Provided by the company)
Mixing ratios
Cement (kg/m³) 460
Water (kg/m³) 160
Sand (kg/m³) 740
Gravel size 1 (kg/m³) 525
Gravel size 2 (kg/m³) 525
Add. (kg/m³) 8
Cement Type OPC
Additives type SIIKA R4PN
Sample type Standard Cube
Sample receipt date 27/9/2023
Sample Testing date 27/9/2023
Sample age 8 Days

Test Results

No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8343	225.0	1205.8	53.6	546	Pile No. (7)
2	8270	225.0	1142.9	50.8	518	
3	8435	225.0	1215.7	54.0	551	
Average Compressive Strength				52.8	538.5	
Standard deviation value				1.75	17.89	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar





HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الى ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	9
IR	4

Pile	A 8
------	-----

Test Results (7 Days) & Calculation :

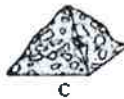
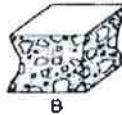
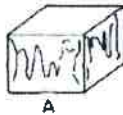
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	19/09/2023	26/09/2023	7	8270	2.450	1370.0	621	557	139%
2				8420	2.495	1131.1	512		
3				8640	2.580	1188.0	538		

Test Results (28 Days) & Calculation :

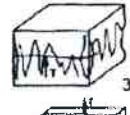
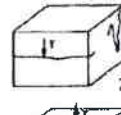
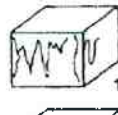
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	19/09/2023	17/10/2023	28	8119	2.406	1120.0	507	510	127%
2				8173	2.422	1125.0	510		
3				8390	2.486	1131.0	512		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة السلام

م /
التوقيع



Technical Report

Cube Compressive Strength

(Pile No. 8)

(7 days)

Project

ELECTRIC EXPRESS TRAIN

El Alamein City on the Mediterranean Coast

Prepared for

استمارة ٤٩٦٥٢
أمين عام الجامعة
شواء المهندس / أسامة فتحي
Al-Salam International
(September 27, 2023)





Cube Compressive Strength Report

Company :	Al-Salam International												
Owner:	Egypt-Japan University for Science and Technology												
Casting Date:	19/9/2023 As mentioned by the company												
Ready mix concrete supplier	محطة الصفوة للخرسانة الجاهزة												
Curing condition and storing	محطة الصفوة للخرسانة الجاهزة												
The age at which the sample is required to be tested	7 days												
Project	ELECTRIC EXPRESS TRAIN												
Structural element	Pile No. 8												
Design grade of concrete	400 kg/cm ² (Provided by the company)												
Mixing ratios	<table> <tr> <td>Cement (kg/m³)</td><td>460</td></tr> <tr> <td>Water (kg/m³)</td><td>160</td></tr> <tr> <td>Sand (kg/m³)</td><td>740</td></tr> <tr> <td>Gravel size 1 (kg/m³)</td><td>525</td></tr> <tr> <td>Gravel size 2 (kg/m³)</td><td>525</td></tr> <tr> <td>Add. (kg/m³)</td><td>8</td></tr> </table>	Cement (kg/m ³)	460	Water (kg/m ³)	160	Sand (kg/m ³)	740	Gravel size 1 (kg/m ³)	525	Gravel size 2 (kg/m ³)	525	Add. (kg/m ³)	8
Cement (kg/m ³)	460												
Water (kg/m ³)	160												
Sand (kg/m ³)	740												
Gravel size 1 (kg/m ³)	525												
Gravel size 2 (kg/m ³)	525												
Add. (kg/m ³)	8												
Cement Type	OPC												
Additives type	SIKA R4PN												
Sample type	Standard Cube												
Sample receipt date	27/9/2023												
Sample Testing date	27/9/2023												
Sample age	8 Days												

Test Results

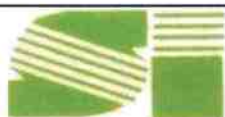
No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8270	225.0	1370.0	60.9	621	Pile No. (8)
2	8420	225.0	1131.1	50.3	513	
3	8640	225.0	1188.0	52.8	538	
Average Compressive Strength				54.7	557.3	
Standard deviation value				5.55	56.56	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar



SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		17/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 005				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				18	10
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A12 2-A17				1-
Location of Test	Egept-Japan University of Scince and Technology (7 days) , site (28 days)				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days ompressive Strength	Attached		
2					
3					
4					
5					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		18/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

*

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre

Design - Quality Control - Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	10
IR	5

Pile	A 12
------	------

Test Results (7 Days) & Calculation :

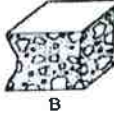
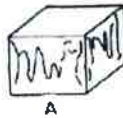
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	20/09/2023	27/09/2023	7	8291	2.457	1051.6	476	509	127%
2				8125	2.407	1206.8	547		
3				8264	2.449	1112.8	504		

Test Results (28 Days) & Calculation :

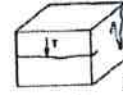
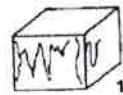
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	20/09/2023	18/10/2023	28	8520	2.524	1234.0	559	555	139%
2				8275	2.452	1209.0	548		
3				8293	2.457	1231.0	558		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



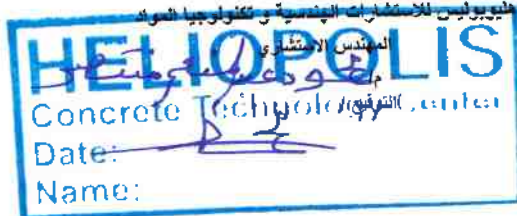
Unsatisfactory



Remarks

BS1 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع



Technical Report

Cube Compressive Strength

(Pile No. 12)
(7 days)

Project

ELECTRIC EXPRESS TRAIN
El Alamein City on the Mediterranean Coast



Prepared for

Al-Salam International
أسمن عام الجامعة
أسامة فتحى
(September 27, 2023)





Cube Compressive Strength Report

Company : Al-Salam International
Owner: Egypt-Japan University for Science and Technology
Casting Date: 20/9/2023 As mentioned by the company
Ready mix concrete supplier محطة الصفوة للخرسانة الجاهزة
Curing condition and storing محطة الصفوة للخرسانة الجاهزة
The age at which the sample is required to be tested 7 days
Project ELECTRIC EXPRESS TRAIN
Structural element Pile No. 12
Design grade of concrete 400 kg/cm² (Provided by the company)
Mixing ratios
Cement (kg/m³) 460
Water (kg/m³) 160
Sand (kg/m³) 740
Gravel size 1 (kg/m³) 525
Gravel size 2 (kg/m³) 525
Add. (kg/m³) 8
Cement Type OPC
Additives type SIKA R4PN
Sample type Standard Cube
Sample receipt date 27/9/2023
Sample Testing date 27/9/2023
Sample age 7 Days

Test Results

No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8291	225.0	1051.6	46.7	477	Pile No. (12)
2	8125	225.0	1206.8	53.6	547	
3	8264	225.0	1112.8	49.5	504	
Average Compressive Strength				49.9	509.3	
Standard deviation value				3.47	35.43	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar





HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربائيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	11
IR	5

Pile	A 17
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Test Results (7 Days) & Calculation :

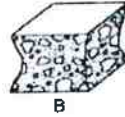
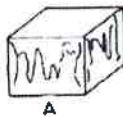
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	20/09/2023	27/09/2023	7	8499	2.518	1196.4	542	519	130%
2				8211	2.433	1203.8	545		
3				8430	2.498	1035.3	469		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	20/09/2023	18/10/2023	28	8293	2.457	1230.0	557	544	136%
2				8280	2.453	1197.0	542		
3				8504	2.520	1173.0	531		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع / م



وحدة اختبارات واستشارات الهندسية
المهنية

(Pile No. 17)
(7 days)



ELECTRIC EXPRESS TRAIN

El Alamein City on the Mediterranean Coast

Prepared for

Al-Salam International
(September 27, 2023)





Cube Compressive Strength Report

Company : Al-Salam International
Owner: Egypt-Japan University for Science and Technology
Casting Date: 20/9/2023 As mentioned by the company
Ready mix concrete supplier محطة الصفوة للخرسانة الجاهزة
Curing condition and storing محطة الصفوة للخرسانة الجاهزة
The age at which the sample is required to be tested 7 days
Project ELECTRIC EXPRESS TRAIN
Structural element Pile No. 17
Design grade of concrete 400 kg/cm² (Provided by the company)
Mixing ratios
Cement (kg/m³) 460
Water (kg/m³) 160
Sand (kg/m³) 740
Gravel size 1 (kg/m³) 525
Gravel size 2 (kg/m³) 525
Add. (kg/m³) 8
Cement Type OPC
Additives type SIIKA R4PN
Sample type Standard Cube
Sample receipt date 27/9/2023
Sample Testing date 27/9/2023
Sample age 7 Days

Test Results

No.	Cube weight (gm)	Cube loaded surface area (cm ²)	Ultimate Load (kN)	Compressive Strength N/mm ² (kg/cm ²)		Note
				N/mm ²	kg/cm ²	
1	8499	225.0	1196.4	53.2	542	Pile No. (17)
2	8211	225.0	1203.8	53.5	546	
3	8430	225.0	1035.3	46.0	469	
Average Compressive Strength				50.9	519.0	
Standard deviation value				4.23	43.15	

Technical committee
Prof. Dr. Mohamed F. M. Fahmy
Prof. of Concrete Structures

Lab Engineer
Mohamed A. Al-Najjar



SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		18/10/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 006				Revision			
					00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				19	10	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1-			
	A9			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		19/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre
Design - Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الإسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	12
IR	6

Pile	A 9
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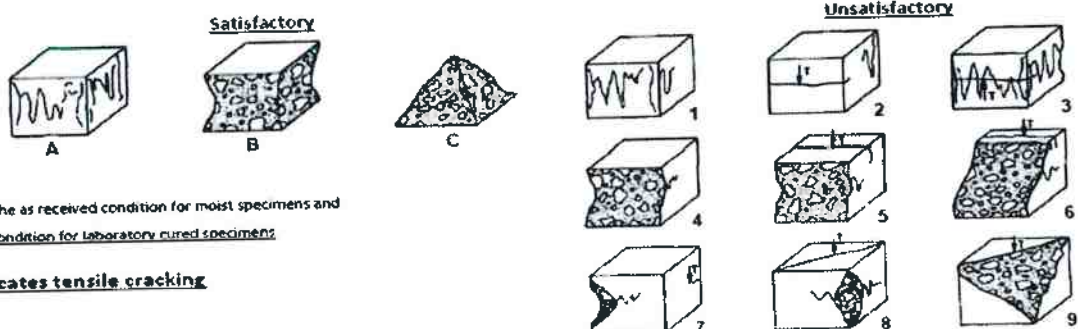
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	21/09/2023	28/09/2023	7	8122	2.407	836.9	379	386	97%
2				8207	2.432	870.0	394		
3				8278	2.453	849.8	385		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	21/09/2023	19/10/2023	28	8620	2.524	1133.0	513	516	129%
2				8426	2.497	1098.0	497		
3				8347	2.473	1183.0	536		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع /

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		20/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 007				Revision
					00
Received by ER	Name	Sign	TRF	DD	MM
				21	10
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles :				
	1-A20 2-A2				
	11-11-2023				
Location of Test	Site				
Item	Specification	Test Requirement	Test result Attachment	Remarks	
1	C 400/460	7&28 days compressive strenght	Attached		
2					
3					
4					
5					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

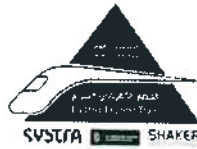
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		21/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربائيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	13
IR	7

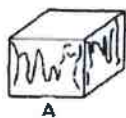
Pile	A 20
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/09/2023	30/09/2023	7	8350	2.474	765.8	347	365	91%
2				8480	2.513	813.0	368		
3				8460	2.507	835.5	378		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/09/2023	21/10/2023	28	8416	2.494	1129.0	511	524	131%
2				8350	2.474	1178.0	534		
3				8497	2.518	1162.0	526		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881, Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

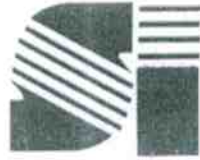
Note : T indicates tensile cracking



مهندس شركة السلام
التوقيع



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	14
IR	7

Pile	A 2
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Test Results (7 Days) & Calculation :

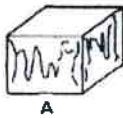
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/09/2023	30/09/2023	7	8261	2.446	868.4	393	389	97%
2				8487	2.509	851.0	386		
3				8345	2.473	859.7	389		

Test Results (28 Days) & Calculation :

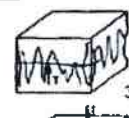
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/09/2023	21/10/2023	28	8455	2.505	1088.0	493	493	123%
2				8513	2.522	1082.0	490		
3				8467	2.509	1096.0	496		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة السلام

التوقيع / م

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		21/10/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 008				Revision 00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				22	10	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 2- A23 3-A30 4-A36 5- A199	1-A14
Location of Test	site	

Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		22/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

*

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربائيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	15
IR	8

Pile	A 14
------	------

Test Results (7 Days) & Calculation :

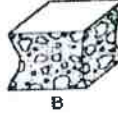
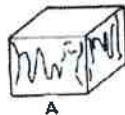
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/09/2023	01/10/2023	7	8346	2.473	864.3	392	386	96%
2				8542	2.531	841.9	381		
3				8290	2.456	846.8	384		

Test Results (28 Days) & Calculation :

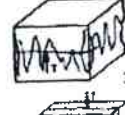
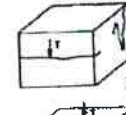
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/09/2023	22/10/2023	28	8191	2.427	1147.0	520	509	127%
2				8302	2.460	1089.0	493		
3				8204	2.431	1135.0	514		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	16
IR	8

Pile	A 23
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Test Results (7 Days) & Calculation :

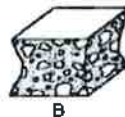
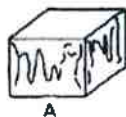
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/09/2023	01/10/2023	7	8341	2.471	776.3	352	367	92%
2				8410	2.492	826.6	374		
3				8346	2.473	829.4	376		

Test Results (28 Days) & Calculation :

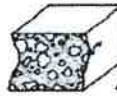
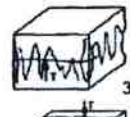
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/09/2023	22/10/2023	28	8460	2.507	1133.0	513	513	128%
2				8269	2.450	1140.0	516		
3				8270	2.450	1123.0	509		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory

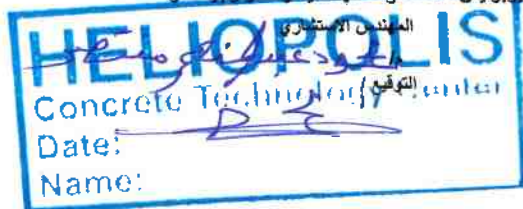


Remarks :

1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا جيا المواد



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Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الى ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	17
IR	8

Pile	A 30
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Test Results (7 Days) & Calculation :

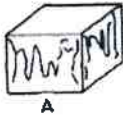
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/09/2023	01/10/2023	7	8233	2.439	811.4	368	382	96%
2				7846	2.325	846.9	384		
3				8235	2.440	873.2	396		

Test Results (28 Days) & Calculation :

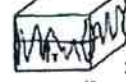
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/09/2023	22/10/2023	28	8209	2.432	1164.0	527	511	128%
2				8323	2.466	1122.0	508		
3				8290	2.456	1099.0	498		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



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مشروع القطار السريع القطاع الخامس الغريانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الي ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	18
IR	8

Pile	A 36
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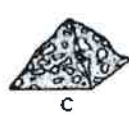
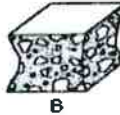
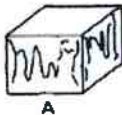
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/09/2023	01/10/2023	7	8320	2.465	822.9	373	382	96%
2				8297	2.458	856.2	388		
3				8635	2.559	853.0	386		

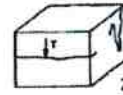
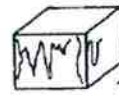
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/09/2023	22/10/2023	28	8589	2.539	1147.0	520	517	129%
2				8299	2.489	1113.0	504		
3				8256	2.448	1182.0	526		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881, Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة السلام

التوقيع / م



HELIOPOLIS
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Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	19
IR	8

Pile	A 199
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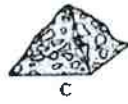
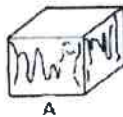
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/09/2023	01/10/2023	7	8556	2.535	827.4	375	386	97%
2				8291	2.457	866.0	392		
3				8244	2.443	863.2	391		

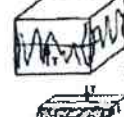
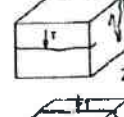
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/09/2023	22/10/2023	28	8223	2.436	1099.0	498	488	122%
2				8377	2.482	1084.0	491		
3				3020	0.895	1062.0	477		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع / م

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		22/10/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 009				Revision			
					00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				23	10	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A31 2-A204 3- A210				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days compressive strength	Attached		
2					
3					
4					
5					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		23/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Technology Centre
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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الي ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	20
IR	9

Pile	A 31
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/09/2023	02/10/2023	7	7819	2.317	782.3	354	353	88%
2				8118	2.405	790.1	358		
3				8119	2.406	765.2	347		

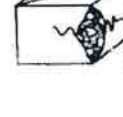
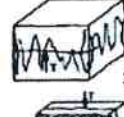
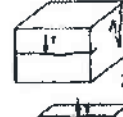
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/09/2023	23/10/2023	28	8496	2.517	1204.0	545	506	127%
2				8413	2.483	1119.0	507		
3				8237	2.441	1029.0	466		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة السلام

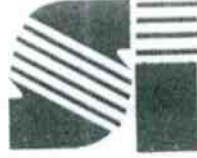
التوقيع / م



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مشروع القطار السريع القطاع الخامس الغرباليات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / OMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	21
IR	9

Pile	A 204
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/09/2023	02/10/2023	7	8270	2.450	781.3	354	344	86%
2				8236	2.440	779.1	363		
3				8062	2.389	720.4	326		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/09/2023	23/10/2023	28	8508	2.521	1144.0	518	520	130%
2				8575	2.541	1093.0	495		
3				8633	2.556	1204.0	546		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	22
IR	9

Pile	A 210
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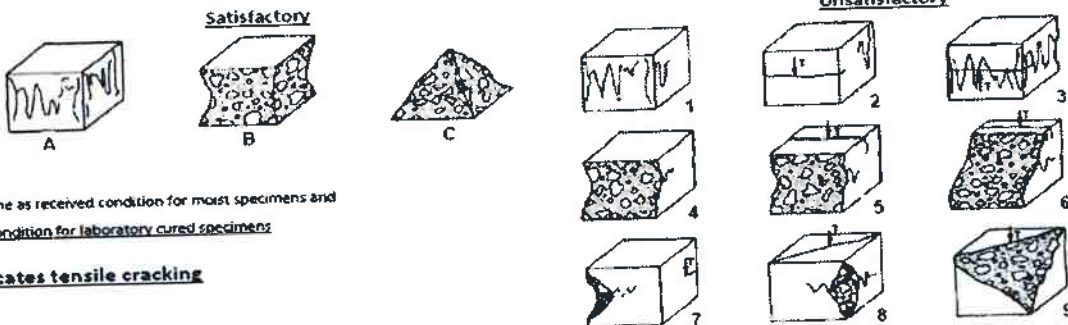
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/09/2023	02/10/2023	7	8023	2.377	801.8	363	362	90%
2				8230	2.439	808.6	366		
3				8199	2.429	785.6	356		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/09/2023	23/10/2023	28	8254	2.446	1183.0	536	527	132%
2				8260	2.447	1146.0	519		
3				8419	2.495	1158.0	525		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



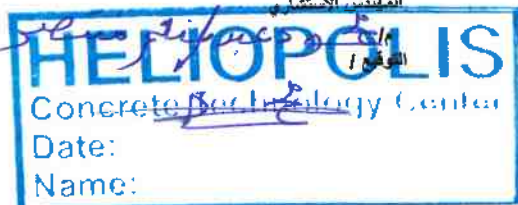
Remarks :

1881: Part 114 in the as received condition for most specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد

مهندس شركة السلام



التوقيع /

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		23/10/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 010				Revision			
					00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				24	10	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strenght Test result (7&28 Days) for Piles : 1-			
	A222 2- A11 3- A211 4-A25			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days compressive strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		24/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	23
IR	10

Pile	A 222
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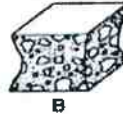
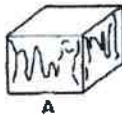
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	26/09/2023	03/10/2023	7	8210	2.433	843.3	382	373	93%
2				8345	2.473	799.2	362		
3				8329	2.468	829.0	376		

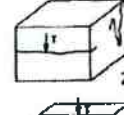
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	26/09/2023	24/10/2023	28	8405	2.490	1123.0	509	512	128%
2				8180	2.424	1140.0	516		
3				8014	2.375	1127.0	511		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	24
IR	10

Pile	A 11
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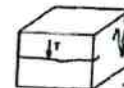
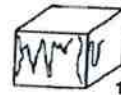
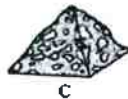
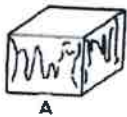
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	26/09/2023	03/10/2023	7	8265	2.449	787.0	357	351	88%
2				8370	2.480	776.0	352		
3				8271	2.451	763.5	346		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	26/09/2023	24/10/2023	28	8458	2.506	1149.0	520	485	121%
2				8127	2.408	1016.0	460		
3				8273	2.451	1048.0	475		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	25
IR	10

Pile	A 211
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Test Results (7 Days) & Calculation :

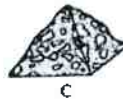
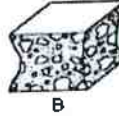
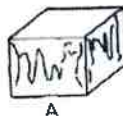
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	26/09/2023	03/10/2023	7	8072	2.392	852.5	386	382	96%
2				8348	2.473	846.4	383		
3				8223	2.436	832.4	377		

Test Results (28 Days) & Calculation :

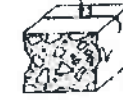
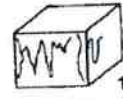
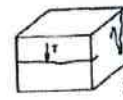
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	26/09/2023	24/10/2023	28	8184	2.425	1168.0	529	524	131%
2				8123	2.407	1143.0	518		
3				8079	2.394	1156.0	524		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



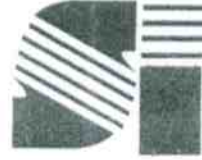
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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الإسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	26
IR	10

Pile	A 25
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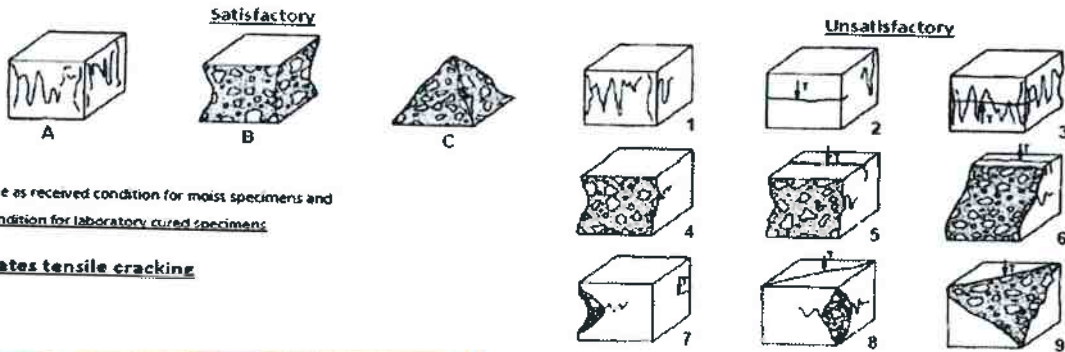
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	26/09/2023	03/10/2023	7	8341	2.471	786.5	356	352	88%
2				8271	2.451	782.0	354		
3				8351	2.474	763.3	346		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	26/09/2023	24/10/2023	28	8400	2.489	1103.0	500	505	126%
2				8154	2.416	1108.0	502		
3				8381	2.483	1132.0	513		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع /

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		24/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF -011				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				25	10
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A24 2- A37 3 - A205 4 - A10 5- A15 6 - A216				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					
6					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		25/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الفريانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	27
IR	11

Pile	A 24
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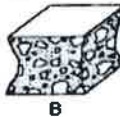
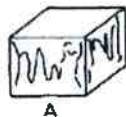
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	27/09/2023	04/10/2023	7	8261	2.448	843.2	382	386	96%
2				8207	2.432	860.5	390		
3				8274	2.452	849.8	385		

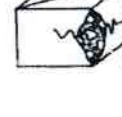
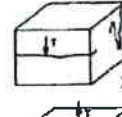
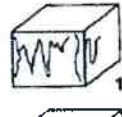
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	27/09/2023	25/10/2023	28	8204	2.431	1196.0	542	541	135%
2				8162	2.418	1203.0	545		
3				8262	2.448	1187.0	538		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	28
IR	11

Pile	A 37
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Test Results (7 Days) & Calculation :

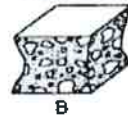
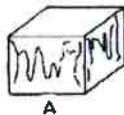
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	27/09/2023	04/10/2023	7	8124	2.407	844.7	383	385	96%
2				8155	2.416	852.8	386		
3				8173	2.422	853.8	387		

Test Results (28 Days) & Calculation :

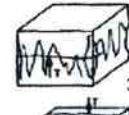
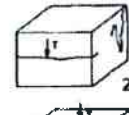
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	27/09/2023	25/10/2023	28	8397	2.488	1066.0	483	498	125%
2				8273	2.451	1112.0	504		
3				8272	2.451	1123.0	509		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	29
IR	11

Pile	A 205
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Test Results (7 Days) & Calculation :

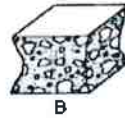
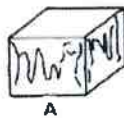
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	27/09/2023	04/10/2023	7	7907	2.343	782.3	354	351	88%
2				8090	2.397	763.0	346		
3				8473	2.511	780.1	353		

Test Results (28 Days) & Calculation :

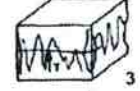
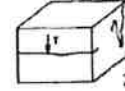
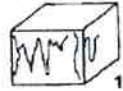
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	27/09/2023	25/10/2023	28	8404	2.490	1140.0	516	509	127%
2				8010	2.373	1113.0	504		
3				8406	2.491	1117.0	506		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	30
IR	11

Pile	A 10
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Test Results (7 Days) & Calculation :

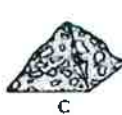
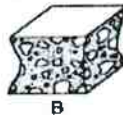
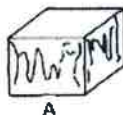
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	27/09/2023	04/10/2023	7	7915	2.345	781.4	354	358	89%
2				8190	2.427	794.8	360		
3				8254	2.446	794.0	360		

Test Results (28 Days) & Calculation :

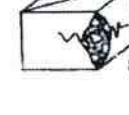
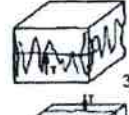
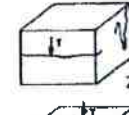
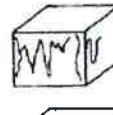
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	27/09/2023	25/10/2023	28	8312	2.463	1132.0	513	514	128%
2				8086	2.396	1171.0	530		
3				8214	2.434	1098.0	497		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	31
IR	11

Pile	A 15
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Test Results (7 Days) & Calculation :

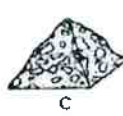
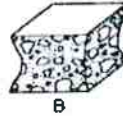
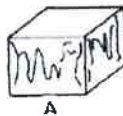
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	27/09/2023	04/10/2023	7	8266	2.449	785.0	356	369	92%
2				8156	2.417	824.0	373		
3				8092	2.396	835.5	378		

Test Results (28 Days) & Calculation :

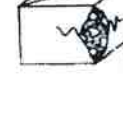
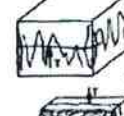
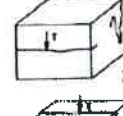
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	27/09/2023	25/10/2023	28	8232	2.439	1195.0	541	520	130%
2				8302	2.460	1117.0	506		
3				8213	2.433	1132.0	513		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	32
IR	11

Pile	A 216
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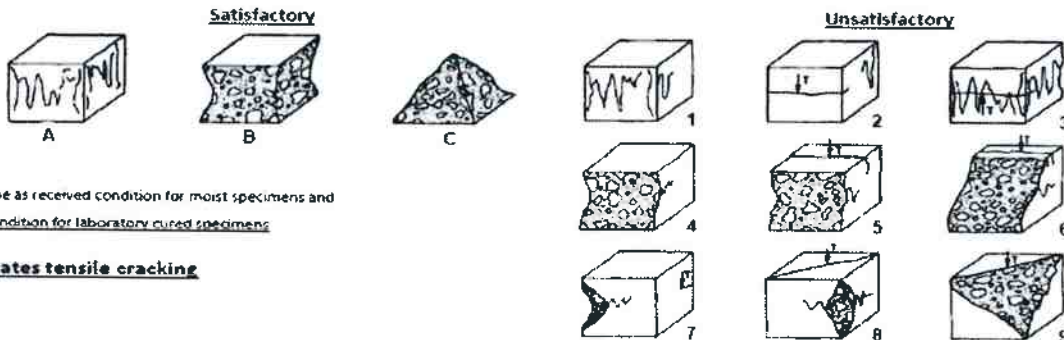
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	27/09/2023	04/10/2023	7	8135	2.410	792.4	359	356	89%
2				8266	2.449	744.9	337		
3				8336	2.470	817.7	370		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	27/09/2023	25/10/2023	28	8187	2.426	1126.0	510	509	127%
2				8309	2.462	1102.0	499		
3				8459	2.506	1146.0	519		

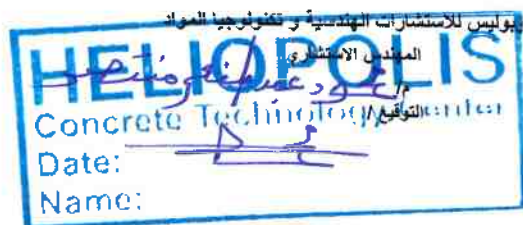
MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

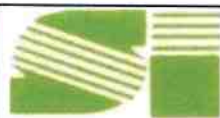
Note : T indicates tensile cracking



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SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		25/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 012				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				26	10
				23	11
				30	

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1- A48 2- A49 3- A200			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 daysCompressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		26/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng / Ahmed Yehai		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	33
IR	12

Pile	A 48
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Test Results (7 Days) & Calculation :

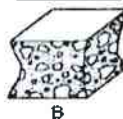
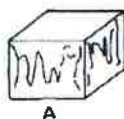
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	28/09/2023	05/10/2023	7	8146	2.414	823.8	373	368	92%
2				8380	2.483	833.5	378		
3				8219	2.435	782.8	355		

1

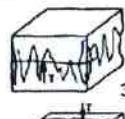
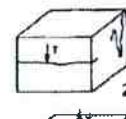
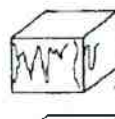
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	28/09/2023	26/10/2023	28	8542	2.531	1166.0	528	512	128%
2				8305	2.461	1123.0	509		
3				8300	2.459	1099.0	498		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory

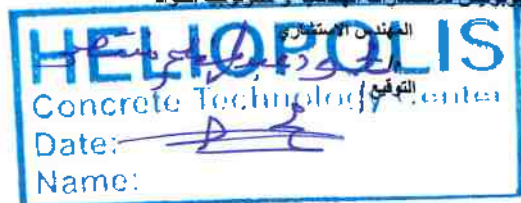


Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد

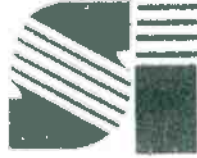


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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	34
IR	12

Pile	A 49
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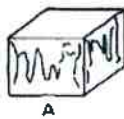
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	28/09/2023	05/10/2023	7	8220	2.436	787.6	357	358	90%
2				8300	2.459	810.9	367		
3				8240	2.441	774.6	351		

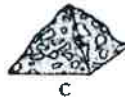
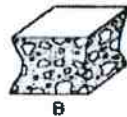
Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	28/09/2023	26/10/2023	28	8391	2.466	1090.0	494	498	125%
2				8307	2.461	1100.0	498		
3				8190	2.427	1109.0	502		

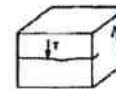
MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	35
IR	12

Pile	A 200
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Test Results (7 Days) & Calculation :

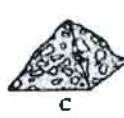
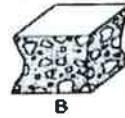
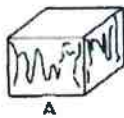
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	28/09/2023	05/10/2023	7	8476	2.511	843.9	382	385	96%
2				8092	2.398	856.0	388		
3				8273	2.451	852.8	386		

Test Results (28 Days) & Calculation :

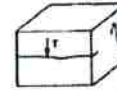
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	28/09/2023	26/10/2023	28	8180	2.424	1140.0	516	512	128%
2				8311	2.463	1135.0	514		
3				8416	2.494	1117.0	506		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

م
التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		27/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF -013				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				28	10
				YY	HH
				23	11
				MM	MM
					30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1-			
	A29 2- A32 3- A209			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

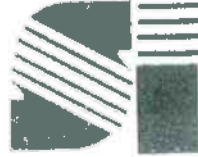
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		28/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng / Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الفرعيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM II 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	36
IR	13

Pile	A 29
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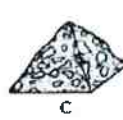
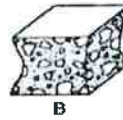
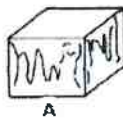
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/09/2023	07/10/2023	7	8350	2.474	837.5	379	365	91%
2				8203	2.431	784.0	355		
3				8222	2.438	796.5	361		

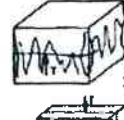
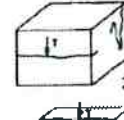
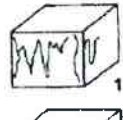
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/09/2023	28/10/2023	28	8313	2.463	1130.0	512	511	128%
2				8301	2.460	1119.0	507		
3				8283	2.454	1136.0	515		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



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مشروع القطار السريع القطاع الخامس الغربايات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	37
IR	13

Pile	A 32
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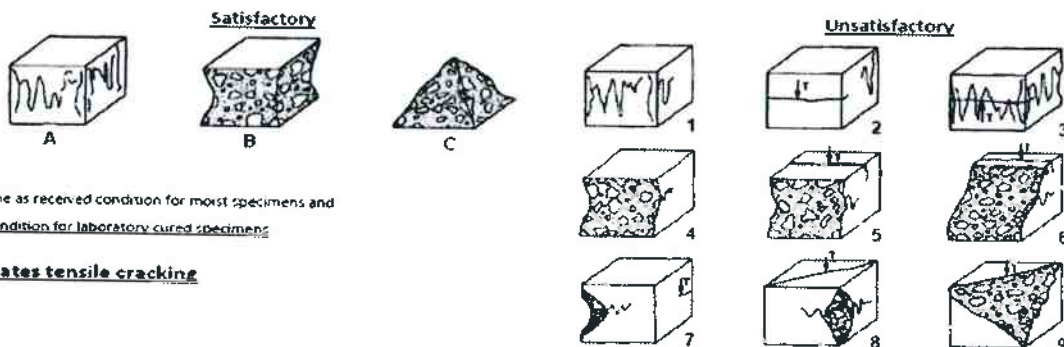
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/09/2023	07/10/2023	7	8193	2.428	845.6	383	373	93%
2				8124	2.407	826.7	374		
3				8300	2.459	799.3	362		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/09/2023	28/10/2023	28	8360	2.477	1150.0	521	517	129%
2				8620	2.554	1143.0	518		
3				8466	2.508	1131.0	612		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM II 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	38
IR	13

Pile	A 209
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Test Results (7 Days) & Calculation :

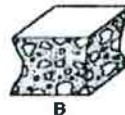
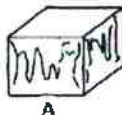
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/09/2023	07/10/2023	7	8406	2.491	848.4	384	370	93%
2				8490	2.516	800.2	362		
3				8144	2.413	802.4	363		

Test Results (28 Days) & Calculation :

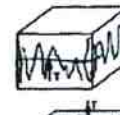
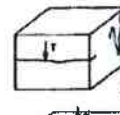
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	30/09/2023	28/10/2023	28	8030	2.379	1081.0	490	499	125%
2				8110	2.403	1095.0	496		
3				8275	2.452	1130.0	512		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع /

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		28/10/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 014				Revision			
					00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				29	10	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1-			
	A203 2- A212			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		29/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng / Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	39
IR	14

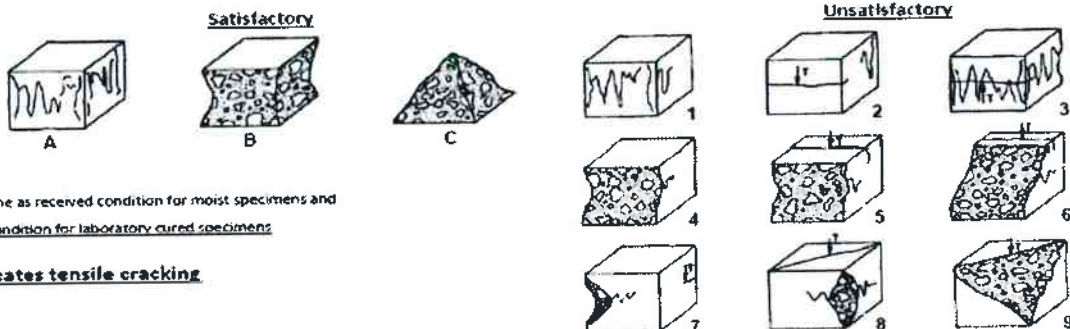
Pile	A 203
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	01/10/2023	08/10/2023	7	8497	2.518	786.0	356	352	0.8808963
2				8281	2.454	787.8	357		
3				8130	2.409	759.7	344		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	01/10/2023	29/10/2023	28	8417	2.494	1126.0	510	509	127%
2				8215	2.434	1131.0	512		
3				8326	2.467	1113.0	504		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

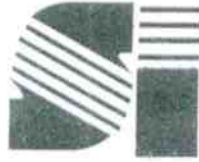


مهندس شركة الملام

التوقيع / م



HELIOPOLIS
Concrete Technology Centre
Design - Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	40
IR	14

Pile	A 212
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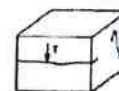
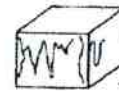
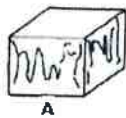
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	01/10/2023	08/10/2023	7	8364	2.478	816.3	370	358	90%
2				8431	2.498	787.9	357		
3				8326	2.467	768.0	348		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	01/10/2023	29/10/2023	28	8058	2.388	1181.0	535	538	134%
2				8349	2.474	1187.0	538		
3				8126	2.408	1193.0	540		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T Indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد

المهندس الاستشاري
HELIOPOLIS
Concrete Technology Center
Date:
Name:

مهندس شركة السلام

التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		29/10/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 015				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				30	10
				YY	HH
				23	11
					MM
					30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1- A215 2- A13 3- A206 4- A16			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		30/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng / Ahmed yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre

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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	41
IR	15

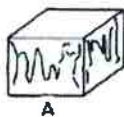
Pile	A 215
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Test Results (7 Days) & Calculation :

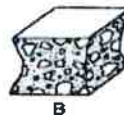
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	02/10/2023	09/10/2023	7	8449	2.503	878.0	398	395	99%
2				8540	2.530	857.0	388		
3				8020	2.376	882.0	400		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	02/10/2023	30/10/2023	28	8212	2.433	1178.0	534	526	131%
2				8310	2.462	1163.0	527		
3				8303	2.480	1142.0	517		

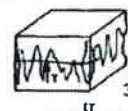
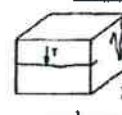
MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

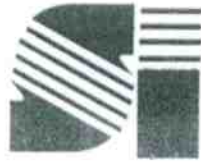


مهندس شركة السلام

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HELIOPOLIS
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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	42
IR	15

Pile	A 13
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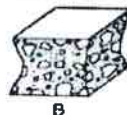
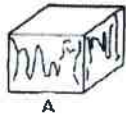
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage
1	02/10/2023	09/10/2023	7	8485	2.514	879.8	399	410	103%
2				8445	2.502	869.4	394		
3				8266	2.449	969.3	439		

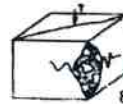
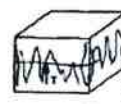
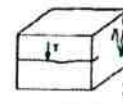
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage
1	02/10/2023	30/10/2023	28	8328	2.468	1036.0	469	488	122%
2				8265	2.449	1087.0	492		
3				8370	2.480	1107.0	501		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع / م

مشروع القطار السريع القطاع الخامس الغربائيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	43
IR	15

Pile	A 206
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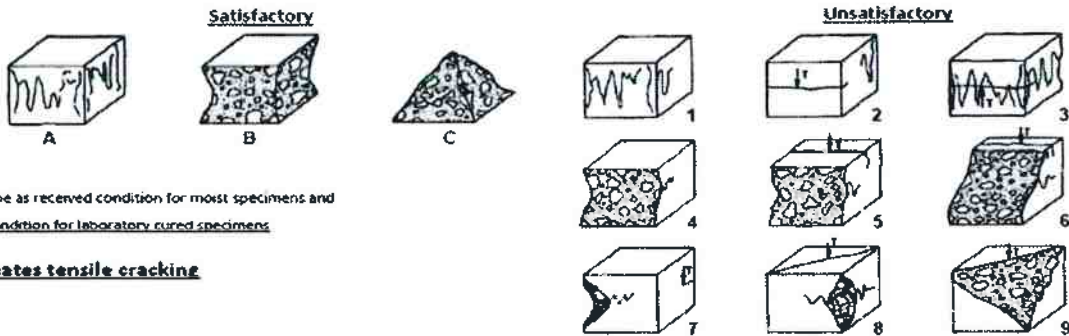
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	02/10/2023	09/10/2023	7	8575	2.541	943.7	427	413	103%
2				8244	2.443	885.0	401		
3				8685	2.573	906.8	411		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	02/10/2023	30/10/2023	28	8290	2.458	1073.0	486	493	123%
2				8227	2.438	1100.0	498		
3				8174	2.422	1082.0	495		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الإسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	44
IR	15

Pile	A 16
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Test Results (7 Days) & Calculation :

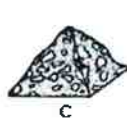
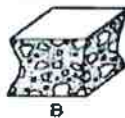
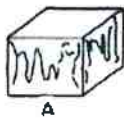
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	02/10/2023	09/10/2023	7	8299	2.459	854.7	387	403	101%
2				8006	2.372	914.0	414		
3				8402	2.489	898.0	407		

Test Results (28 Days) & Calculation :

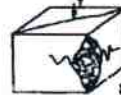
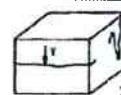
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	02/10/2023	30/10/2023	28	8304	2.460	1174.0	532	519	130%
2				8340	2.471	1153.0	522		
3				8301	2.460	1109.0	502		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع /

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		30/10/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 016				Revision			
					00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				31	10	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1-			
	A221 2-A224 3- A21 4- A28			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		31/10/2023	A
Designer				A
GARB *				
Employers Representative	Eng / ahmed yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربائيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الي ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	45
IR	16

Pile	A 221
------	-------

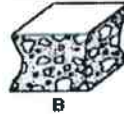
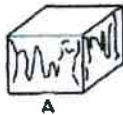
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	03/10/2023	10/10/2023	7	8323	2.466	883.0	400	396	99%
2				8282	2.454	849.8	385		
3				8402	2.489	886.5	402		

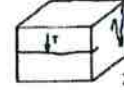
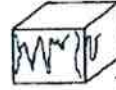
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	03/10/2023	31/10/2023	28	8360	2.477	1140.0	516	509	127%
2				8217	2.435	1129.0	511		
3				8190	2.427	1100.0	498		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	46
IR	16

Pile	A 224
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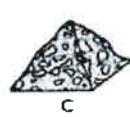
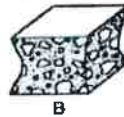
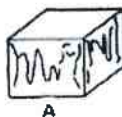
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	03/10/2023	10/10/2023	7	8311	2.463	896.0	406	398	100%
2				8409	2.492	880.0	399		
3				8091	2.397	863.0	391		

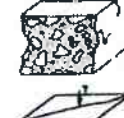
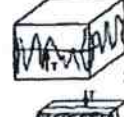
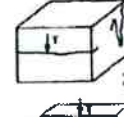
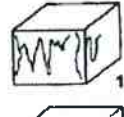
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	03/10/2023	31/10/2023	28	8339	2.471	1186.0	537	536	134%
2				8299	2.459	1170.0	530		
3				8400	2.489	1193.0	540		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



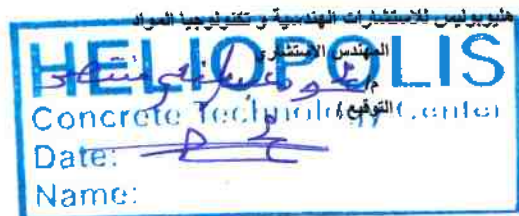
Unsatisfactory



Remarks :

1881, Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	47
IR	16

Pile	A 21
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Test Results (7 Days) & Calculation :

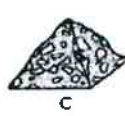
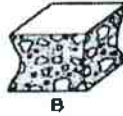
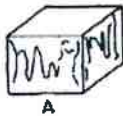
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	03/10/2023	10/10/2023	7	8311	2.463	871.0	395	428	107%
2				8470	2.510	933.4	423		
3				8266	2.449	1033.0	468		

Test Results (28 Days) & Calculation :

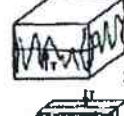
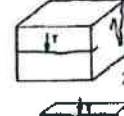
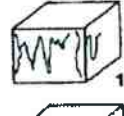
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	03/10/2023	31/10/2023	28	8213	2.433	1128.0	511	519	130%
2				8400	2.489	1173.0	531		
3				8350	2.474	1134.0	514		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	48
IR	16

Pile	A 28
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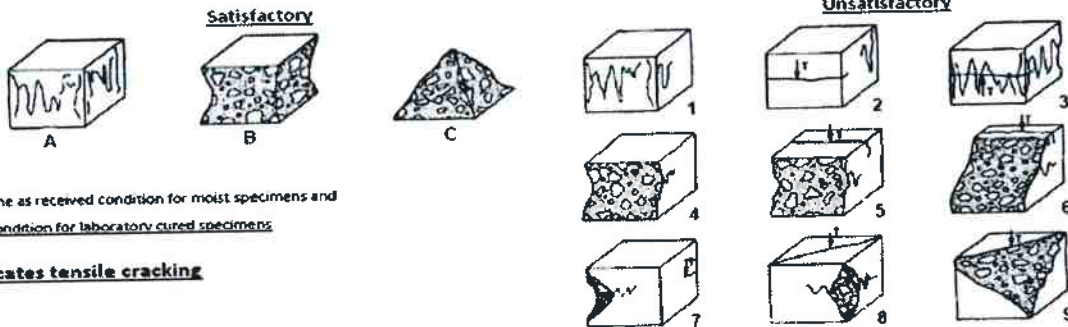
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	03/10/2023	10/10/2023	7	8323	2.466	874.8	396	398	100%
2				8426	2.497	858.3	389		
3				8377	2.482	905.8	410		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	03/10/2023	31/10/2023	28	7982	2.368	1140.0	516	518	130%
2				8350	2.474	1138.0	516		
3				8210	2.433	1154.0	523		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		31/10/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 017				Revision 00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				1	11	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A33 2- A42 3- A217 4- B324				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		01/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng / Ahmed yehia		11-11-2023	A

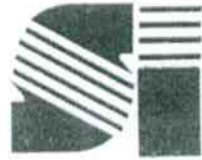
*

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	49
IR	17

Pile	A 33
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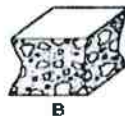
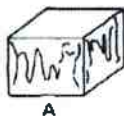
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	04/10/2023	11/10/2023	7	8252	2.445	847.0	384	393	98%
2				8100	2.400	883.0	400		
3				8197	2.429	871.0	395		

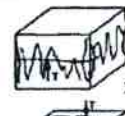
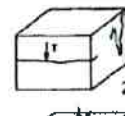
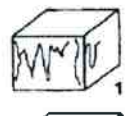
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	04/10/2023	01/11/2023	28	8311	2.463	1052.0	477	487	122%
2				8286	2.455	1075.0	487		
3				8334	2.469	1100.0	498		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



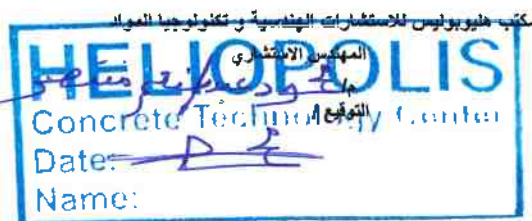
Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	50
IR	17

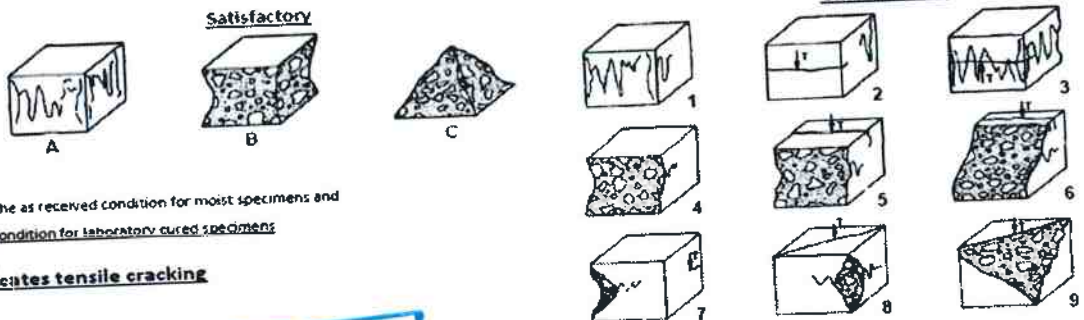
Pile	A 42
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	04/10/2023	11/10/2023	7	8518	2.524	875.8	397	397	99%
2				8381	2.483	896.3	406		
3				823	0.244	857.4	388		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	04/10/2023	01/11/2023	28	8223	2.436	1180.0	535	535	134%
2				8214	2.434	1173.0	531		
3				8250	2.444	1190.0	539		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Technology Centre
Design - Quality Control - Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠٠٠ الى ٣٤١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	51
IR	17

Pile	A 217
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Test Results (7 Days) & Calculation :

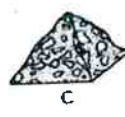
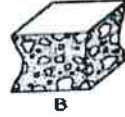
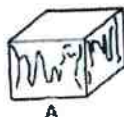
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	04/10/2023	11/10/2023	7	8124	2.407	857.0	388	388	97%
2				8343	2.472	835.8	379		
3				8300	2.459	876.0	397		

Test Results (28 Days) & Calculation :

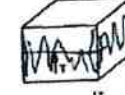
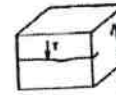
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	04/10/2023	01/11/2023	28	8252	2.445	1117.0	506	510	127%
2				8212	2.433	1131.0	512		
3				8290	2.456	1129.0	511		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory

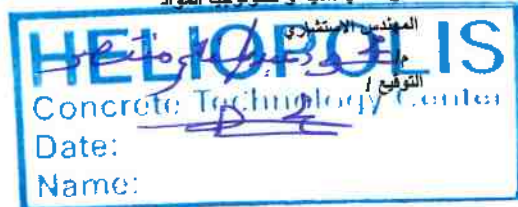


Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة السلام

التوقيع



HELIOPOLIS
Concrete Technology Centre
Design - Quality Control - Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	52
IR	17

Pile	B 324
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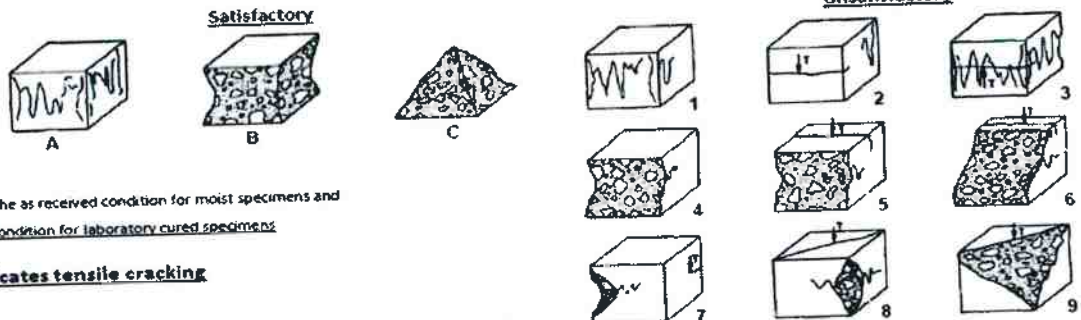
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	04/10/2023	11/10/2023	7	8117	2.405	854.6	387	389	97%
2				8475	2.511	868.5	393		
3				8323	2.466	855.4	387		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	04/10/2023	01/11/2023	28	8321	2.465	1130.0	512	507	127%
2				8327	2.467	1121.0	508		
3				8317	2.464	1105.0	501		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		03/11/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 018				Revision 00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				4	11	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A26 2- A43 3- A228 4-A229 5- B336 6- B348					1-
Location of Test	Site					
Item	Specification	Test Requirement	Test Result Attachment	Remarks		
1	C 400/460	7&28 daysCompressive Strength	Attached			
2						
3						
4						
5						
6						

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		04/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng / Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربائيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	53
IR	18

Pile	A 26
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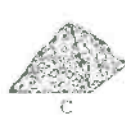
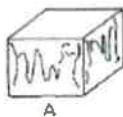
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	07/10/2023	14/10/2023	7	8280	2.453	862.0	390	394	99%
2				8255	2.446	870.0	394		
3				8339	2.471	878.0	398		

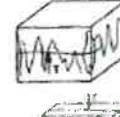
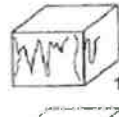
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	07/10/2023	04/11/2023	28	8259	2.447	1091.0	494	528	132%
2				8338	2.471	1198.0	543		
3				8288	2.456	1209.0	548		

MODES OF FAILURE AS PER BS 1881 : Part 115 : 1983

Satisfactory



Unsatisfactory



Remarks :

2881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م / عبدالله وجدى
التوقيع



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	54
IR	18

Pile	A 43
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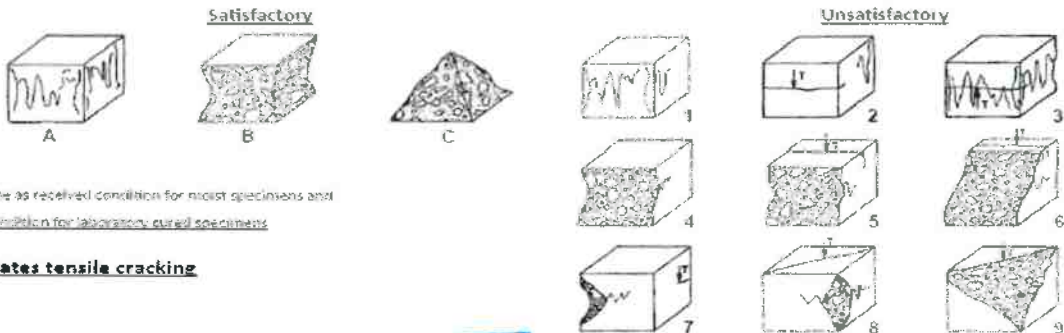
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	07/10/2023	14/10/2023	7	8280	2.453	873.0	395	394	99%
2				8328	2.467	890.0	403		
3				8334	2.469	848.0	384		

1

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	07/10/2023	04/11/2023	28	8396	2.488	1125.0	510	522	131%
2				8315	2.464	1139.0	516		
3				8381	2.477	1194.0	541		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1982



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

م/ عبدالله وحدى

التوقيع



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Concrete Technology Centre
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مشروع القطار السريع القطاع الخامس الغريانيات - برج العرب - الاسكندرية (من محطة ٢٤٠٠+٥٠٠ الي ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	55
IR	18

Pile	A 228
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	07/10/2023	14/10/2023	7	8285	2.455	853.0	386	387	97%
2				8300	2.459	836.0	379		
3				8282	2.454	872.0	396		

Test Results (28 Days) & Calculation :

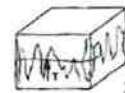
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	07/10/2023	04/11/2023	28	8327	2.467	1177.0	533	519	130%
2				8269	2.450	1179.0	534		
3				8343	2.472	1083.0	491		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربائيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	56
IR	18

Pile	A 229
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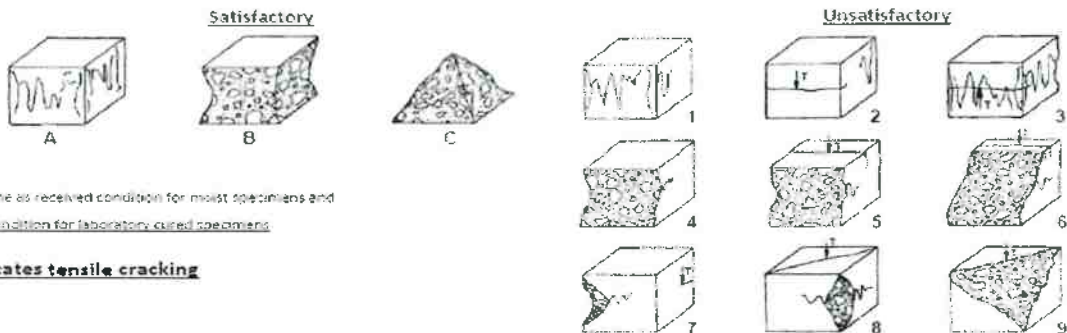
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	07/10/2023	14/10/2023	7	8585	2.544	850.0	385	389	97%
2				8200	2.430	858.0	389		
3				8090	2.397	865.0	392		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	07/10/2023	04/11/2023	28	8214	2.434	1219.0	552	503	126%
2				8461	2.507	1148.0	520		
3				8132	2.409	966.0	438		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة السلام

م / عبدالله وجدى

التوقيع /

(Signature)



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفنى لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	57
IR	18

Pile	B 336
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Test Results (7 Days) & Calculation :

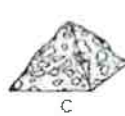
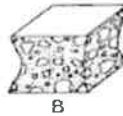
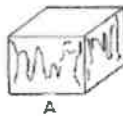
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	07/10/2023	14/10/2023	7	8265	2.449	866.0	392	386	97%
2				8314	2.463	838.0	380		
3				8309	2.462	864.0	387		

Test Results (28 Days) & Calculation :

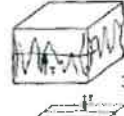
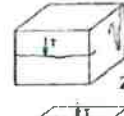
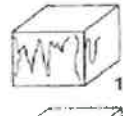
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	07/10/2023	04/11/2023	28	8268	2.450	1141.0	517	527	132%
2				8361	2.477	1165.0	528		
3				8348	2.473	1184.0	536		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks:

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

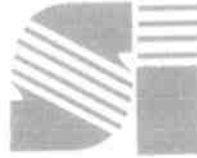
Note : T indicates tensile cracking

HELIOPOLIS
Concrete Technology Center
Date:
Name:

مهندس شركة السلام
م / عبدالله وحدى
التوقيع /



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربائيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	58
IR	18

Pile	B 348
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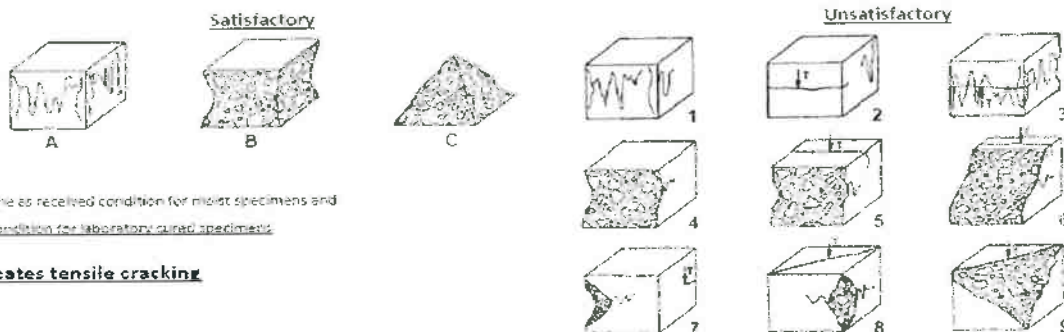
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	07/10/2023	14/10/2023	7	8265	2.449	858.0	389	383	96%
2				8312	2.463	835.0	378		
3				8249	2.444	841.0	381		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	07/10/2023	04/11/2023	28	8253	2.445	1132.0	513	510	127%
2				8371	2.480	1133.0	513		
3				8384	2.484	1112.0	504		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



مهندس شركة السلام
م / عبدالله وجدى
التوقيع /

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		04/11/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 019				Revision 00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				5	11	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A35 2- A198 3- A55 4- B325 5- B337 6- A38					1-
Location of Test	Site					
Item	Specification	Test Requirement	Test Result Attachment	Remarks		
1	C 400/460	7&28 days Compressive Strength	Attached			
2						
3						
4						
5						
6						

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party	

APPROVAL STATUS

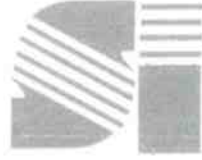
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		05/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng / Ahmed Yehia		11-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	59
IR	19

Pile	A 35
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Test Results (7 Days) & Calculation :

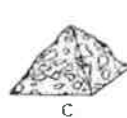
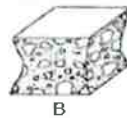
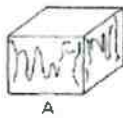
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m³)	Load (KN)	Compressive Strength (Kg/cm²)	Average (Kg/Cm²)	percentage %
1	08/10/2023	15/10/2023	7	8344	2.472	855.0	387	392	98%
2				8349	2.474	864.0	391		
3				8336	2.470	876.0	397		

1

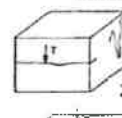
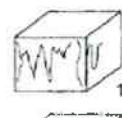
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m³)	Load (KN)	Compressive Strength (Kg/cm²)	Average (Kg/Cm²)	percentage %
1	08/10/2023	05/11/2023	28	8348	2.473	1149.0	520	521	130%
2				8359	2.477	1154.0	523		
3				8352	2.475	1149.0	520		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

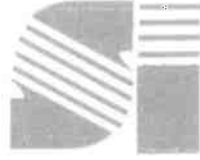
Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الي ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	60
IR	19

Pile	A 198
------	-------

Test Results (7 Days) & Calculation :

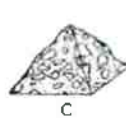
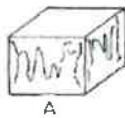
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	08/10/2023	15/10/2023	7	8319	2.465	856.0	388	393	98%
2				8302	2.460	888.0	402		
3				8365	2.479	859.0	389		

1

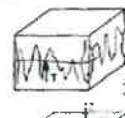
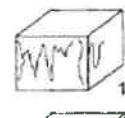
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	08/10/2023	05/11/2023	28	8318	2.465	1173.0	531	532	133%
2				8328	2.466	1169.0	530		
3				8483	2.513	1184.0	536		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks:

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking

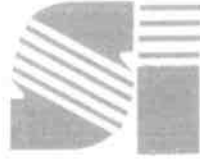


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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	61
IR	19

Pile	A 55
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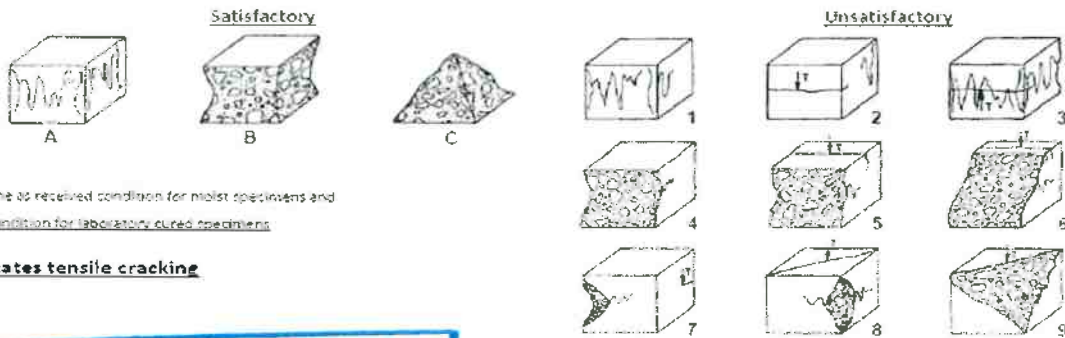
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	08/10/2023	15/10/2023	7	8270	2.450	816.0	370	372	93%
2				8425	2.496	886.0	401		
3				8300	2.459	761.0	345		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	08/10/2023	05/11/2023	28	8433	2.499	1053.0	477	483	121%
2				8326	2.467	1082.0	481		
3				8308	2.462	1083.0	491		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	62
IR	19

Pile	B 325
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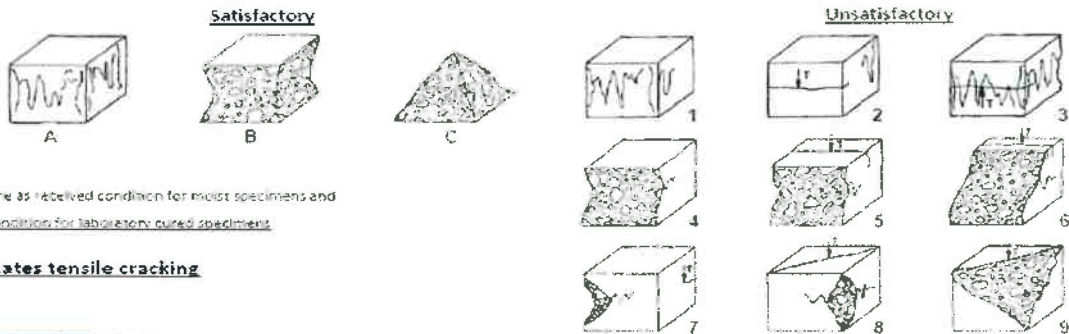
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	08/10/2023	15/10/2023	7	8395	2.487	853.0	386	390	98%
2				8333	2.469	876.0	397		
3				8290	2.456	855.0	387		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	08/10/2023	05/11/2023	28	8414	2.493	1144.0	518	528	132%
2				8372	2.481	1163.0	527		
3				8315	2.464	1189.0	539		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	63
IR	19

Pile	B 337
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Test Results (7 Days) & Calculation :

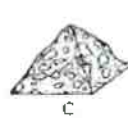
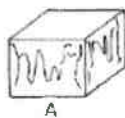
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	08/10/2023	15/10/2023	7	8378	2.482	850.0	385	395	99%
2				8366	2.479	880.0	399		
3				8319	2.465	887.0	402		

Test Results (28 Days) & Calculation :

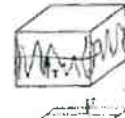
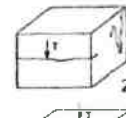
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	08/10/2023	05/11/2023	28	8389	2.486	1190.0	539	529	132%
2				8328	2.468	1166.0	528		
3				8404	2.490	1145.0	519		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimen and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد

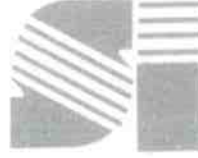
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Date: _____
Name: _____

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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	64
IR	19

Pile	A 38
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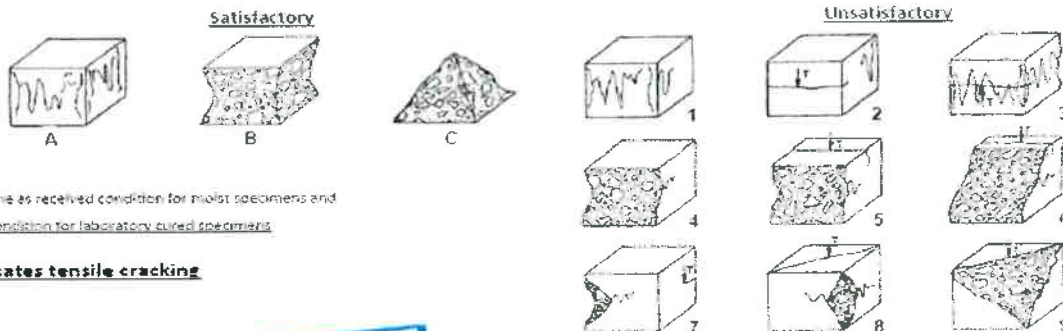
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	08/10/2023	15/10/2023	7	8328	2.468	826.0	374	384	96%
2				8372	2.481	858.0	389		
3				8358	2.476	857.0	388		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	08/10/2023	05/11/2023	28	8248	2.444	1076.0	487	494	124%
2				8413	2.493	1092.0	495		
3				8386	2.479	1104.0	500		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



مكتب هليوبوليس للاستشارات الهندسية وتكنولوجيا المواد

المهندس الاستشاري

م/ مهندسة منتظون

التوقيع

مهندس شركة السلام

م/ عبدالله وجدي

التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		05/11/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 020				Revision			
					00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				6	11	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A319 2-A186 3-A187				1-
Location of Test	Site				
the accuracy of test result is the responsibility of the third party					
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification 	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		06/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		21-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الي ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	65
IR	20

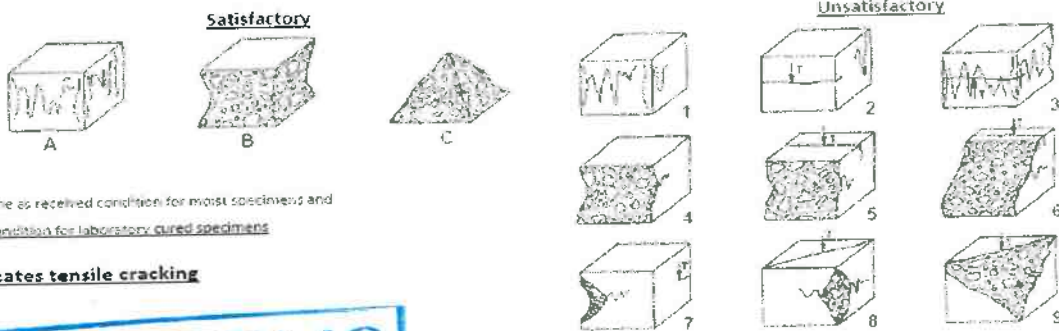
Pile	A 319
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	09/10/2023	16/10/2023	7	8300	2.459	865.0	392	387	97%
2				8320	2.465	840.0	381		
3				8365	2.479	857.0	388		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	09/10/2023	06/11/2023	28	8235	2.440	1149.0	520	517	129%
2				8214	2.434	1131.0	512		
3				8232	2.439	1143.0	518		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	66
IR	20

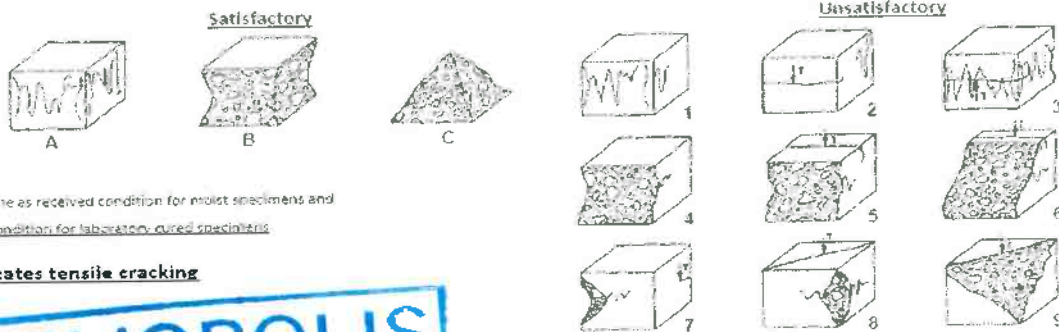
Pile	A 186
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	09/10/2023	16/10/2023	7	8267	2.449	861.0	390	398	100%
2				8270	2.450	877.0	397		
3				8296	2.458	901.0	408		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	09/10/2023	06/11/2023	28	8309	2.462	1168.0	529	522	130%
2				8300	2.459	1149.0	520		
3				8330	2.465	1138.0	516		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الفرعيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	67
IR	20

Pile	A 187
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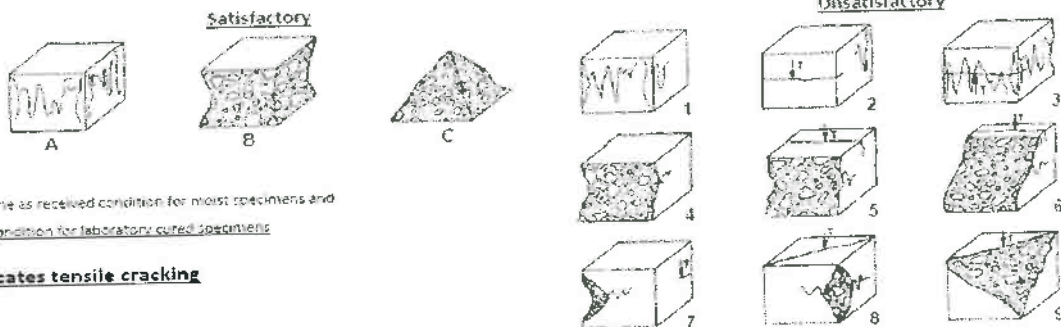
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	09/10/2023	16/10/2023	7	8230	2.439	862.0	390	385	96%
2				8300	2.459	843.0	382		
3				8299	2.459	847.0	384		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	09/10/2023	06/11/2023	28	8276	2.452	1186.0	537	526	131%
2				8309	2.462	1135.0	514		
3				8320	2.465	1162.0	526		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 : Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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عبدالله
التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab – Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		06/11/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 021				Revision 00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				7	11	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A27 2-B331 3-A22 4-B330				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		07/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		21-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربائيات - برج العرب - الاسكندرية (من محطة ٣٤٠٠+٥٠٠ الي ٣٤١٠+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	68
IR	21

Pile	A 27
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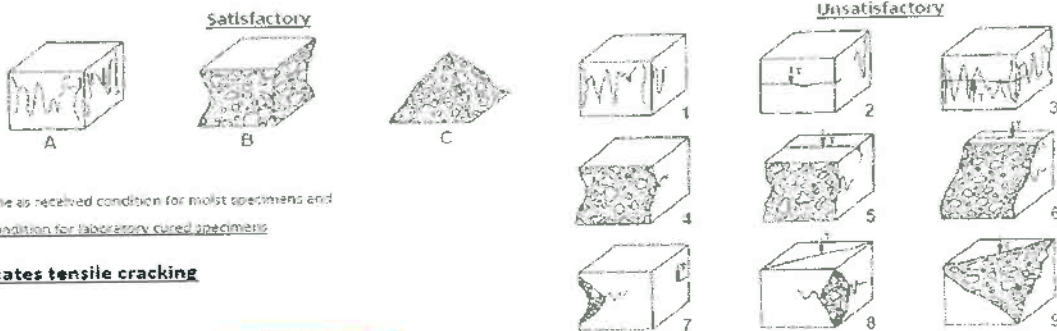
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	10/10/2023	17/10/2023	7	8270	2.450	840.0	381	380	95%
2				8312	2.463	823.0	373		
3				8241	2.442	851.0	386		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	10/10/2023	07/11/2023	28	8314	2.463	1109.0	502	506	126%
2				8311	2.463	1131.0	512		
3				8364	2.478	1108.0	502		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م. / عبدالرحمن
التوقيع / 2023



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Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الي ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	69
IR	21

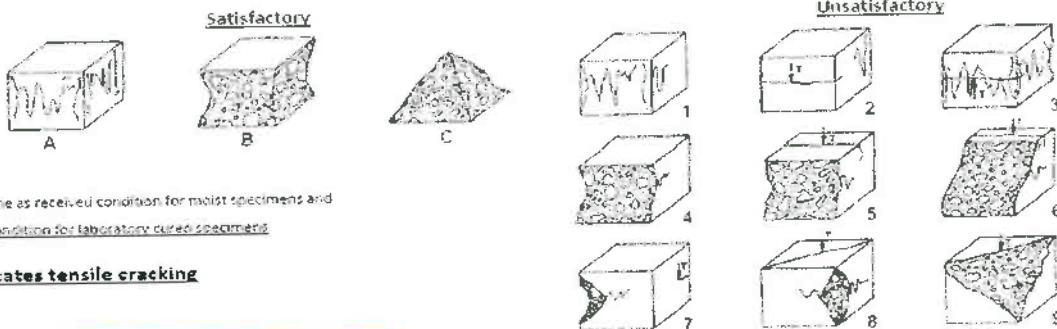
Pile	B 331
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	10/10/2023	17/10/2023	7	8375	2.481	886.0	401	396	99%
2				8413	2.493	877.0	397		
3				8361	2.477	862.0	390		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	10/10/2023	07/11/2023	28	8370	2.480	1132.0	513	515	129%
2				8256	2.446	1153.0	522		
3				8292	2.457	1123.0	509		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS811 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م. عبد الله محمد
التوقيع



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	70
IR	21

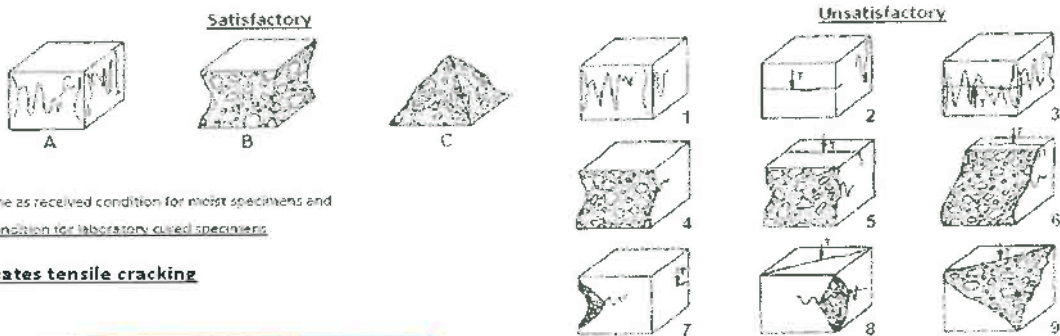
Pile	A 22
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	10/10/2023	17/10/2023	7	8338	2.471	861.0	390	390	97%
2				8239	2.441	870.0	394		
3				8401	2.489	849.0	385		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	10/10/2023	07/11/2023	28	8333	2.469	1130.0	512	508	127%
2				8370	2.480	1120.0	507		
3				8176	2.423	1117.0	506		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881, Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	71
IR	22

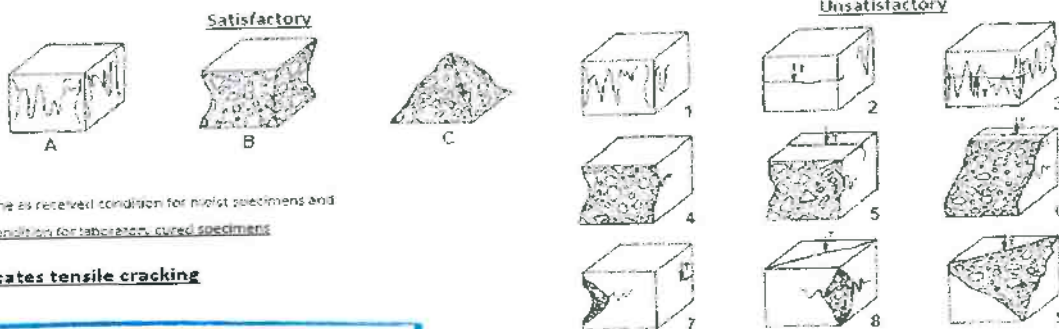
Pile	B 330
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	10/10/2023	17/10/2023	7	8365	2.479	856.0	388	388	97%
2				8352	2.475	843.0	382		
3				8386	2.485	870.0	394		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	10/10/2023	07/11/2023	28	8366	2.479	1123.0	509	512	128%
2				8368	2.479	1153.0	522		
3				8352	2.475	1118.0	506		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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م. أحمد
التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		07/11/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 022				Revision			
					00			
Received by ER	Name	Sign	TRF	DD	MM	YY	HH	MM
				8	11	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1- A34 2-A39 3-54 4-A218 5-A227			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		08/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		21-11-2023	A

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected

مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠٠+٥٠٠ الى ٢٤١٠+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	72
IR	22

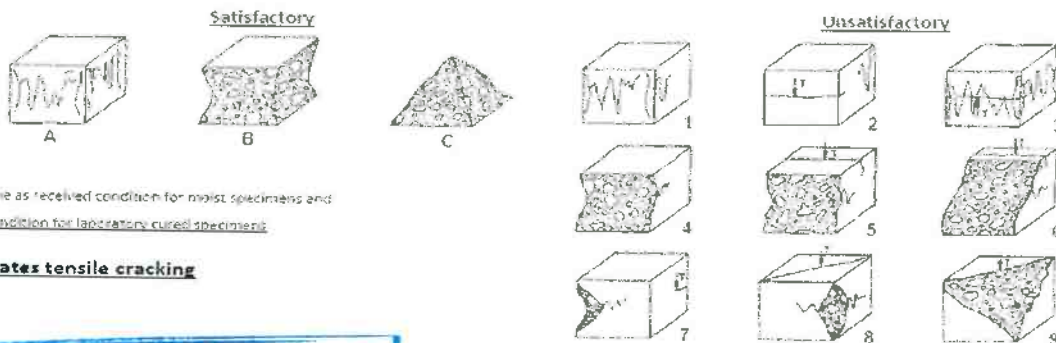
Pile	A 34
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	11/10/2023	18/10/2023	7	8400	2.489	867.0	393	388	97%
2				8323	2.466	845.0	383		
3				8391	2.486	855.0	387		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	11/10/2023	08/11/2023	28	8400	2.489	1164.0	527	524	131%
2				8398	2.488	1157.0	524		
3				8388	2.485	1149.0	520		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

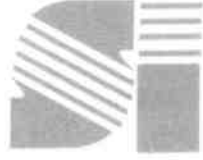
Note : T indicates tensile cracking

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المهندس الاستشاري
Date: ٢٠٢٣/١١/٠٨
Name: [Signature]

مهندس شركة السلام
[Signature]
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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	73
IR	22

Pile	A 39
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	11/10/2023	18/10/2023	7	8265	2.449	888.0	402	389	97%
2				8230	2.439	838.0	380		
3				8311	2.463	847.0	384		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	11/10/2023	08/11/2023	28	8362	2.478	1134.0	514	516	129%
2				8328	2.468	1154.0	523		
3				8284	2.455	1129.0	511		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

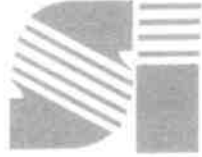
Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الى ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	74
IR	22

Pile	A 54
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	11/10/2023	18/10/2023	7	8274	2.452	852.0	386	387	97%
2				8180	2.424	860.0	390		
3				8230	2.439	849.0	385		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	11/10/2023	08/11/2023	28	8285	2.449	1112.0	504	504	126%
2				8280	2.453	1127.0	511		
3				8285	2.455	1099.0	498		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الى ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	75
IR	22

Pile	A 218
------	-------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	11/10/2023	18/10/2023	7	8295	2.458	877.0	397	393	98%
2				8203	2.431	847.0	384		
3				8257	2.447	881.0	399		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	11/10/2023	08/11/2023	28	8275	2.452	1125.0	510	511	128%
2				8450	2.504	1131.0	512		
3				8203	2.431	1126.0	510		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	76
IR	22

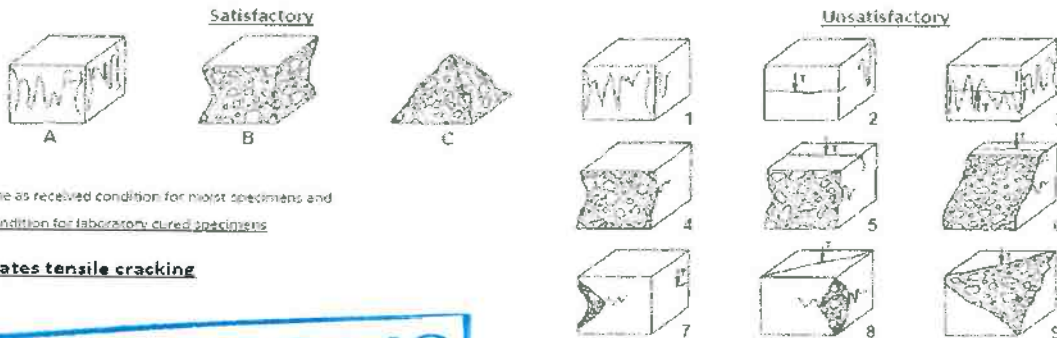
Pile	A 227
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	11/10/2023	18/10/2023	7	8217	2.435	884.0	400	400	100%
2				8229	2.438	873.0	395		
3				8301	2.460	894.0	405		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	11/10/2023	08/11/2023	28	8523	2.525	1110.0	503	483	121%
2				8067	2.390	1039.0	471		
3				8395	2.487	1048.0	476		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881, Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		10/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 023				Revision
					00
Received by ER	Name	Sign	TRF	DD	MM
				11	11
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : B323 2- A240 3-A41				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					

Comments by:

the accuracy of test result is the responsibility of the third party
Test results comply with specification

Comments by:

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		11/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		21-11-2023	A

*

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	77
IR	23

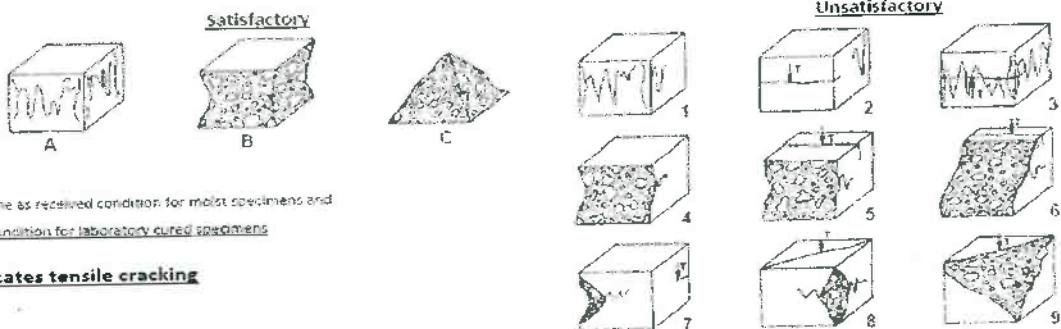
Pile	B 323
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	14/10/2023	21/10/2023	7	8382	2.484	923.0	418	405	101%
2				8383	2.484	897.0	406		
3				8412	2.492	864.0	391		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	14/10/2023	11/11/2023	28	8317	2.464	1171.0	530	531	133%
2				8223	2.436	1183.0	536		
3				8304	2.460	1164.0	527		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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م / عبدالله وحدي
التوقيع /

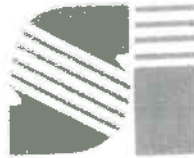
(Handwritten signature)



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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	78
IR	23

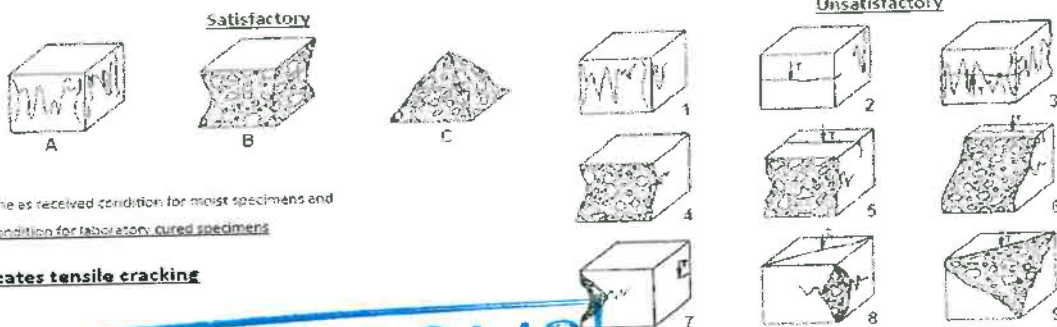
Pile	A 240
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	14/10/2023	21/10/2023	7	8417	2.494	923.0	418	397	99%
2				8493	2.516	868.0	393		
3				8430	2.498	839.0	380		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	14/10/2023	11/11/2023	28	8370	2.480	1137.0	515	528	132%
2				8401	2.489	1165.0	528		
3				8391	2.486	1196.0	542		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	79
IR	23

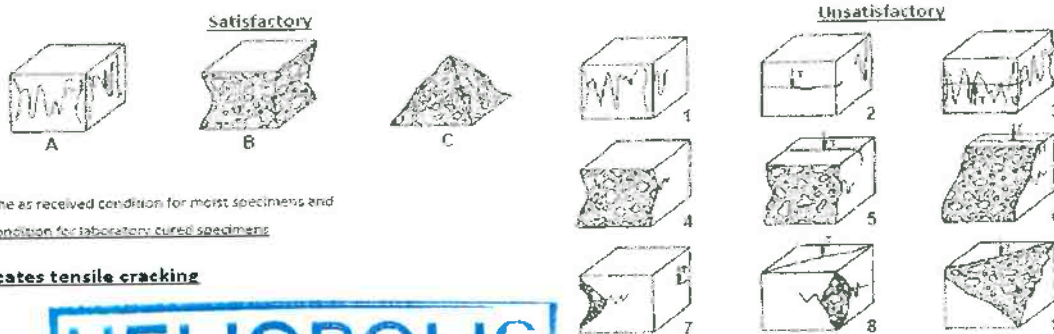
Pile	A 41
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	14/10/2023	21/10/2023	7	8386	2.485	909.0	412	399	100%
2				8393	2.487	870.0	394		
3				8463	2.508	863.0	391		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	14/10/2023	11/11/2023	28	8321	2.485	1176.0	533	534	133%
2				8372	2.481	1165.0	528		
3				8291	2.457	1194.0	541		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م / عبدالله وجدي
التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		11/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 024				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				12	11
				YY	HH
				23	11
					MM
					30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A66 2-50 3-B320 4-47 5-241 6-326 7-415 8-426 9-252				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					
6					
7					
8					
9					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		12/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		21-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	80
IR	024

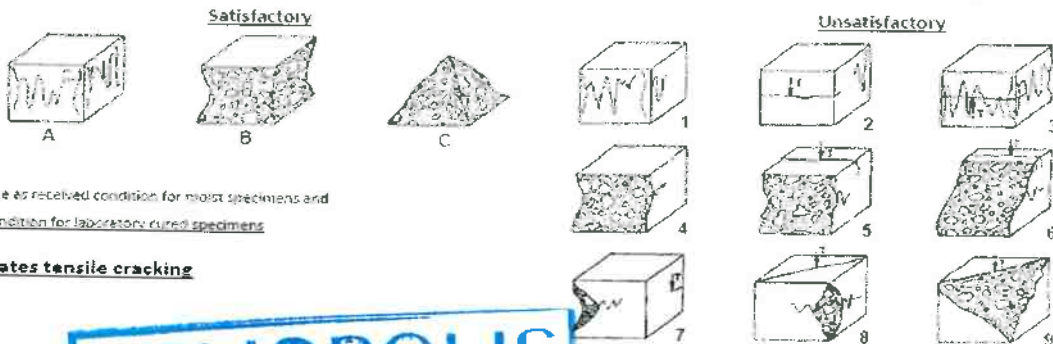
Pile	A66
------	-----

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	22/10/2023	7	8373	2.481	881.0	399	397	99%
2				8381	2.483	886.0	401		
3				8380	2.483	862.0	390		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	12/11/2023	28	8312	2.463	1171.0	530	525	131%
2				8293	2.457	1143.0	518		
3				8301	2.460	1164.0	527		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

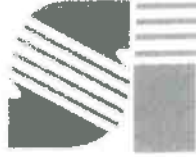
Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفنى لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (DPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	81
IR	024

Pile	A50
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Test Results (7 Days) & Calculation :

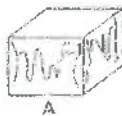
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	22/10/2023	7	8357	2.476	871.0	395	398	99%
2				8346	2.473	879.0	398		
3				8381	2.483	883.0	400		

1

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	12/11/2023	28	8371	2.480	1192.0	540	528	132%
2				8311	2.463	1181.0	535		
3				8297	2.458	1121.0	508		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS1: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

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Date: 15/10/2023
Name: التوقيع

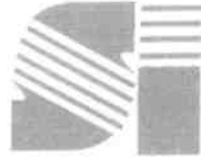
مهندس شركة الملام

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التوقيع



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	82
IR	024

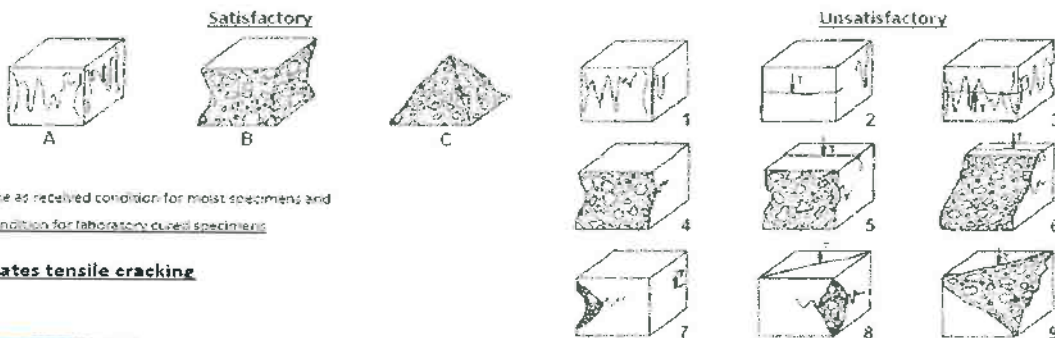
Pile	B320
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	15/10/2023	22/10/2023	7	8477	2.512	873.0	395	387	97%
2				8303	2.460	857.0	388		
3				8185	2.425	832.0	377		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	15/10/2023	12/11/2023	28	8312	2.463	1164.0	527	533	133%
2				8179	2.423	1172.0	531		
3				8286	2.455	1193.0	540		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS81 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	83
IR	24

Pile	A47
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	15/10/2023	22/10/2023	7	8305	2.461	840.0	381	382	95%
2				8318	2.465	851.0	386		
3				8397	2.488	838.0	380		

1

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	15/10/2023	12/11/2023	28	8317	2.464	1167.0	529	525	131%
2				8301	2.460	1173.0	531		
3				8291	2.457	1138.0	516		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking

HELIOPOLIS
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Date:
Name:

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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	84
IR	24

Pile	A241
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	22/10/2023	7	8232	2.439	917.0	415	403	101%
2				8193	2.428	891.0	404		
3				8204	2.431	863.0	391		

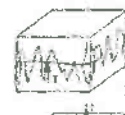
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	12/11/2023	28	8257	2.447	1126.0	510	523	131%
2				8264	2.449	1172.0	531		
3				8196	2.428	1165.0	528		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1982

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

HELIOPOLIS
Concrete Technology Center
Date: ٢٠٢٣ / ١١ / ١٢
Name: /

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م / عبدالله وجدي

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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	85
IR	24

Pile	B 326
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	15/10/2023	22/10/2023	7	8215	2.434	883.0	400	393	98%
2				8282	2.454	878.0	398		
3				8320	2.466	844.0	382		

1

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	15/10/2023	12/11/2023	28	8213	2.433	1170.0	530	535	134%
2				8223	2.436	1187.0	538		
3				8310	2.462	1188.0	538		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881-Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد
HELIOPOLIS
Concrete Technology Center
Date: 22/10/2023 التوقيع: [Signature]
Name: _____

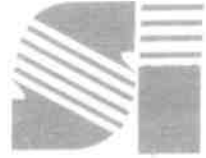
مهندس شركة السلام

م / عبدالله وجدي

التوقيع: [Signature]



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	86
IR	24

Pile	B 415
------	-------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	22/10/2023	7	8395	2.487	873.0	395	395	99%
2				8199	2.429	893.0	405		
3				8159	2.417	849.0	385		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	12/11/2023	28	8319	2.465	1191.0	540	540	135%
2				8293	2.457	1186.0	537		
3				8301	2.460	1197.0	542		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

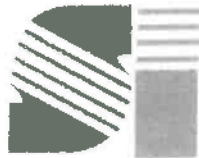
Note : T indicates tensile cracking



مهندس شركة السلام
م / عبدالله وحدي
التوقيع /



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	87
IR	24

Pile	B 426
------	-------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	22/10/2023	7	8021	2.377	849.0	385	376	94%
2				8000	2.370	826.0	374		
3				8382	2.484	817.0	370		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	15/10/2023	12/11/2023	28	8213	2.433	1192.0	540	537	134%
2				8196	2.426	1187.0	538		
3				8203	2.431	1180.0	535		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory-cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م/ عبدالرحمن
التوقيع



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الى ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	88
IR	24

Pile	A 252
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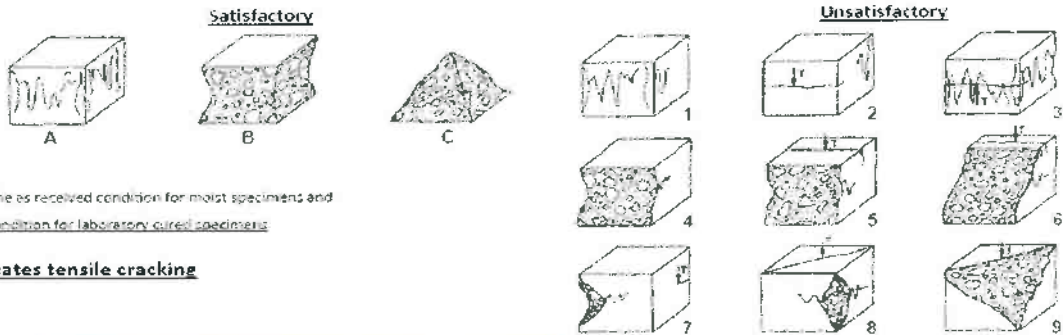
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	15/10/2023	22/10/2023	7	8361	2.477	908.0	411	406	102%
2				8356	2.476	939.0	425		
3				8368	2.479	842.0	381		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	15/10/2023	12/11/2023	28	8317	2.464	1137.0	515	531	133%
2				8248	2.444	1185.0	537		
3				8287	2.455	1197.0	542		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م / عبدالله وحدي
التوقيع /

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company				
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		EISalam International company		A&A Consultants				
Contractor ISSUED	Name	Sign	Date	Designation				
	Abdallah Wagdy		12/11/2023	QC Engineer				
Contractor Reference	GH - SI - SYS - STR - TRF - 025				Revision			
					00			
Received by ER	Name	Sign	TRF	DO	MM	YY	HH	MM
				13	11	23	11	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : B329 2-B420 3-A40 4-A44 5-B335 6-A56 7-B421 8-A192 9-A201 10-B438				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					
6					
7					
8					
9					
10					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		13/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		21-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربايات - برج العرب - الاسكندرية (من محطة ٣٤٠٠+٥٠٠ الي ٣٤١٠+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	89
IR	25

Pile	B 329
------	-------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	23/10/2023	7	8229	2.438	849.0	385	410	103%
2				8256	2.446	991.0	449		
3				8212	2.433	878.0	398		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	13/11/2023	28	8212	2.433	1192.0	540	536	134%
2				8113	2.404	1177.0	533		
3				8217	2.435	1183.0	536		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS81/Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory-cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م/ أحمد عبد الله
التوقيع



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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	90
IR	25

Pile	B 420
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Test Results (7 Days) & Calculation :

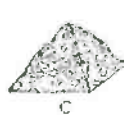
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	23/10/2023	7	8247	2.444	869.0	394	390	98%
2				8243	2.442	851.0	386		
3				8228	2.438	863.0	391		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	13/11/2023	28	8231	2.439	1203.0	545	541	135%
2				8251	2.445	1198.0	543		
3				8263	2.448	1181.0	535		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS81 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م. عبد الله علي
التوقيع / 2023



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الى ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	91
IR	25

Pile	A 40
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	23/10/2023	7	8155	2.416	829.0	376	386	97%
2				7880	2.335	883.0	400		
3				8190	2.427	846.0	383		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	13/11/2023	28	8231	2.439	1130.0	512	523	131%
2				8194	2.428	1171.0	530		
3				8202	2.430	1166.0	528		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام
م. عبد الله محمد
التوقيع



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مشروع القطر السريع القطاع الخامس الغربايات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	92
IR	25

Pile	A 44
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m³)	Load (KN)	Compressive Strength (Kg/cm²)	Average (Kg/Cm²)	percentage %
1	16/10/2023	23/10/2023	7	8268	2.450	889.0	403	387	97%
2				8300	2.459	857.0	388		
3				8316	2.464	815.0	369		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m³)	Load (KN)	Compressive Strength (Kg/cm²)	Average (Kg/Cm²)	percentage %
1	16/10/2023	13/11/2023	28	8217	2.435	1171.0	530	525	131%
2				8379	2.483	1142.0	517		
3				8237	2.441	1163.0	527		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS1: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



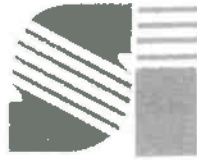
مهندس شركة الملام

م / عبدالله وجدي

التوقيع /



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مشروع القطر السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الى ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفنى لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	93
IR	25

Pile	B 335
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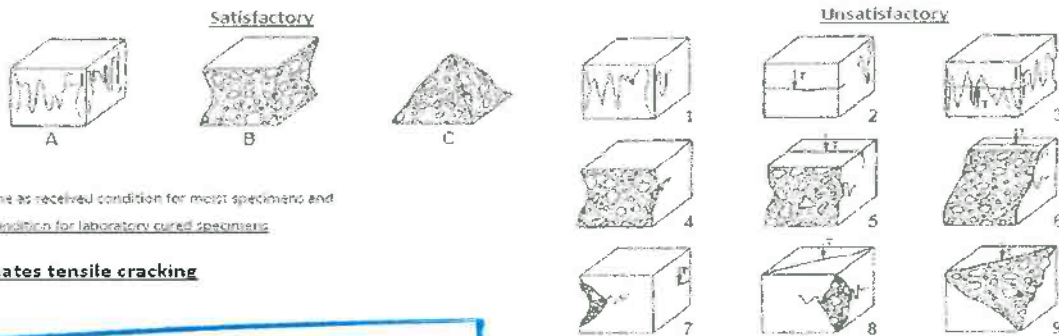
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	16/10/2023	23/10/2023	7	8183	2.425	829.0	376	385	96%
2				8214	2.434	870.0	394		
3				8098	2.399	849.0	385		

1

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	16/10/2023	13/11/2023	28	8219	2.435	1191.0	540	521	130%
2				8171	2.421	1122.0	508		
3				8203	2.431	1137.0	515		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks:

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

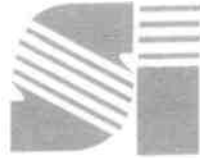
Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الى ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفنى لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	94
IR	25

Pile	A 56
------	------

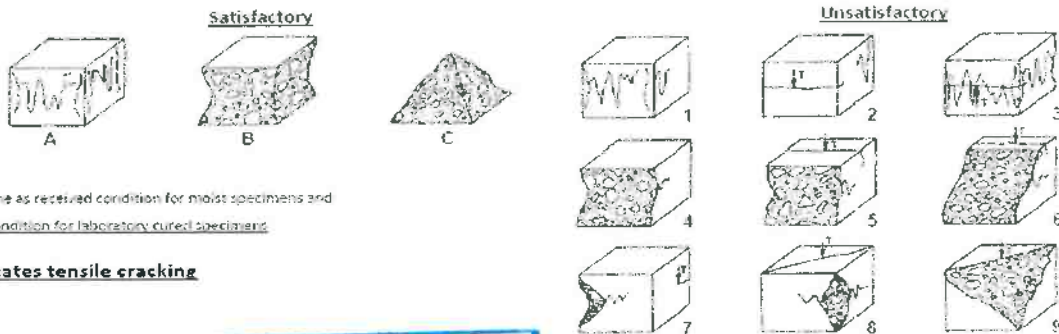
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	16/10/2023	23/10/2023	7	8216	2.434	849.0	385	395	99%
2				8198	2.429	854.0	387		
3				8199	2.429	913.0	414		

Test Results (28 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	16/10/2023	13/11/2023	28	8217	2.435	1172.0	531	535	134%
2				8192	2.427	1180.0	535		
3				8213	2.433	1191.0	540		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS81 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	95
IR	25

Pile	B 421
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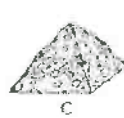
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	16/10/2023	23/10/2023	7	8156	2.417	901.0	408	393	98%
2				8038	2.382	836.0	379		
3				7963	2.359	868.0	393		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	16/10/2023	13/11/2023	28	8173	2.422	1170.0	530	528	132%
2				8102	2.401	1132.0	513		
3				8200	2.430	1192.0	540		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد



مهندس شركة السلام

م / عبدالله وحدى

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HELIOPOLIS
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Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	96
IR	25

Pile	A 192
------	-------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	23/10/2023	7	8222	2.436	843.0	382	392	98%
2				8191	2.427	872.0	395		
3				8228	2.438	884.0	400		

1

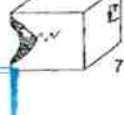
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	13/11/2023	28	8231	2.439	1183.0	536	538	134%
2				8273	2.451	1179.0	534		
3				8211	2.433	1200.0	544		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks:

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



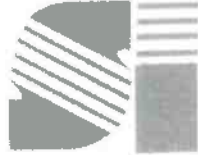
مهندس شركة السلام

م / عبدالله وجدي

التوقيع



HELIOPOLIS
Concrete Technology Centre
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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	97
IR	25

Pile	A201
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	23/10/2023	7	8171	2.421	858.0	389	386	96%
2				8177	2.423	833.0	377		
3				8260	2.447	863.0	391		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	16/10/2023	13/11/2023	28	8273	2.451	1177.0	533	536	134%
2				8192	2.427	1182.0	535		
3				8199	2.429	1193.0	540		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 114 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



مهندس شركة السلام

م / عبدالله وجدى

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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٢٤٠+٥٠٠ الي ٢٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	98
IR	25

Pile	B 438
------	-------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	16/10/2023	23/10/2023	7	8195	2.428	879.0	398	398	100%
2				8108	2.402	903.0	409		
3				8230	2.439	857.0	388		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	16/10/2023	13/11/2023	28	8219	2.435	1167.0	529	536	134%
2				8119	2.406	1199.0	543		
3				8217	2.435	1183.0	536		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

م / عبدالله وحدى

التوقيع /

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		13/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 026				Revision
					00
Received by ER	Name	Sign	TRF	DD	MM
				14	11
				23	11
				30	

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : B332 2-A*12 3-B445 4-338 5-A*1 6-A174 7- B433 8-A175 9- A60				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					
6					
7					
8					
9					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification 	

APPROVAL STATUS

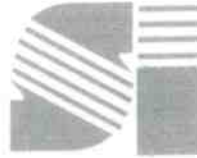
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		14/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		21-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	99
IR	26

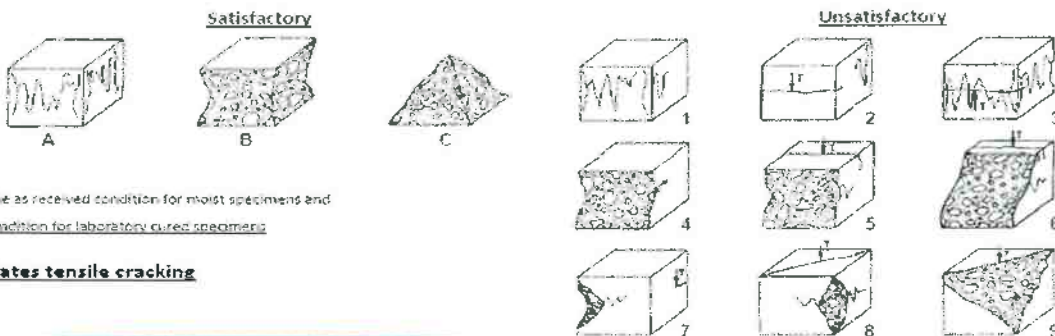
Pile	B332
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	24/10/2023	7	8294	2.457	876.0	397	391	98%
2				8258	2.447	879.0	398		
3				8282	2.454	833.0	377		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	14/11/2023	28	8195	2.428	1129.0	511	514	128%
2				8273	2.451	1131.0	512		
3				8287	2.455	1142.0	517		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

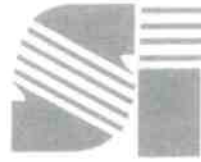
Note : T indicates tensile cracking

HELIOPOLIS
Concrete Technology Center
Date:
Name:

مهندس شركة السلام
م / عبدالله وجدى
التوقيع /



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	100
IR	26

Pile	A*12
------	------

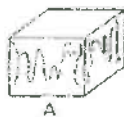
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	24/10/2023	7	8197	2.429	849.0	385	384	96%
2				8186	2.425	875.0	396		
3				8299	2.459	817.0	370		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	14/11/2023	28	8201	2.430	1138.0	516	521	130%
2				8193	2.428	1165.0	528		
3				8171	2.421	1148.0	520		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	101
IR	26

Pile	B445
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	17/10/2023	24/10/2023	7	8230	2.439	900.0	408	390	97%
2				8176	2.423	817.0	370		
3				8211	2.433	863.0	391		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	17/10/2023	14/11/2023	28	8237	2.441	1191.0	540	542	136%
2				8213	2.433	1210.0	548		
3				8201	2.430	1189.0	539		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	102
IR	26

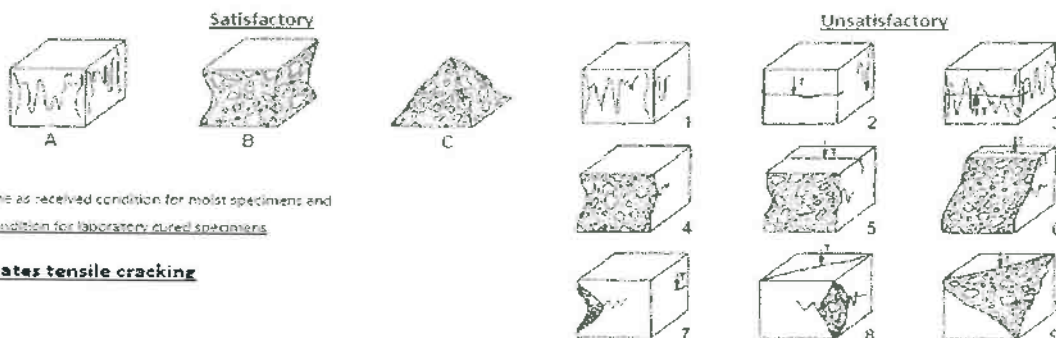
Pile	B338
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	24/10/2023	7	8206	2.431	873.0	395	386	96%
2				8253	2.445	855.0	387		
3				8245	2.443	827.0	375		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	14/11/2023	28	8203	2.431	1189.0	530	524	131%
2				8179	2.423	1157.0	524		
3				8187	2.426	1146.0	519		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	103
IR	26

Pile	A*1
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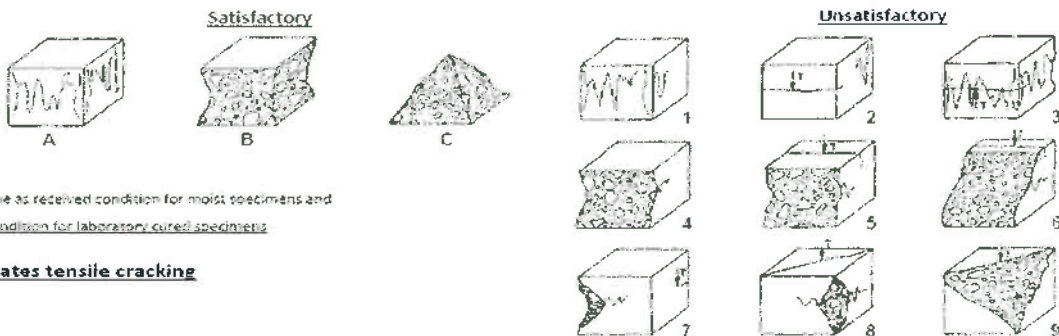
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	24/10/2023	7	8220	2.436	874.0	396	400	100%
2				8246	2.443	856.0	388		
3				8408	2.481	917.0	415		

1

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	14/11/2023	28	8223	2.436	1116.0	506	518	129%
2				8271	2.451	1141.0	517		
3				8212	2.433	1173.0	531		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

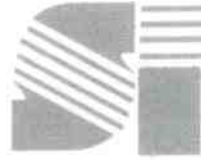
Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد
HELIOPOLIS
Concrete Technology Center
Date: 17/10/2023
Name: /

مهندسين شركة السلام
م / عبدالله وحدى
التوقيع /



HELIOPOLIS
Concrete Technology Centre
Design – Quality Control- Testing



مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	104
IR	26

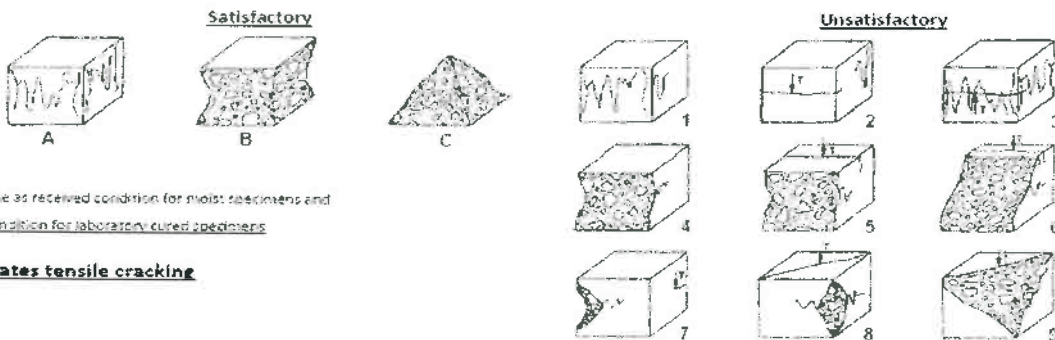
Pile	A174
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	17/10/2023	24/10/2023	7	8289	2.456	827.0	375	382	95%
2				8289	2.456	844.0	382		
3				8293	2.457	856.0	388		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	17/10/2023	14/11/2023	28	8267	2.449	1163.0	527	530	132%
2				8251	2.445	1156.0	524		
3				8241	2.442	1190.0	539		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS81-Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory-cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	105
IR	26

Pile	B433
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	17/10/2023	24/10/2023	7	8279	2.453	871.0	395	392	98%
2				8332	2.469	847.0	384		
3				8074	2.392	875.0	396		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	17/10/2023	14/11/2023	28	8227	2.438	1177.0	533	531	133%
2				8321	2.465	1168.0	529		
3				8123	2.407	1170.0	530		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1082: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	106
IR	26

Pile	A175
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	17/10/2023	24/10/2023	7	8235	2.440	887.0	402	393	98%
2				8237	2.441	852.0	386		
3				8243	2.442	863.0	391		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	17/10/2023	14/11/2023	28	8273	2.451	1202.0	545	540	135%
2				8287	2.455	1193.0	540		
3				8196	2.428	1181.0	535		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS81 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

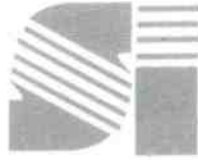
Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الي ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	107
IR	26

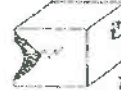
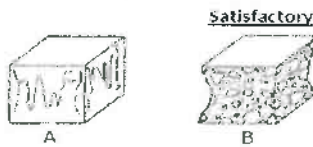
Pile	A60
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	24/10/2023	7	8215	2.434	887.0	402	397	99%
2				8208	2.432	907.0	411		
3				8284	2.455	838.0	380		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	17/10/2023	14/11/2023	28	8213	2.433	1191.0	540	533	133%
2				8220	2.436	1183.0	536		
3				8199	2.429	1154.0	523		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		14/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 027				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				15	11
				23	11
				30	

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1-A57 2-B342 3-B439 4-A45 5-B416 6-B343 7-A*2 8-B419 9-B347 10-A*11				
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					
6					
7					
8					
9					
10					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		15/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		22-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	108
IR	027

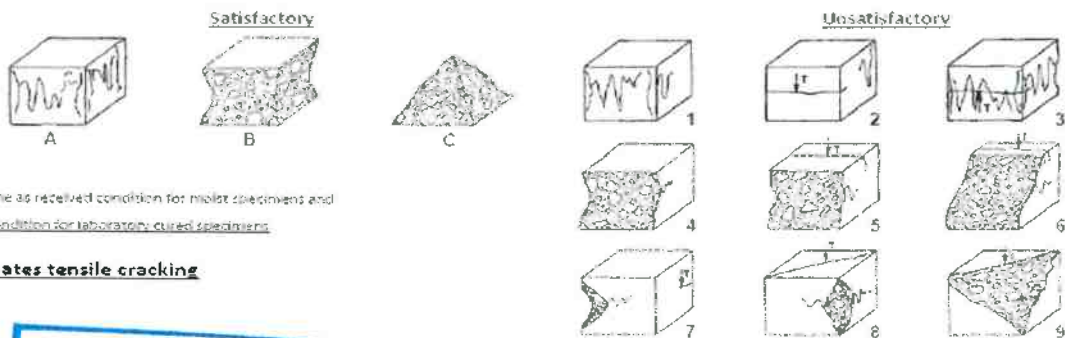
Pile	A57
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8260	2.447	847.0	384	394	98%
2				8250	2.444	879.0	398		
3				8318	2.465	882.0	400		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8202	2.430	1029.0	466	490	122%
2				8316	2.464	1131.0	512		
3				8293	2.457	1084.0	491		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881, Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory-cured specimens.

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	109
IR	027

Pile	B342
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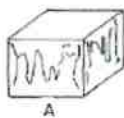
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8337	2.470	913.0	414	408	102%
2				8213	2.433	899.0	407		
3				8370	2.480	887.0	402		

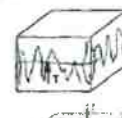
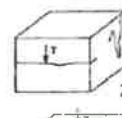
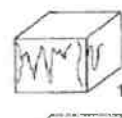
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8361	2.477	1193.0	540	538	134%
2				8183	2.425	1173.0	531		
3				8222	2.436	1195.0	541		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



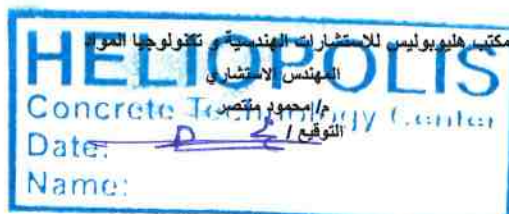
Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	110
IR	027

Pile	B439
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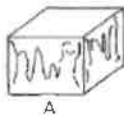
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8223	2.436	836.0	379	408	102%
2				8200	2.430	943.0	427		
3				8216	2.434	923.0	418		

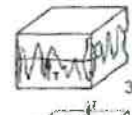
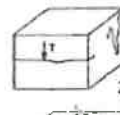
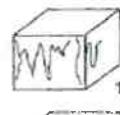
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8257	2.447	991.0	449	458	115%
2				8242	2.442	977.0	443		
3				8275	2.452	1068.0	484		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1061 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	111
IR	027

Pile	A45
------	-----

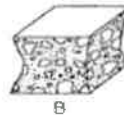
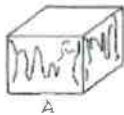
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8230	2.439	891.0	404	398	100%
2				8260	2.447	884.0	400		
3				8217	2.435	862.0	390		

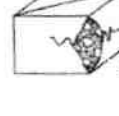
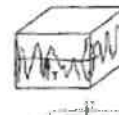
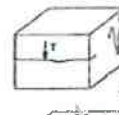
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8281	2.454	1173.0	531	529	132%
2				8184	2.425	1155.0	523		
3				8360	2.477	1174.0	532		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	112
IR	027

Pile	B416
------	------

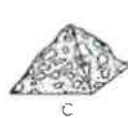
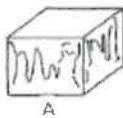
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8270	2.450	924.0	419	419	105%
2				8246	2.443	936.0	424		
3				8116	2.405	912.0	413		

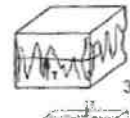
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8223	2.436	1042.0	472	490	122%
2				8281	2.454	1106.0	501		
3				8291	2.457	1097.0	497		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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4/4/23



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	113
IR	027

Pile	B343
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8130	2.409	952.0	431	415	104%
2				8265	2.449	921.0	417		
3				8218	2.435	874.0	396		

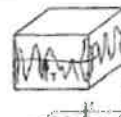
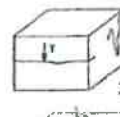
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8460	2.507	1159.0	525	524	131%
2				8347	2.473	1144.0	518		
3				8285	2.455	1167.0	529		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 is in line as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد

HELIOPOLIS
Concrete Technology Center
Date:
Name:

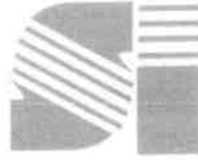
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	114
IR	027

Pile	A*2
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8298	2.458	886.0	401	410	103%
2				8270	2.450	920.0	417		
3				8248	2.444	911.0	413		

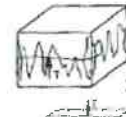
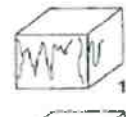
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8316	2.464	1056.0	478	503	126%
2				8235	2.440	1127.0	511		
3				8257	2.447	1148.0	520		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks:

BS 1881 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا المواد
HELIOPOLIS
Concrete Technology Center
Date:
Name:

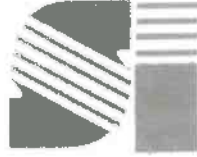
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	115
IR	027

Pile	B419
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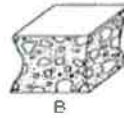
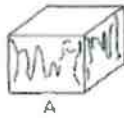
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8224	2.437	883.0	400	390	97%
2				8244	2.443	842.0	381		
3				8213	2.433	857.0	388		

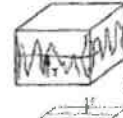
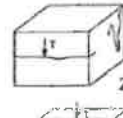
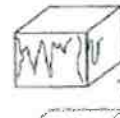
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8266	2.449	1139.0	516	509	127%
2				8251	2.445	1134.0	514		
3				8319	2.465	1099.0	498		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS81 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

م / عبدالله وجدى

التوقيع



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	116
IR	027

Pile	B347
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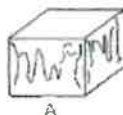
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8241	2.442	923.0	418	413	103%
2				8311	2.463	919.0	416		
3				8232	2.439	892.0	404		

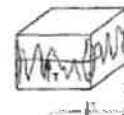
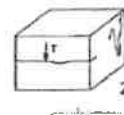
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8419	2.495	1046.0	474	484	121%
2				8294	2.457	1062.0	481		
3				8278	2.453	1099.0	498		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS81:Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مكتب هليوبوليس للاستشارات الهندسية وتكنولوجيا البناء



مهندس شركة السلام

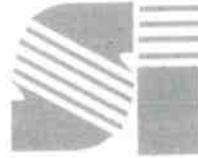
م / عبدالله وحدي

التوقيع



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM II 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	117
IR	027

Pile	A*11
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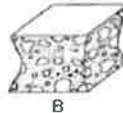
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/10/2023	25/10/2023	7	8230	2.439	931.0	422	417	104%
2				8311	2.463	941.0	426		
3				8270	2.450	892.0	404		

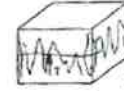
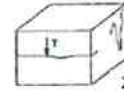
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	18/10/2023	15/11/2023	28	8331	2.468	1156.0	524	518	129%
2				8319	2.465	1127.0	511		
3				8261	2.448	1145.0	519		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS1 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

مكتب هليوبوليس للاستشارات الهندسية و تكنولوجيا جبا المواد

HELIOPOLIS
Concrete Technology Center

المهندس الاستشاري
م / محمود منير
التوقيع

Date: _____

Name: _____

مهندس شركة السلام

م / عبدالله وجدي

التوقيع

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		17/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 028				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				18	11
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1-A13 2-A5 3-A188 4-A208 5-B444 6-B361			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				
6				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		18/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		22-11-2023	A

*

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	118
IR	028

Pile	A13
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	21/10/2023	28/10/2023	7	8336	2.470	971.0	440	452	113%
2				8289	2.456	1009.0	457		
3				8339	2.471	1015.0	460		

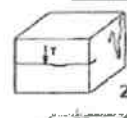
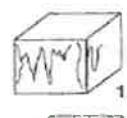
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	21/10/2023	18/11/2023	28	8330	2.468	1092.0	495	500	125%
2				8317	2.464	1104.0	500		
3				8340	2.471	1115.0	505		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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(Signature)



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	119
IR	028

Pile	A5
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	21/10/2023	28/10/2023	7	8270	2.450	914.0	414	405	101%
2				8247	2.444	853.0	386		
3				8349	2.474	917.0	415		

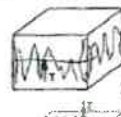
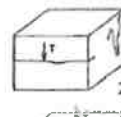
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	21/10/2023	18/11/2023	28	8323	2.466	1138.0	516	505	126%
2				8295	2.458	1086.0	492		
3				8278	2.453	1119.0	507		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



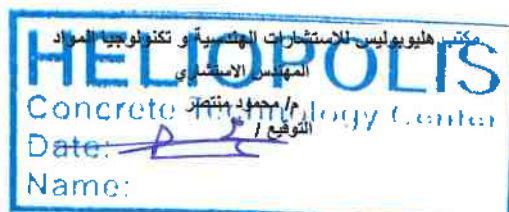
Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	120
IR	028

Pile	A188
------	------

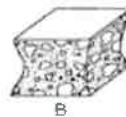
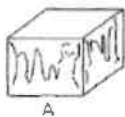
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	21/10/2023	28/10/2023	7	8326	2.467	956.0	433	448	112%
2				8212	2.433	999.0	453		
3				8220	2.436	1012.0	458		

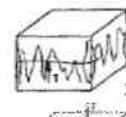
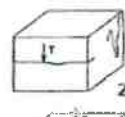
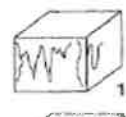
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	21/10/2023	18/11/2023	28	8255	2.446	1147.0	520	513	128%
2				8268	2.450	1129.0	511		
3				8288	2.456	1124.0	509		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



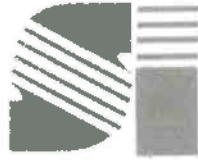
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	121
IR	028

Pile	A208
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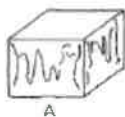
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	21/10/2023	28/10/2023	7	8165	2.419	897.0	406	405	101%
2				8337	2.470	881.0	399		
3				8159	2.417	903.0	409		

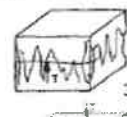
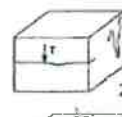
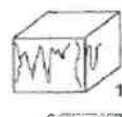
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	21/10/2023	18/11/2023	28	8161	2.418	1204.0	545	529	132%
2				8322	2.466	1189.0	530		
3				8234	2.440	1128.0	511		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS81 Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

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Name: / التوقيع /

مهندسين شركة السلام

م / عبدالله وجدي

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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	122
IR	028

Pile	B444
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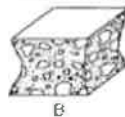
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	21/10/2023	28/10/2023	7	8341	2.471	1024.0	464	502	125%
2				8282	2.454	1123.0	509		
3				8343	2.472	1176.0	533		

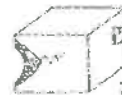
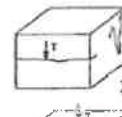
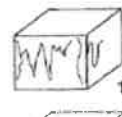
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	21/10/2023	18/11/2023	28	8346	2.473	1147.0	520	534	133%
2				8333	2.469	1171.0	530		
3				8303	2.460	1217.0	551		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in use as received condition for moist specimens and in the UNTESTED condition for laboratory cured specimens.

Note : T indicates tensile cracking

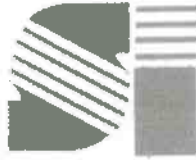


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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	123
IR	028

Pile	B361
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	21/10/2023	28/10/2023	7	8311	2.463	916.0	415	403	101%
2				8280	2.453	859.0	389		
3				8300	2.459	893.0	405		

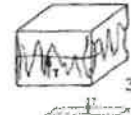
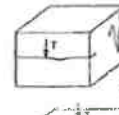
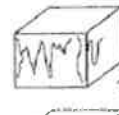
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	21/10/2023	18/11/2023	28	8348	2.473	1105.0	501	503	126%
2				8383	2.484	1093.0	495		
3				8399	2.489	1136.0	515		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		18/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 029				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				19	11
				23	11
				30	

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A197 2-B349 3-B438 4-B354 5-A220 6-B432 7-A61 8-A176	1-
Location of Test	Site	

Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/460	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				
6				
7				
8				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		19/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		26-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	124
IR	029

Pile	A197
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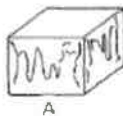
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	22/10/2023	29/10/2023	7	8458	2.596	918.0	416	405	101%
2				8483	2.490	876.0	397		
3				8301	2.460	888.0	402		

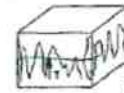
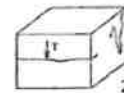
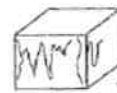
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	22/10/2023	19/11/2023	28	8326	2.467	1158.0	525	525	131%
2				8382	2.484	1148.0	520		
3				8220	2.436	1174.0	532		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS81, Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	125
IR	029

Pile	B349
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	29/10/2023	7	8290	2.456	913.0	414	407	102%
2				8231	2.439	884.0	400		
3				8317	2.464	899.0	407		

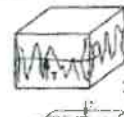
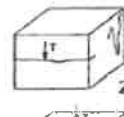
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	19/11/2023	28	8227	2.438	1173.0	531	516	129%
2				8380	2.483	1148.0	520		
3				8195	2.428	1094.0	496		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	126
IR	029

Pile	B438
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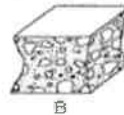
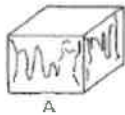
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	22/10/2023	29/10/2023	7	8306	2.461	889.0	403	405	101%
2				8260	2.447	892.0	404		
3				8347	2.473	904.0	410		

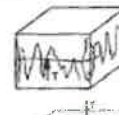
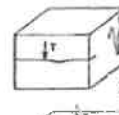
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	22/10/2023	19/11/2023	28	8316	2.464	1147.0	520	520	130%
2				8316	2.464	1138.0	516		
3				8340	2.471	1160.0	525		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	127
IR	029

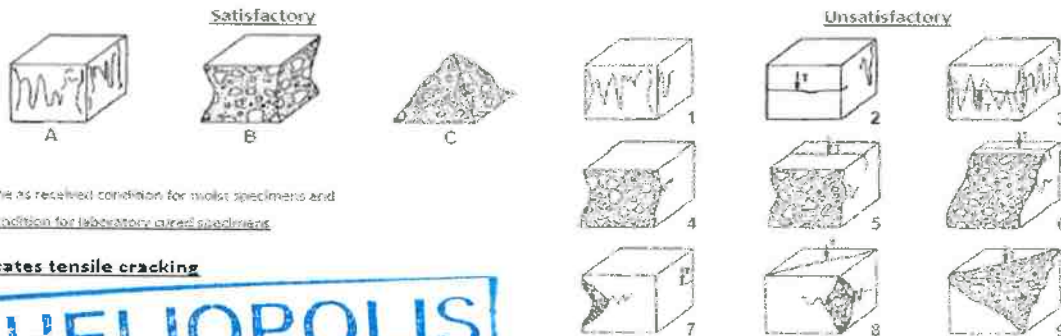
Pile	B354
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	22/10/2023	29/10/2023	7	8235	2.440	916.0	415	414	103%
2				8313	2.463	923.0	418		
3				8307	2.461	900.0	408		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	22/10/2023	19/11/2023	28	8309	2.462	1131.0	512	513	128%
2				8308	2.462	1126.0	510		
3				8371	2.480	1142.0	517		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

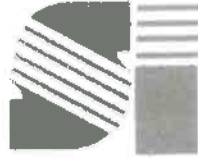
Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	128
IR	029

Pile	A220
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	29/10/2023	7	8239	2.441	920.0	417	405	101%
2				8334	2.469	897.0	406		
3				8205	2.431	867.0	393		

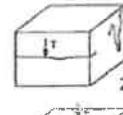
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	19/11/2023	28	8382	2.484	1153.0	522	522	131%
2				8251	2.445	1146.0	519		
3				8240	2.441	1162.0	526		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	129
IR	029

Pile	B432
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	29/10/2023	7	8320	2.465	872.0	395	404	101%
2				8347	2.473	913.0	414		
3				8340	2.471	893.0	405		

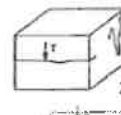
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	19/11/2023	28	8357	2.476	1127.0	511	510	128%
2				8403	2.490	1119.0	507		
3				8345	2.473	1134.0	514		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	130
IR	029

Pile	A61
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	29/10/2023	7	8347	2.473	871.0	395	406	102%
2				8023	2.377	913.0	414		
3				8245	2.443	908.0	411		

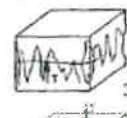
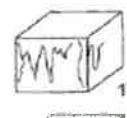
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	19/11/2023	28	7901	2.341	1175.0	532	522	131%
2				8045	2.384	1133.0	513		
3				8144	2.413	1150.0	521		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881, Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	131
IR	029

Pile	A176
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Test Results (7 Days) & Calculation :

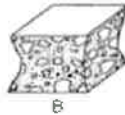
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	29/10/2023	7	8260	2.447	916.0	415	405	101%
2				8040	2.382	871.0	395		
3				8171	2.421	892.0	404		

1

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	22/10/2023	19/11/2023	28	8466	2.508	1156.0	524	519	130%
2				8494	2.517	1139.0	516		
3				8501	2.519	1141.0	517		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 is the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		19/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 030				Revision
					00
Received by ER	Name	Sign	TRF	DD	MM
				20	11
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A59 2-A207 3-B321 4-B425 5-A52 6-A195 7-B417 8-A72 9-B450 10-A183				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					
6					
7					
8					
9					
10					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

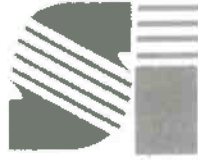
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		20/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		26-11-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	132
IR	030

Pile	A59
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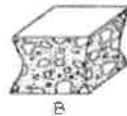
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8231	2.439	881.0	399	389	97%
2				8317	2.464	879.0	398		
3				8212	2.433	818.0	371		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8338	2.471	1126.0	510	508	127%
2				8300	2.459	1109.0	502		
3				8297	2.458	1131.0	512		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	133
IR	030

Pile	A207
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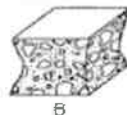
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8219	2.435	849.0	385	391	98%
2				8302	2.460	876.0	397		
3				8190	2.427	865.0	392		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8209	2.432	1117.0	506	510	128%
2				8226	2.437	1122.0	508		
3				8256	2.446	1141.0	517		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



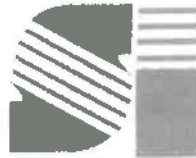
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	134
IR	030

Pile	B321
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8219	2.435	849.0	386	391	98%
2				8302	2.460	876.0	397		
3				8190	2.427	865.0	392		

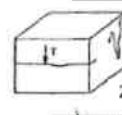
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8234	2.440	1165.0	528	521	130%
2				8297	2.458	1151.0	521		
3				8304	2.460	1134.0	614		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881, Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	135
IR	030

Pile	B425
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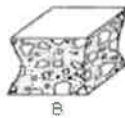
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8271	2.451	882.0	400	406	101%
2				8318	2.465	891.0	404		
3				8201	2.430	913.0	414		

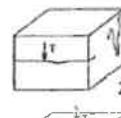
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8281	2.454	1144.0	518	514	129%
2				8280	2.453	1127.0	511		
3				8282	2.454	1135.0	514		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMII 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	136
IR	030

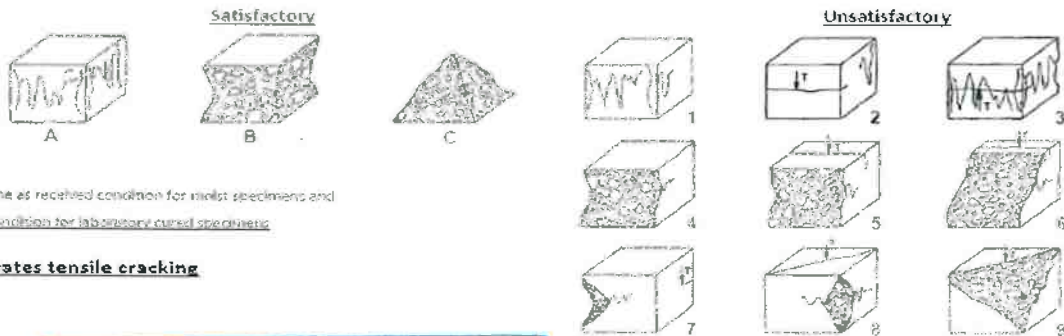
Pile	A52
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8176	2.423	879.0	398	396	99%
2				8237	2.441	861.0	390		
3				8315	2.464	883.0	400		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8206	2.431	1141.0	517	518	129%
2				8275	2.452	1136.0	516		
3				8195	2.428	1153.0	622		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS81, Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	137
IR	030

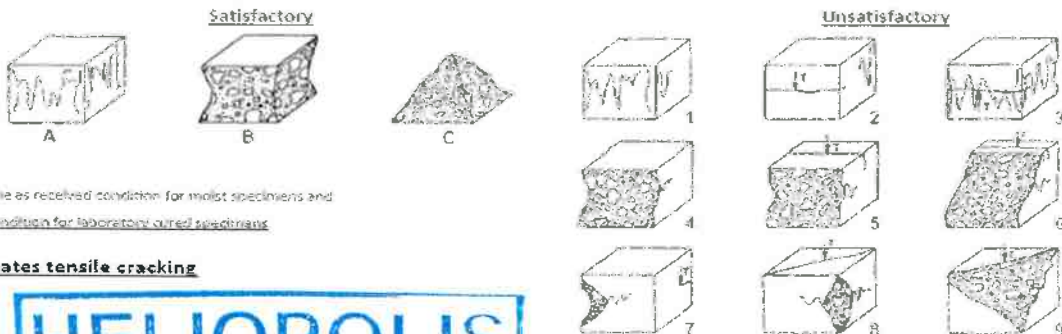
Pile	A195
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8317	2.464	876.0	397	394	99%
2				8401	2.489	863.0	391		
3				8381	2.483	871.0	395		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8236	2.440	1154.0	523	529	132%
2				8253	2.445	1194.0	541		
3				8286	2.455	1153.0	522		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881, Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



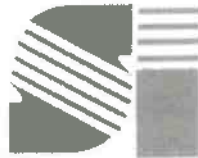
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400
Cube Dimensions	15*15*15 CM

Pile Code	138
IR	030

Pile	B417
------	------

Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8293	2.457	893.0	405	407	102%
2				8317	2.464	916.0	415		
3				8178	2.423	887.0	402		

1

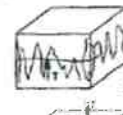
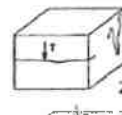
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8184	2.425	1183.0	536	528	132%
2				8394	2.467	1161.0	526		
3				8354	2.475	1151.0	521		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	139
IR	030

Pile	A72
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8137	2.411	856.0	388	387	97%
2				8162	2.418	842.0	381		
3				8142	2.412	863.0	391		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8198	2.429	1138.0	516	537	134%
2				8130	2.409	1189.0	539		
3				8130	2.409	1228.0	556		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	140
IR	030

Pile	B450
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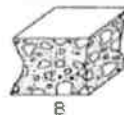
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8307	2.461	867.0	393	396	99%
2				8213	2.433	882.0	400		
3				8301	2.460	874.0	396		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8311	2.463	1126.0	510	529	132%
2				8282	2.454	1169.0	530		
3				8227	2.438	1205.0	546		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 is the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	141
IR	030

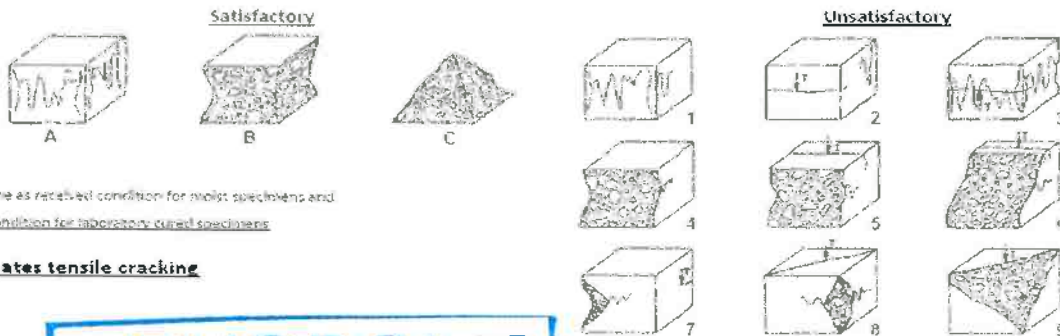
Pile	A183
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/10/2023	30/10/2023	7	8307	2.461	867.0	393	396	99%
2				8213	2.433	882.0	400		
3				8301	2.460	874.0	396		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	23/10/2023	20/11/2023	28	8272	2.451	1133.0	513	516	129%
2				8298	2.459	1131.0	512		
3				8326	2.467	1156.0	524		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		20/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 031				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				21	11
				23	11
				30	

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1-B341 2-A163 3-B434 4-A65 5-B446 6-A162 7-A*8 8-B328 9-A62				
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					
6					
7					
8					
9					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		21/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		26-11-2023	A

*

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	142
IR	031

Pile	B341
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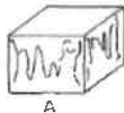
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	31/10/2023	7	8240	2.441	855.0	387	384	96%
2				8164	2.419	849.0	385		
3				8266	2.449	836.0	379		

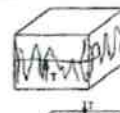
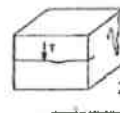
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	21/11/2023	28	8301	2.460	1014.0	459	456	114%
2				8178	2.423	1012.0	458		
3				8237	2.441	994.0	450		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



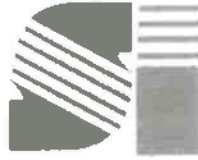
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	143
IR	031

Pile	A163
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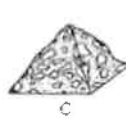
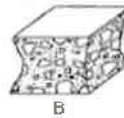
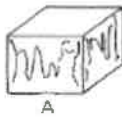
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/10/2023	31/10/2023	7	8251	2.445	793.0	359	376	94%
2				8267	2.449	833.0	377		
3				8073	2.392	865.0	392		

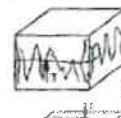
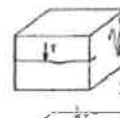
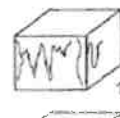
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/10/2023	21/11/2023	28	8236	2.440	1131.0	512	511	128%
2				8076	2.393	1120.0	507		
3				8247	2.444	1136.0	515		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



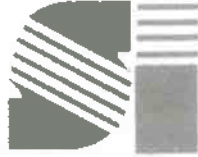
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	144
IR	031

Pile	B434
------	------

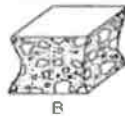
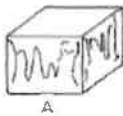
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	31/10/2023	7	8361	2.477	790.0	358	380	95%
2				8281	2.454	866.0	392		
3				8452	2.504	863.0	391		

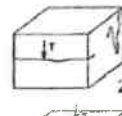
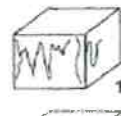
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	21/11/2023	28	8378	2.482	1167.0	529	525	131%
2				8351	2.474	1138.0	516		
3				8325	2.467	1171.0	530		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS81, Para 11.4 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفنى لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	145
IR	031

Pile	A65
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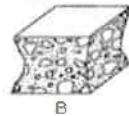
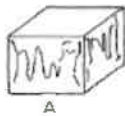
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	31/10/2023	7	8237	2.441	824.0	373	374	93%
2				8261	2.448	846.0	383		
3				8184	2.425	804.0	364		

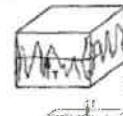
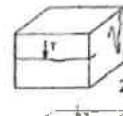
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	21/11/2023	28	8200	2.430	1142.0	517	533	133%
2				8230	2.439	1181.0	535		
3				8237	2.441	1210.0	548		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



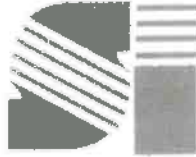
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	146
IR	031

Pile	B446
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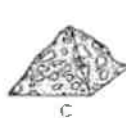
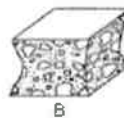
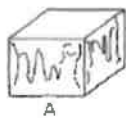
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	31/10/2023	7	8175	2.422	859.0	389	382	95%
2				8281	2.454	847.0	384		
3				8196	2.428	821.0	372		

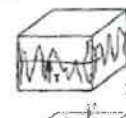
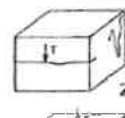
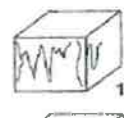
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	21/11/2023	28	8164	2.419	1020.0	462	483	121%
2				8198	2.429	1098.0	497		
3				8081	2.394	1081.0	490		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	147
IR	031

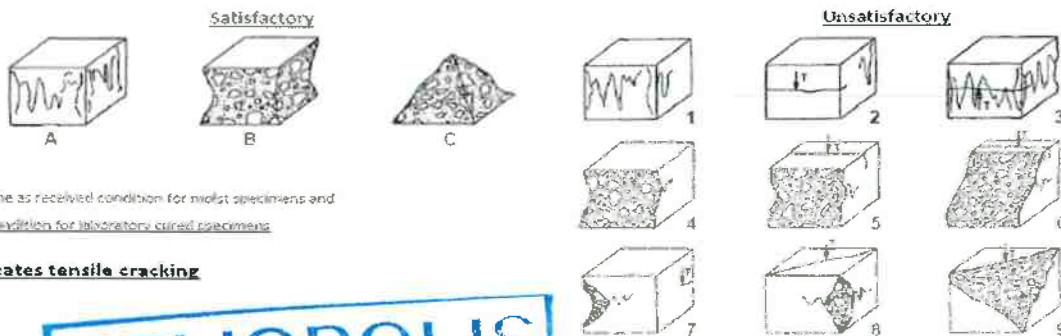
Pile	A162
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/10/2023	31/10/2023	7	8461	2.507	837.0	379	387	97%
2				8354	2.475	871.0	395		
3				8167	2.420	855.0	387		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	24/10/2023	21/11/2023	28	8152	2.415	1018.0	461	464	116%
2				8073	2.392	1022.0	463		
3				8154	2.416	1031.0	467		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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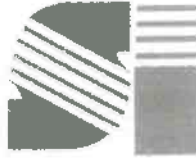
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	148
IR	031

Pile	A*8
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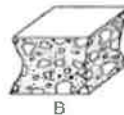
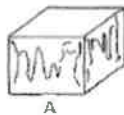
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	31/10/2023	7	7939	2.352	838.0	380	374	94%
2				8092	2.398	817.0	370		
3				8346	2.473	822.0	372		

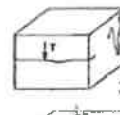
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	21/11/2023	28	8263	2.448	1160.0	525	516	129%
2				8316	2.464	1209.0	548		
3				8282	2.454	1051.0	476		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEM 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	149
IR	031

Pile	B328
------	------

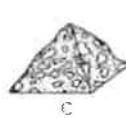
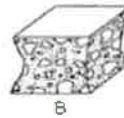
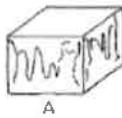
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	31/10/2023	7	8165	2.419	792.0	359	368	92%
2				8466	2.508	811.0	367		
3				8238	2.441	836.0	379		

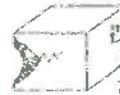
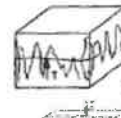
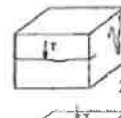
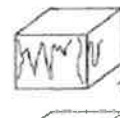
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	24/10/2023	21/11/2023	28	8040	2.382	953.0	432	439	110%
2				8155	2.416	926.0	419		
3				8076	2.393	1026.0	465		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in line as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	150
IR	031

Pile	A62
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage
1	24/10/2023	31/10/2023	7	8183	2.425	798.0	361	371	93%
2				8265	2.449	828.0	376		
3				8253	2.445	834.0	378		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage
1	24/10/2023	21/11/2023	28	8180	2.424	1048.0	475	475	119%
2				8167	2.420	1019.0	462		
3				8079	2.394	1080.0	489		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory-cured specimens.

Note : T indicates tensile cracking

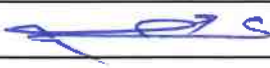


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Green Line										
Location Name			Contractor Company				Designer Company			
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab – Alexandria .			ElSalam International company				A&A Consultants			
Contractor ISSUED	Name		Sign		Date		Designation			
	Abdallah Wagdy				21/11/2023		QC Engineer			
Contractor Reference	GH - SI - SYS - STR - TRF - 032						Revision			
							00			
Received by ER	Name		Sign		TRF	DD	MM	YY	HH	MM
						22	11	23	11	30

NB: Package 1 Only (Package 2 via Aconex)					
THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW					
Description of Test	Compressive Strength Test result (7&28 Days) for Piles : A68 2-B344 3-A185 4-B422 5-A180 6-A71 7-B428 8-A169 9-A46 10-B440				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/460	7&28 days Compressive Strength	Attached		
2					
3					
4					
5					
6					
7					
8					
9					
10					

Comments by: the accuracy of test result is the responsibility of the third party Test results comply with specification	Comments by:
--	--------------

APPROVAL STATUS				
Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		22/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		26-11-2023	A

*

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	151
IR	032

Pile	A68
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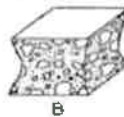
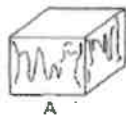
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8461	2.507	778.0	352	365	91%
2				8396	2.488	817.0	370		
3				8382	2.484	820.0	371		

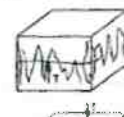
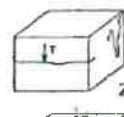
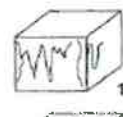
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8315	2.464	1022.0	463	448	112%
2				8224	2.437	984.0	446		
3				8031	2.380	962.0	436		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens.

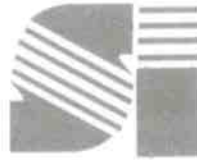
Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	152
IR	032

Pile	B344
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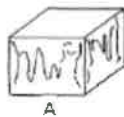
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8095	2.399	823.0	373	368	92%
2				8236	2.440	812.0	368		
3				8234	2.440	803.0	364		

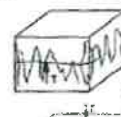
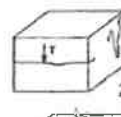
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8361	2.477	1001.0	453	458	115%
2				8287	2.455	987.0	447		
3				8362	2.475	1047.0	474		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	153
IR	032

Pile	A185
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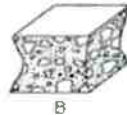
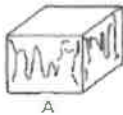
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8173	2.422	843.0	382	372	93%
2				8262	2.448	838.0	380		
3				8170	2.421	783.0	355		

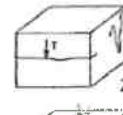
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8095	2.399	964.0	437	441	110%
2				8107	2.402	999.0	453		
3				8149	2.415	956.0	433		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	154
IR	032

Pile	B422
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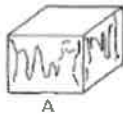
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8222	2.436	816.0	370	362	90%
2				8371	2.480	794.0	360		
3				8261	2.448	786.0	356		

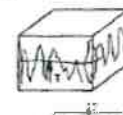
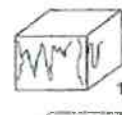
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8393	2.487	1109.0	502	522	131%
2				8220	2.436	1155.0	523		
3				8221	2.436	1194.0	541		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



مهندس شركة السلام

م / عبدالله ودي

التوقيع /



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	155
IR	032

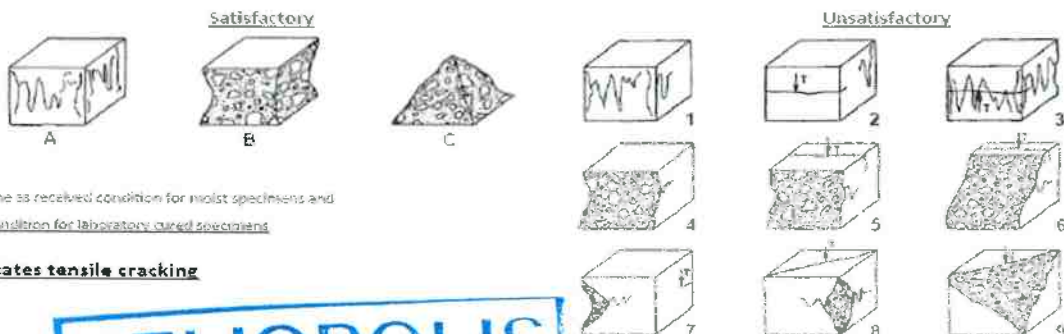
Pile	A180
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8376	2.482	879.0	398	388	97%
2				8384	2.484	844.0	382		
3				8299	2.459	844.0	382		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8110	2.403	1151.0	521	519	130%
2				7969	2.358	1139.0	516		
3				8185	2.425	1146.0	519		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS81: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	156
IR	032

Pile	A71
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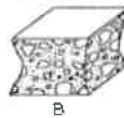
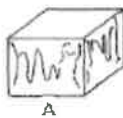
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8271	2.451	860.0	390	387	97%
2				8341	2.471	850.0	385		
3				8262	2.448	854.0	387		

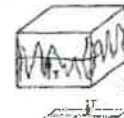
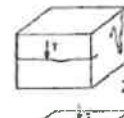
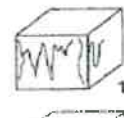
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8272	2.451	1227.0	556	539	135%
2				8345	2.473	1162.0	526		
3				8218	2.435	1178.0	534		

MODES OF FAILURE AS PER Bs 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS81, Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	157
IR	032

Pile	B428
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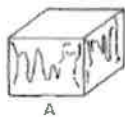
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8183	2.419	808.0	366	379	95%
2				8244	2.443	833.0	377		
3				8197	2.429	869.0	394		

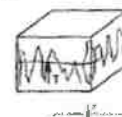
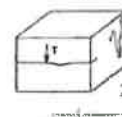
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8206	2.431	1176.0	533	525	131%
2				8234	2.440	1139.0	516		
3				8213	2.433	1163.0	527		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881 Part 116 in line as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	158
IR	032

Pile	A169
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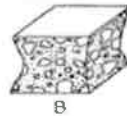
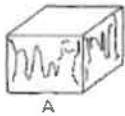
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8116	2.405	805.0	365	365	91%
2				8243	2.442	813.0	368		
3				8156	2.417	802.0	363		

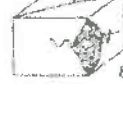
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8190	2.427	1217.0	551	541	135%
2				8427	2.497	1174.0	532		
3				8082	2.395	1192.0	540		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS1 Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



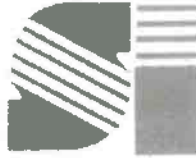
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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	159
IR	032

Pile	A46
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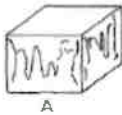
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8199	2.429	860.0	390	380	95%
2				8215	2.434	843.0	382		
3				8034	2.380	811.0	367		

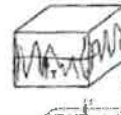
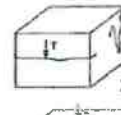
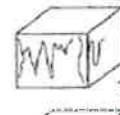
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8329	2.468	1202.0	545	536	134%
2				8316	2.484	1162.0	526		
3				8186	2.425	1187.0	538		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	160
IR	032

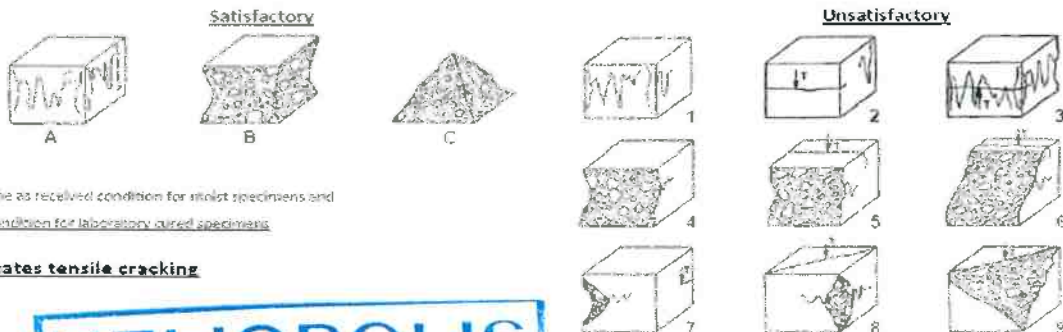
Pile	B440
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	01/11/2023	7	8264	2.449	851.0	386	382	95%
2				8361	2.477	847.0	384		
3				8242	2.442	829.0	376		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	25/10/2023	22/11/2023	28	8434	2.499	1119.0	507	524	131%
2				8462	2.507	1157.0	524		
3				8198	2.429	1197.0	542		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

1881:Part 114 in the as received condition for field specimens and
in the saturated condition for laboratory cured specimens

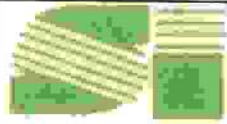
Note : T indicates tensile cracking



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(Signature)

SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		28/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 035				Revision 00
Received by ER	Name	Sign	TRF	DD	MM
				28	11
				YY	HH
				23	11
				MM	30

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : B437 + A193 2- A*25 + A*14 3- A196 + A*10 4- B443				1-
Location of Test	Site				
Item	Specification	Test Requirement	Test Result Attachment	Remarks	
1	C 400/450	7&28 days Compressive Strength	Attached		
2	C 400/450				
6	C 400/460				
4	C 400/450				
5					

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party . Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		28/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		3-12-2023	A

* Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	169
IR	035

Pile	B437 + A193
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Test Results (7 Days) & Calculation :

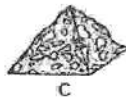
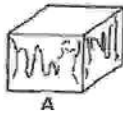
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	31/10/2023	07/11/2023	7	8422	2.495	843.0	382	386	96%
2				8134	2.410	851.0	386		
3				8282	2.454	859.0	389		

1

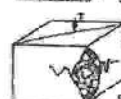
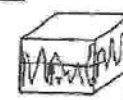
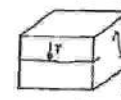
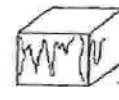
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage %
1	31/10/2023	28/11/2023	28	8321	2.465	1237.0	560	519	130%
2				8365	2.479	1076.0	487		
3				8401	2.489	1123.0	509		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks

1881: Part 114 in the as received condition for moist specimens and
in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	170
IR	035

Pile	A*25 + A*14
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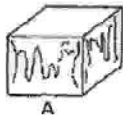
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	31/10/2023	07/11/2023	7	8207	2.432	835.0	378	383	96%
2				8214	2.434	842.0	381		
3				8089	2.397	861.0	390		

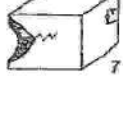
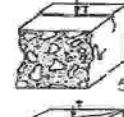
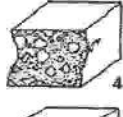
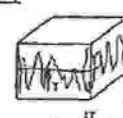
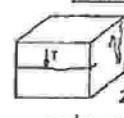
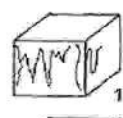
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	31/10/2023	28/11/2023	28	8273	2.451	1037.0	470	474	118%
2				8315	2.464	1047.0	474		
3				8203	2.431	1052.0	477		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks :

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	171
IR	035

Pile	A196 + A*10
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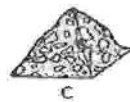
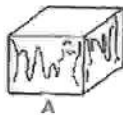
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage
1	31/10/2023	07/11/2023	7	8193	2.428	831.0	376	382	96%
2				8071	2.391	849.0	385		
3				8203	2.431	852.0	386		

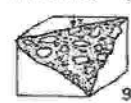
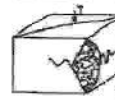
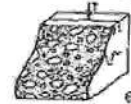
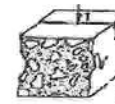
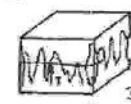
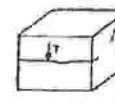
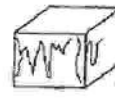
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage
1	31/10/2023	28/11/2023	28	8174	2.422	1089.0	493	504	126%
2				8219	2.435	1140.0	516		
3				8110	2.403	1109.0	502		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks

BS 1881: Part 116 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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مشروع القطار السريع القطاع الخامس الغربانيات - برج العرب - الاسكندرية (من محطة ٣٤٠+٥٠٠ الى ٣٤١+١٠٠)

Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	172
IR	035

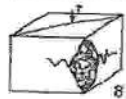
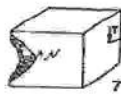
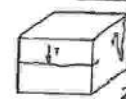
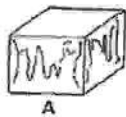
Pile	B443
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	31/10/2023	07/11/2023	7	8214	2.434	829.0	376	381	95%
2				8332	2.469	837.0	379		
3				8235	2.440	860.0	390		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	31/10/2023	28/11/2023	28	8212	2.433	1029.0	466	487	122%
2				8371	2.480	1121.0	508		
3				8263	2.454	1073.0	486		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1993



Remarks :

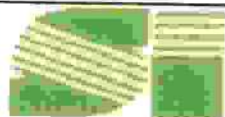
BS 1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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SUBMISSION of TEST RESULTS



Green Line

Location Name		Contractor Company		Designer Company	
Electric Express Train - Sector 5 - ElGharbanyat (340+460-341+300) - Borg Al Arab - Alexandria .		ElSalam International company		A&A Consultants	
Contractor ISSUED	Name	Sign	Date	Designation	
	Abdallah Wagdy		29/11/2023	QC Engineer	
Contractor Reference	GH - SI - SYS - STR - TRF - 036				Revision
					00
Received by ER	Name	Sign	TRF	DD	MM
				29	11
				23	11
				30	

NB: Package 1 Only (Package 2 via Aconex)

THE FOLLOWING TEST RESULTS ARE ATTACHED FOR REVIEW

Description of Test	Compressive Strength Test result (7&28 Days) for Piles : 1- A 189 + B456 2- A*29 + A184 3- B429 + A*7 4- B462 + A170 5- A*19			
Location of Test	Site			
Item	Specification	Test Requirement	Test Result Attachment	Remarks
1	C 400/450	7&28 days Compressive Strength	Attached	
2				
3				
4				
5				

Comments by:	Comments by:
the accuracy of test result is the responsibility of the third party . Test results comply with specification	

APPROVAL STATUS

Organisation	Name	Sign	Date	A-AWC-R
Contractor	Abdallah Wagdy		29/11/2023	A
Designer				A
GARB *				
Employers Representative	Eng : Ahmed Yehia		3-12-2023	A

*

Alignment / Bridges: Culvert Only

A= Approved; AWC= Approved with Comments; R= Rejected



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	173
IR	036

Pile	A 189 + B456
------	--------------

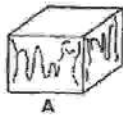
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	01/11/2023	08/11/2023	7	8225	2.437	837.0	379	378	95%
2				8109	2.403	841.0	381		
3				8241	2.442	826.0	374		

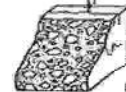
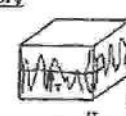
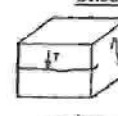
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	01/11/2023	29/11/2023	28	8230	2.439	1137.0	515	500	125%
2				8191	2.427	1098.0	497		
3				8274	2.452	1073.0	486		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks:

BS 1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	174
IR	036

Pile	A*29 + A184
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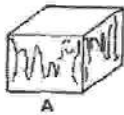
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage
1	01/11/2023	08/11/2023	7	8306	2.461	873.0	395	385	96%
2				8258	2.447	828.0	375		
3				8191	2.427	848.0	384		

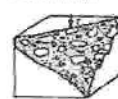
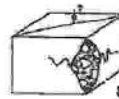
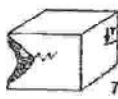
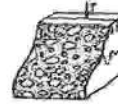
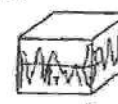
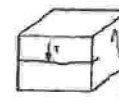
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/Cm ²)	percentage
1	01/11/2023	29/11/2023	28	8245	2.443	1056.0	478	479	120%
2				8173	2.422	1041.0	472		
3				8223	2.436	1074.0	487		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks:

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	460 kg/m ³ / CEMI 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	175
IR	036

Pile	B429 + A*7
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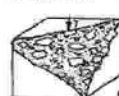
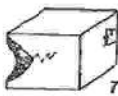
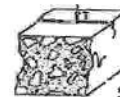
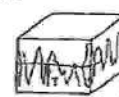
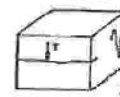
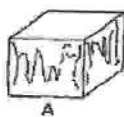
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	01/11/2023	08/11/2023	7	8009	2.373	8009.0	3628	3686	921%
2				8190	2.427	8190.0	3710		
3				8210	2.433	8210.0	3719		

1

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	01/11/2023	29/11/2023	28	8120	2.406	1115.0	505	497	124%
2				8216	2.434	1086.0	492		
3				8176	2.423	1091.0	494		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks

1881:Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEMII 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	176
IR	036

Pile	A170 + B462
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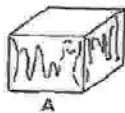
Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	01/11/2023	08/11/2023	7	8170	2.421	853.0	386	385	96%
2				8417	2.494	837.0	379		
3				8215	2.434	859.0	389		

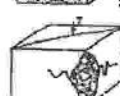
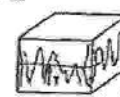
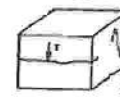
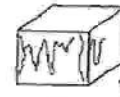
No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage %
1	01/11/2023	29/11/2023	28	8236	2.440	1149.0	520	522	131%
2				8191	2.427	1172.0	531		
3				8099	2.400	1136.0	515		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983

Satisfactory



Unsatisfactory



Remarks

1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking

HELIOPOLIS
Concrete Technology Centre
Date: / م / أحمد سالم
Name: التوقيع

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م / عبدالله وجدى

التوقيع / 22



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Concrete Cubes Compressive Strength

التقرير الفني لجهد المكعبات

Cement Content/Type	450 kg/m ³ / CEM I 42.5N (OPC)
Required Strength (Kg/cm ²) at 28 days	400 at 28 days
Cube Dimensions	15*15*15 CM

Pile Code	177
IR	036

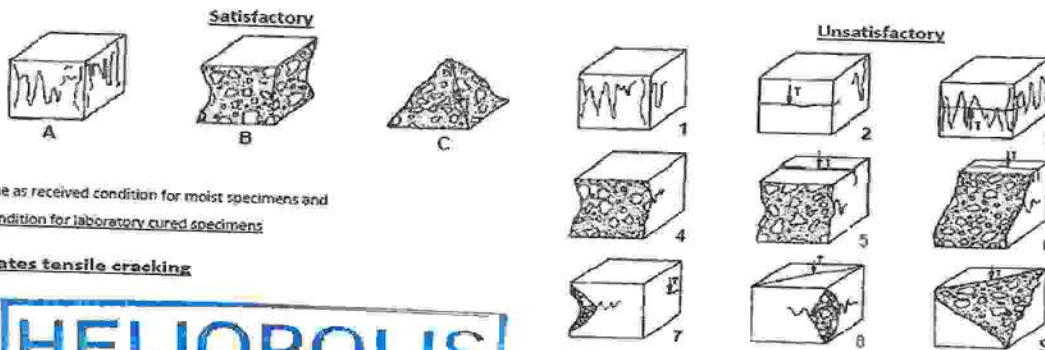
Pile	A*19
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Test Results (7 Days) & Calculation :

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	01/11/2023	08/11/2023	7	8213	2.433	842.0	381	385	96%
2				8182	2.424	839.0	380		
3				8361	2.477	866.0	392		

No.	Casting Date:	Test Date	Age	Weight (gm)	Density (T/m ³)	Load (KN)	Compressive Strength (Kg/cm ²)	Average (Kg/cm ²)	percentage
1	01/11/2023	29/11/2023	28	8271	2.451	1061.0	476	490	123%
2				8234	2.440	1086.0	492		
3				8300	2.459	1109.0	502		

MODES OF FAILURE AS PER BS 1881 : Part 116 : 1983



Remarks :

BS 1881: Part 114 in the as received condition for moist specimens and in the saturated condition for laboratory cured specimens

Note : T indicates tensile cracking



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م / عبدالله وجدي

التوقيع



وحدة هندسة الإنتاج

التاريخ : ٢٠٢٣/١٠/١٧

الشركة المنفذة : السلام إنترناشونال للمقاولات والتجارة.

الإستشاري العام : شركة سيسترا الفرنسية للإستشارات الهندسية.

المشروع : القطار السريع القطاع الخامس الغربانيات - برج العرب - الإسكندرية (من محطة 340+360 إلى 341+300).

الجهة المالكة : الهيئة العامة للأنفاق - الهيئة العامة للطرق والكباري.

العينات : جزء من حديد تسليح مشرشر المصريين قطر ١٨ مم والموردة بمعرفتكم للوحده الخاصه لهندسة الإنتاج.

الاختبارات المطلوبة : تحليل للعناصر المكونة للمعدن من خلال طريقة التحليل الطيفي.

ملحوظة / الوحدة الخاصة لهندسة الإنتاج غير مسنولة عن مصدر العينات الواردة إليها وما تمثله تلك العينات.

النتائج:

بيان التحليل للعناصر المكونة للمعدن من خلال طريقة التحليل الطيفي:

wt%										
C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Fe
0.234	0.321	0.96	0.001	0.001	0.159	0.015	0.141	0.52	0.003	97.398

المشرف

أ.د/ هاشم اللبان

الوحدة الخاصة لهندسة الإنتاج
كلية الهندسة - جامعة الإسكندرية



نتائج الاختبارات على عينات حديد تسليح (مشرشر)

- الجهة المالكة : الهيئة العامة للأنفاق - الهيئة العامة للطرق والكباري
- الاستشاري العام: شركة سيسترا الفرنسية للاستشارات الهندسية
- المشروع: مشروع القطار السريع القطاع الخامس الغربانيات برج العرب - الاسكندرية من محطة (340 + 300 الى 341 + 460)
- الشركة المنفذة: شركة السلام انترناشيونال للمقاولات والتجارة
- الشركة المنتجة لحديد التسليح المورد : شركة حديد المصريين E.G.S
- توريد العينات: 2023/10/15

نتائج اختبار الشد:

الرقم	قطر العينة الاسمي (مم)	مساحة المقطع الاسمي (مم ²)	حمل الخضوع (k.N)	إجهاد الخضوع ReH (N/mm ²)	حمل الاقصى (k.N)	مقاومة الشد Rm (N/mm ²)	القيمة المختبرة المحددة Rm/ReH	النسبة المئوية للاستطالة (5D)	وزن المتر الطولي كجم	النتي على البارد	ملاحظات
1	10	78.54	42.80	545	55.50	707	1.30	28.0	0.590	ج	-----
2	10	78.54	43.00	547	55.60	708	1.29	26.0	0.592		
3	10	78.54	42.70	544	55.30	704	1.30	28.0	0.591		

تم توريد العينات بمعرفة العميل وكذلك المعلومات الخاصة بها.

مدير المعمل



د. عبد اللطيف السيد أبو سن

المشرف على الاختبار



د. عبد القادر عبد المجيد سافوح

تحريرا في : 2023/10/15

رقم التقرير :-

٥٧٠٥ / ٩٩٢





نتائج الاختبارات على عينات حديد تسليح (مشرشر)

- الجهة المالكة : الهيئة العامة للأنفاق - الهيئة العامة للطرق والكباري
- الاستشاري العام: شركة سيسترا الفرنسية للاستشارات الهندسية
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- توريد العينات: 2023/10/15

نتائج اختبار الشد:

الرقم	قطر العينة الاسمي (مم)	مساحة المقطع الاسمية (مم ²)	حمل الخضوع (k.N)	إجهاد الخضوع ReH (N/mm ²)	حمل الاقصى (k.N)	مقاومة الشد Rm (N/mm ²)	القيمة المختبرة المحددة Rm/ReH	النسبة المئوية للاستطالة (5D)	وزن المتر الطولي كجم	التي على البارد	ملاحظات
1	16	201.06	105.80	526	138.24	688	1.31	25.0	1.532	قبول	-----
2	16	201.06	104.20	518	138.10	687	1.33	21.3	1.536		
3	16	201.06	105.10	523	137.80	685	1.31	26.3	1.534		

تم توريد العينات بمعرفة العميل وكذلك المعلومات الخاصة بها.

مدير المعمل

د. عبد اللطيف السيد أبو سن

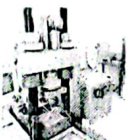
المشرف على الاختبار

د. عبد القادر عبد المجيد سافوح

تحريرا في : 2023/10/15

رقم التقرير :-

٢٠٢٢/٥٧٠٦





نتائج الاختبارات على عينات حديد تسليح (مشرشر)

- الجهة المالكة : الهيئة العامة للأنفاق - الهيئة العامة للطرق والكباري
- الاستشاري العام: شركة سيسترا الفرنسية للاستشارات الهندسية
- المشروع: مشروع القطار السريع القطاع الخامس الغربانيات برج العرب - الاسكندرية من محطة (340 + 300 الى 340 + 460)
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- توريد العينات: 2023/10/15

نتائج اختبار الشد:

الرقم	قطر العينة الاسمي (مم)	مساحة المقطع الاسمية (مم ²)	حمل الخضوع (k.N)	إجهاد الخضوع ReH (N/mm ²)	حمل الاقصى (k.N)	مقاومة الشد Rm (N/mm ²)	القيمة المختبرة المحددة Rm/ReH	النسبة المئوية للاستطالة (5D)	وزن المتر الطولي كجم	النتي على البارد	ملاحظات
1	18	254.47	138.40	544	179.30	705	1.30	18.9	1.933	✓	-----
2	18	254.47	139.60	549	180.00	707	1.29	22.2	1.933	✓	-----
3	18	254.47	138.90	546	179.70	706	1.29	16.7	1.931	✓	-----

• تم توريد العينات بمعرفة العميل وكذلك المعلومات الخاصة بها.

مدير المعمل

د. عبد اللطيف السيد أبو سن



المشرف على الاختبار

د. عبد القادر عبد المجيد سافوح

تحريرا في : 2023/10/15

رقم التقرير :-

٢٠٢٢/٥٧٠٧

وحدة هندسة الإنتاج

التاريخ : ٢٠٢٣/١٠/١٧

الشركة المنفذة : السلام إنترناشونال للمقاولات والتجارة.
الإستشاري العام : شركة سيسترا الفرنسية للإستشارات الهندسية.
المشروع : القطار السريع القطاع الخامس الغربانيات - برج العرب - الإسكندرية (من محطة 340+360 إلى 341+300).
الجهة المالكة : الهيئة العامة للأنفاق - الهيئة العامة للطرق والكباري.
العينات : جزء من حديد تسليح مشرشر المصريين قطر ١٠ مم والموردة بمعرفتكم للوحده الخاصه لهندسة الإنتاج.
الاختبارات المطلوبة : تحليل للعناصر المكونة للمعدن من خلال طريقة التحليل الطيفي.
ملحوظة / الوحدة الخاصة لهندسة الإنتاج غير مسنولة عن مصدر العينات الواردة إليها وما تمثله تلك العينات.

النتائج:

بيان التحليل للعناصر المكونة للمعدن من خلال طريقة التحليل الطيفي:

wt%										
C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Fe
0.262	0.339	0.97	0.001	0.002	0.152	0.018	0.137	0.485	0.002	97.397

المشرف



أ.د/ هاشم اللبان

الوحدة الخاصة لهندسة الإنتاج
كلية الهندسة - جامعة الإسكندرية

التاريخ : ٢٠٢٣/١٠/١٧
الشركة المنفذة : السلام إنترناشونال للمقاولات والتجارة.
الإستشاري العام : شركة سيسترا الفرنسية للإستشارات الهندسية.
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الجهة المالكة : الهيئة العامة للأنفاق - الهيئة العامة للطرق والكباري.
العينات : جزء من حديد تسليح مشرشر المصريين قطر ١٦ مم والموردة بمعرفتكم للوحده الخاصه لهندسة الإنتاج.
الاختبارات المطلوبة : تحليل للعناصر المكونة للمعدن من خلال طريقة التحليل الطيفي.
ملحوظة / الوحدة الخاصة لهندسة الإنتاج غير مسنولة عن مصدر العينات الواردة اليها وما تمثله تلك العينات.

النتائج:

بيان التحليل للعناصر المكونة للمعدن من خلال طريقة التحليل الطيفي:

wt%										
C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Fe
0.233	0.308	1.00	0.002	0.002	0.175	0.018	0.131	0.466	0.003	97.345

المشرف



أ.د. هاشم اللبان

الوحدة الخاصة لهندسة الإنتاج
كلية الهندسة - جامعة الإسكندرية

٧٤٤ ٢٠٢٠

٣٣ « ح . ع »

٢٠٢٠

١٤٢٤

مجموعة

مصلحة

وصل من

مبلغ وقدره

قيمة

قرش

جنيه

دمغة

ما قبله

الجملة

الصراف

الهيئة العامة لشئون المطابع الأميرية

٧٤٤ ٢٠٢٠

٣٣ « ح . ع »

٢٠٢٠

١٤٢٤

مجموعة

مصلحة

وصل من

مبلغ وقدره

قيمة

قرش

جنيه

دمغة

ما قبله

الجملة

الصراف

الهيئة العامة لشئون المطابع الأميرية

٢٩٤٨٠٧٨
مجموعه

مصلحة - وصل من مبلغ وقدره قيمة

تحريراً فى:

الصراف

الهيئة العامة لشئون المطابع الأميرية



إسم العميل : شركة السلام انترناشيونال
إسم المشروع : القطار الكهربائي السريع - القطاع الخامس - قرية الغربانيات - برج العرب - الإسكندرية
الموضوع : اختبارات الجس الصوتي
رقم الصادر : E - 058
التاريخ : 2024/02/12

تحية طيبة وبعد ،،،

بالإشارة إلى الموضوع عاليه، مرفق لسيادتكم عدد (2) نسخة من تقرير اختبارات الجس الصوتي الزيارة التي تمت بتاريخ

2024/01/28 - لعدد (36) خازوق

وتفضلوا سيادتكم بقبول فائق الإحترام ،،،

مكتب النيل الهندسي الاستشاري (م.م.د.)
د.مهندس / أنور فاروق القاضي
"العضو المنتدب"
مكتب النيل الهندسي الاستشاري

المرفقات :

■ عدد (2) نسخة من التقرير.

N.E.C.B	
بيت خبرة استشاري هندسي	
مكتب النيل الهندسي الاستشاري (م.م.د.)	
صادر م.م.د. رقم : E-058	
رقم المشروع : ٢٠٢٤/٢/١٤	التاريخ : ٢٠٢٤/٢/١٤
الاسم :	



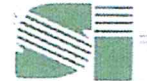
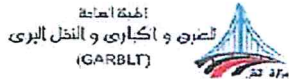
JAS-ANZ





CONCERNING: **SIT** REPORT ON (36) CONCRETE PILE(S) IN

ELECTRIC EXPRESS TRAIN, SECTOR 5, AL-GHARBANIYAT VILLAGE, BURJ AL-ARAB



Rev	Status	Date	Editor	Checked by
0	FINAL	28-JAN-2024	SHERIF SALAH, BSc	DR. ENG. A. F. EL – KADI

sherif salah



NILE ENGINEERING CONSULTING BUREAU (MISR)

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Po. Box 11371

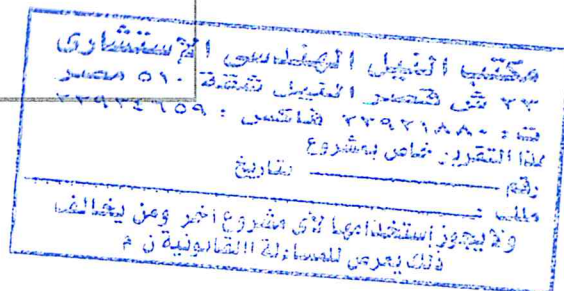
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Fax : +2-02-22700553

E-mail : anwarfelkadi@gmail.com

Internet: www.necb-misr.net



Nile Engineering Consulting Bureau – Geotechnical Q.C&Q.A Department
Subject : **SIT Final Report** _ EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
To : El Salam International for Contracting & Trading.
NECB Ref. : SIT017/0081/2024.
Checked by : **A. F. El-Kadi, PhD**



Document History

Title	NECB Ref.	Rev.	Status	Date	Remark
SIT Report	SIT017/0081/024	0	Formal/ Final	28-1-2024	-



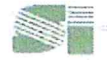


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1. Introduction

1.1 Upon the request of "El Salam International for Contracting & Trading"



Sonic Integrity Testing (SIT) following the Project specifications executed to verify the integrity of (36) concrete pile(s).

1.2 The testing activities may be summarized as follows:

Project /Location	EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab
Date /Time	28-Jan-2024
Witnessed	Project Engineer; and Client Engineer
NECB Staff	Mohamed Ali, Geotec. Ahmed Mohamed, Geotec.
Tested Element (s) Information	All piles information as stated in annex 1
Visual Inspection	As stated in the Reflectogram footer



FIG. 1 SIT IN PROGRESS

2. The Measuring Technique

2.1 Applicable standards:

2.1.1 The measuring technique fully complies with ASTM Standard D5882-17, EA Pfähle 2012, CUR-Aanbeveling 109:2013, AFNOR NF P 94-160-2, and NF P 94-160-4.

2.1.2 The detailed method statement attached in the attachments.

2.2 Additional measurement

2.2.1 Not used.

2.3 Testing Equipment

2.3.1 The used testing equipment manufactured by Allnamics USA.



2.3.2 All testing equipment data are in the attachments.

3. Conclusion

Based on test results interpretation using available nearest borehole logs, the following may be stated:

3.1 The test results for all tested and report piles shows acceptable lengths according to the pile's execution data as shown in annex 1;

3.2 The Test results for all tested and reported piles are matching soil layers' sequence.

Generally, it is be concluded that:

- 1)** No major construction anomalies are evident from the test results;
- 2)** All tested and reported piles are **Integrity Wisely Accepted.**

- يمكن تلخيص نتائج الاختبار لعدد (36) خازوق خرساني والموضحين بالجدول المرفق أدناه بان جميع الخوازيق المختبرة ذات تكاملية جيدة ومقبولة (في الطول المقاس من منسوب الاختبار ومتوسط القطر)، وبدون أي عيوب جوهرية أو اختناقات مؤثرة على تكامليتها.

Nile Engineering Consulting Bureau – Geotechnical Q.C&Q.A Department
Subject : **SIT Final Report** _ EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
To : El Salam International for Contracting & Trading.
NECB Ref. : SIT017/0081/2024.
Checked by : **A. F. El-Kadi, PhD**

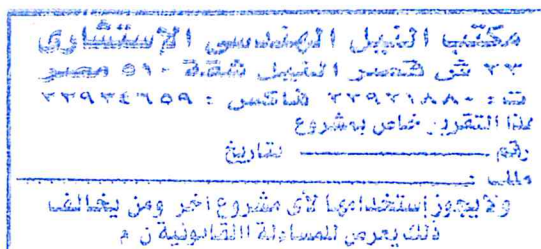


General Tips

- Depending on our instrument accuracy, while the pile length is greater than 25 times the pile diameter. The measurement accuracy is about 90%;
- Pile marked (poor pile head preparation) means surface cracks appear due to pile head demolishing, which does not affect either the wave quality or the integrity of this pile.
- Pile marked (anomaly @ pile head) means the marked pile needs to demolish for about 10 to 20 cm to reach sound concrete.
- The truth of the tested elements ID and input data is the client's responsibility.

Cairo, 28 Jan 2024

NILE ENGINEERING CONSULTING BUREAU
(NECB- MISR)



Nile Engineering Consulting Bureau – Geotechnical Q.C&Q.A Department
Subject : **SIT Final Report** _ EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
To : El Salam International for Contracting & Trading.
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Checked by : **A. F. El-Kadi, PhD**

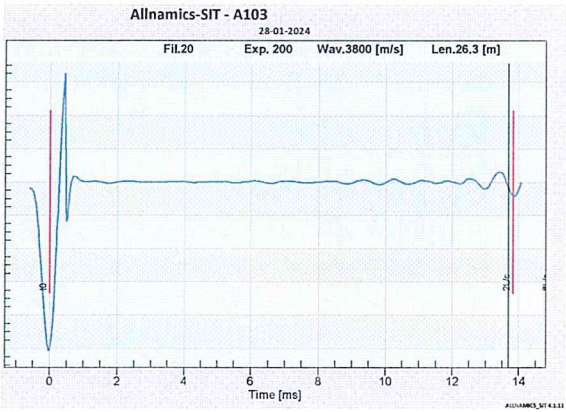


ANNEXES

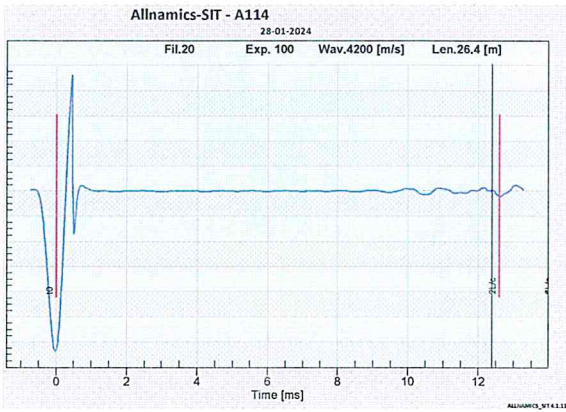
ANNEX 1

Tested Pile(s) on January 28th, 2024

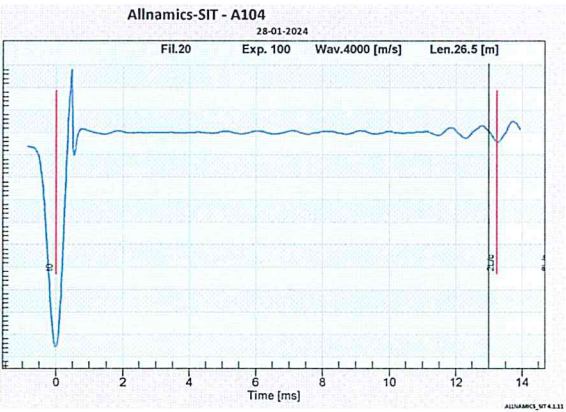
Serial	Type	Pile ID	Ref. Length (meter)	Ref. Diameter (meter)	Pile Toe	Analysis	Conclusion
1	Bored	A103	26.00	0.60	Clear	No Major anomaly	Accepted
2	Bored	A114	26.00	0.60	Clear	No Major anomaly	Accepted
3	Bored	A104	26.00	0.60	Clear	No Major anomaly	Accepted
4	Bored	A113	26.00	0.60	Clear	No Major anomaly	Accepted
5	Bored	A105	26.00	0.60	Clear	No Major anomaly	Accepted
6	Bored	A112	26.00	0.60	Clear	No Major anomaly	Accepted
7	Bored	A106	26.00	0.60	Clear	No Major anomaly	Accepted
8	Bored	A111	26.00	0.60	Clear	No Major anomaly	Accepted
9	Bored	A107	26.00	0.60	Clear	No Major anomaly	Accepted
10	Bored	A119	26.00	0.60	Clear	No Major anomaly	Accepted
11	Bored	A108	26.00	0.60	Clear	No Major anomaly	Accepted
12	Bored	A109	26.00	0.60	Clear	No Major anomaly	Accepted
13	Bored	A120	26.00	0.60	Clear	No Major anomaly	Accepted
14	Bored	A121	26.00	0.60	Clear	No Major anomaly	Accepted
15	Bored	A110	26.00	0.60	Clear	No Major anomaly	Accepted
16	Bored	A122	26.00	0.60	Clear	No Major anomaly	Accepted
17	Bored	A118	26.00	0.60	Clear	No Major anomaly	Accepted
18	Bored	A123	26.00	0.60	Clear	No Major anomaly	Accepted
19	Bored	A117	26.00	0.60	Clear	No Major anomaly	Accepted
20	Bored	A124	26.00	0.60	Clear	No Major anomaly	Accepted
21	Bored	A125	26.00	0.60	Clear	No Major anomaly	Accepted
22	Bored	A116	26.00	0.60	Clear	No Major anomaly	Accepted
23	Bored	A115	26.00	0.60	Clear	No Major anomaly	Accepted
24	Bored	A126	26.00	0.60	Clear	No Major anomaly	Accepted
25	Bored	A138	26.00	0.60	Clear	No Major anomaly	Accepted
26	Bored	A127	26.00	0.60	Clear	No Major anomaly	Accepted
27	Bored	A128	26.00	0.60	Clear	No Major anomaly	Accepted
28	Bored	A137	26.00	0.60	Clear	No Major anomaly	Accepted
29	Bored	A136	26.00	0.60	Clear	No Major anomaly	Accepted
30	Bored	A129	26.00	0.60	Clear	No Major anomaly	Accepted
31	Bored	A130	26.00	0.60	Clear	No Major anomaly	Accepted
32	Bored	A135	26.00	0.60	Clear	No Major anomaly	Accepted
33	Bored	A134	26.00	0.60	Clear	No Major anomaly	Accepted
34	Bored	A131	26.00	0.60	Clear	No Major anomaly	Accepted
35	Bored	A132	26.00	0.60	Clear	No Major anomaly	Accepted
36	Bored	A133	26.00	0.60	Clear	No Major anomaly	Accepted



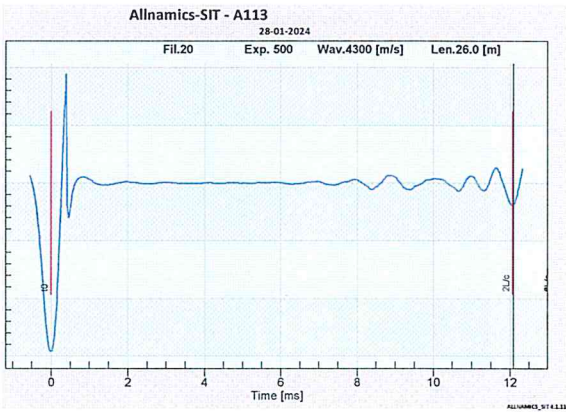
A103 : No significant anomaly, pile is OK



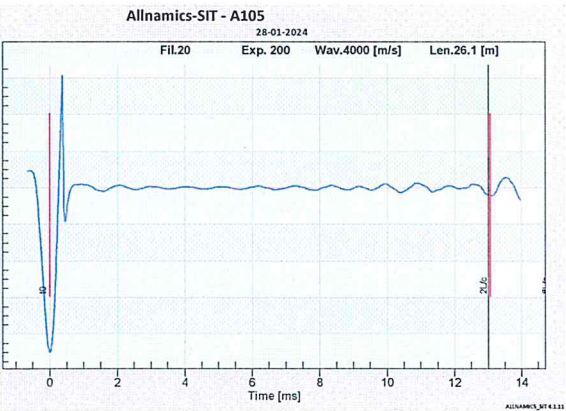
A114 : No significant anomaly, pile is OK



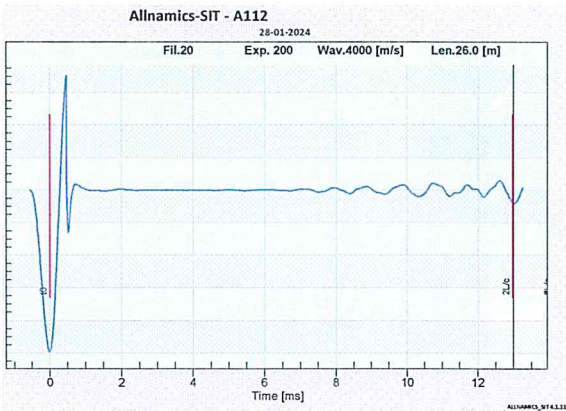
A104 : No significant anomaly, pile is OK



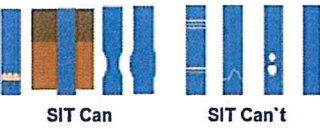
A113 : No significant anomaly, pile is OK



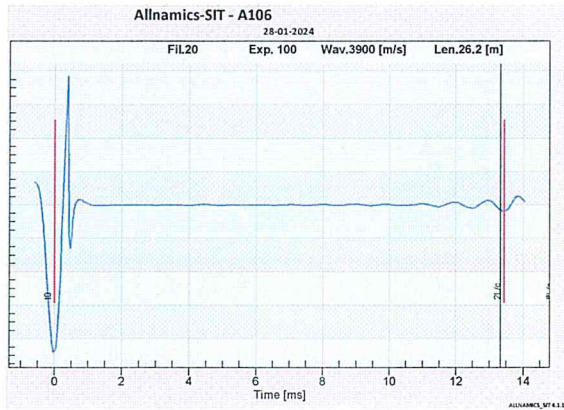
A105 : No significant anomaly, pile is OK



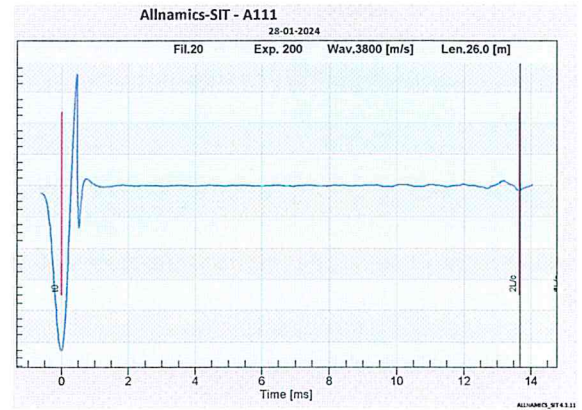
A112 : No significant anomaly, pile is OK



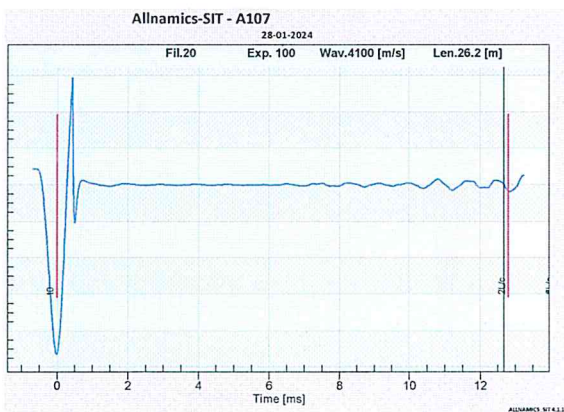
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Jan 28th, 2024



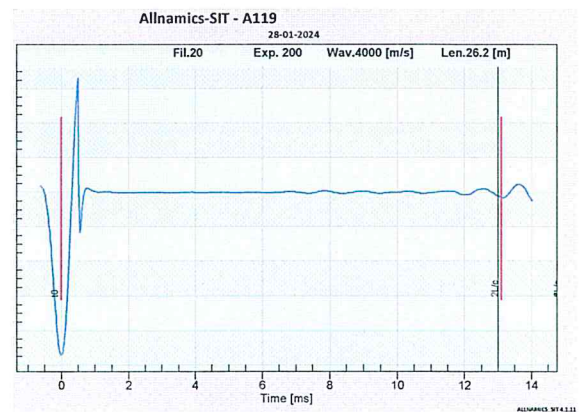
A106 : No significant anomaly, pile is OK



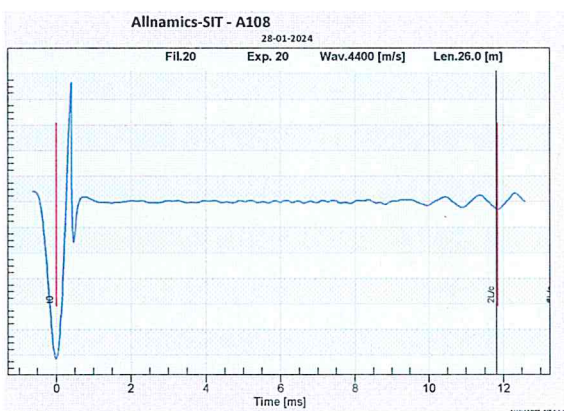
A111 : No significant anomaly, pile is OK



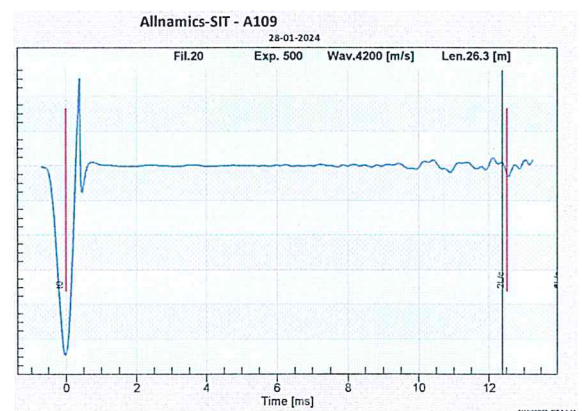
A107 : No significant anomaly, pile is OK



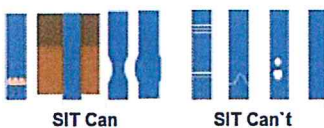
A119 : No significant anomaly, pile is OK



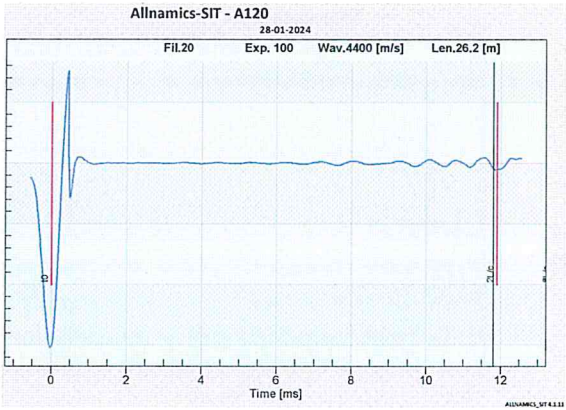
A108 : No significant anomaly, pile is OK



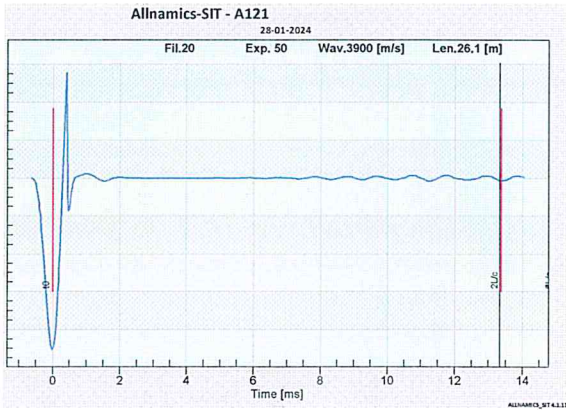
A109 : No significant anomaly, pile is OK



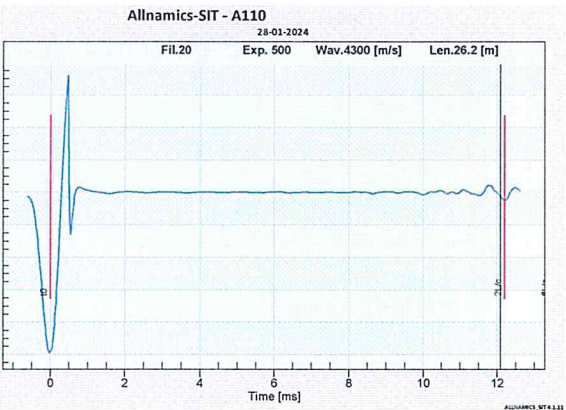
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Jan 28th, 2024



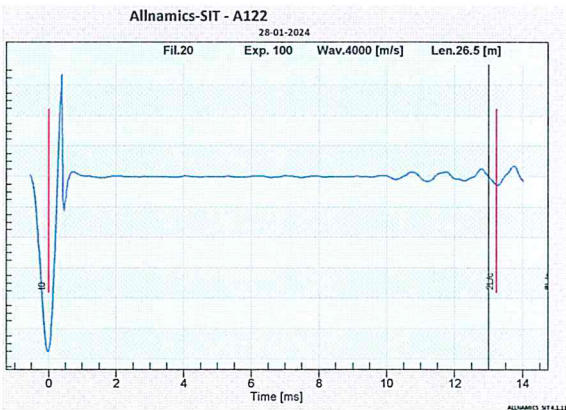
A120 : No significant anomaly, pile is OK



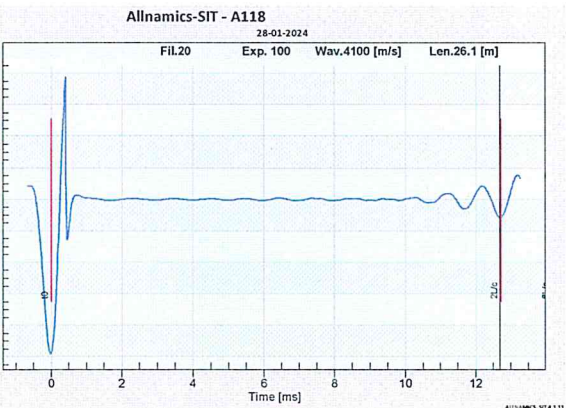
A121 : No significant anomaly, pile is OK



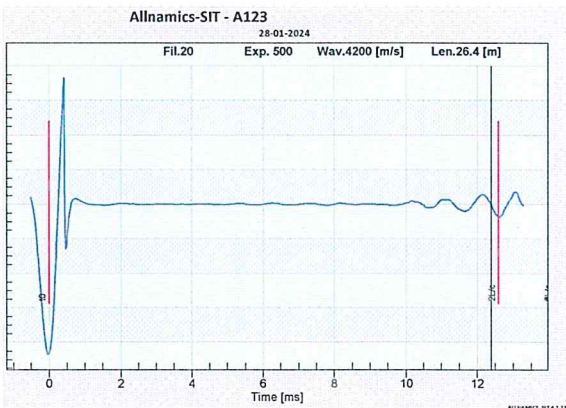
A110 : No significant anomaly, pile is OK



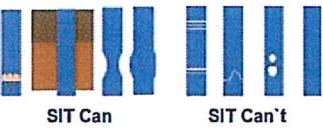
A122 : No significant anomaly, pile is OK



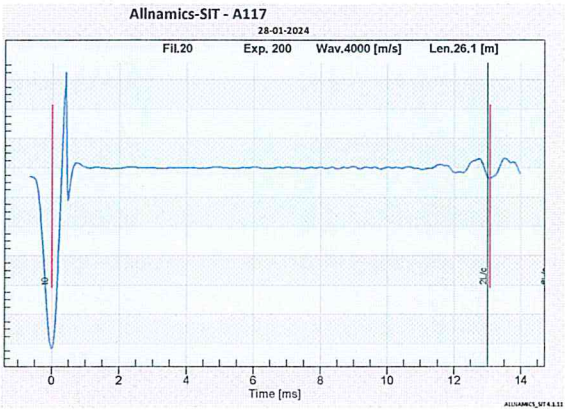
A118 : No significant anomaly, pile is OK



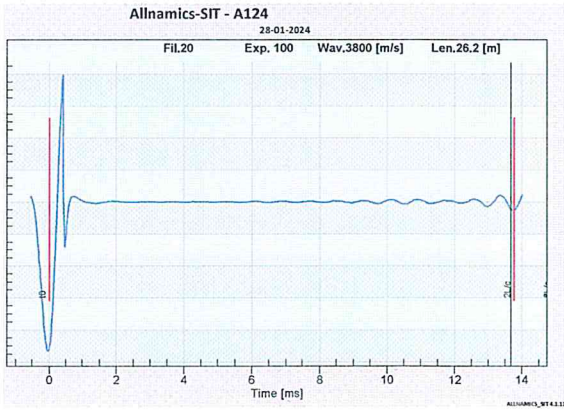
A123 : No significant anomaly, pile is OK



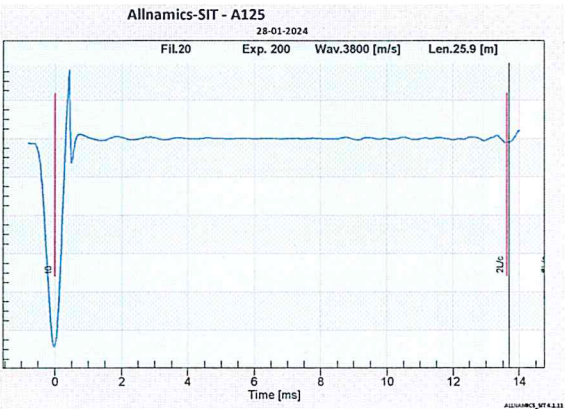
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Jan 28th, 2024



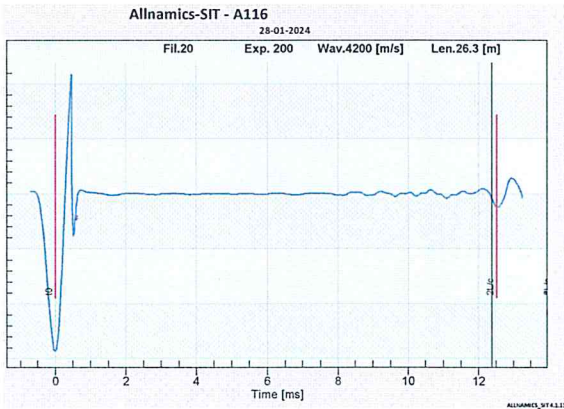
A117 : No significant anomaly, pile is OK



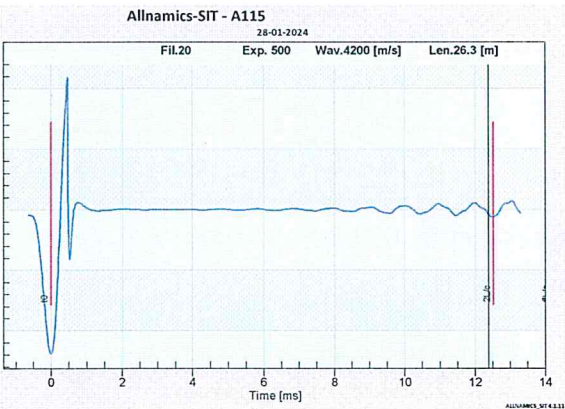
A124 : No significant anomaly, pile is OK



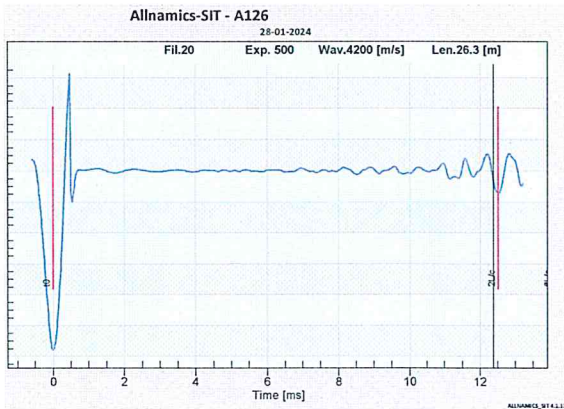
A125 : No significant anomaly, pile is OK



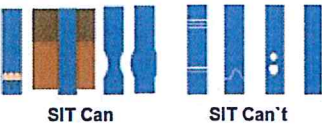
A116 : No significant anomaly, pile is OK



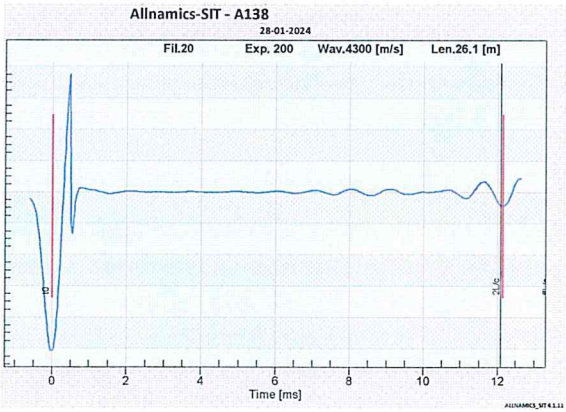
A115 : No significant anomaly, pile is OK



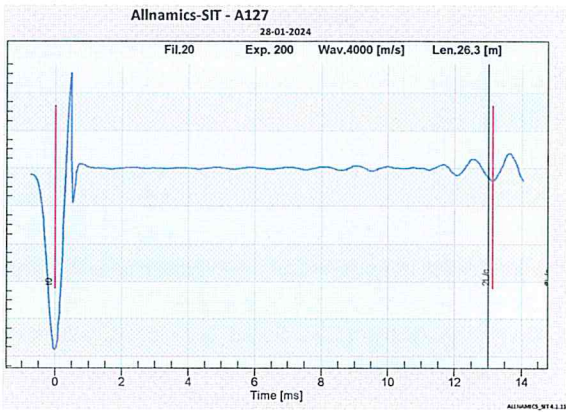
A126 : No significant anomaly, pile is OK



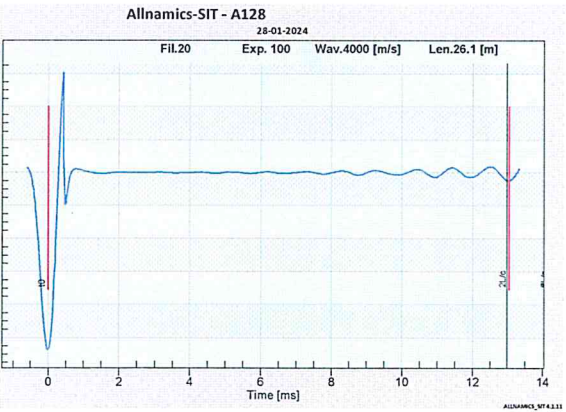
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Jan 28th, 2024



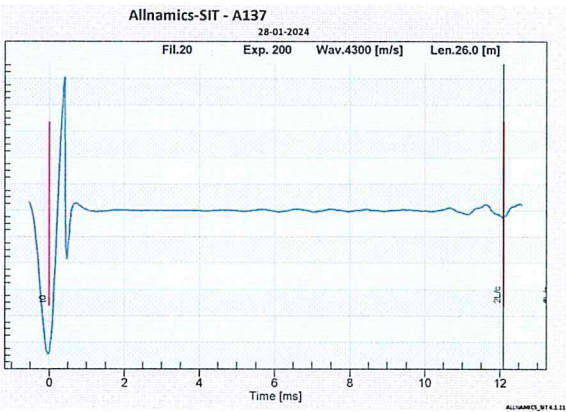
A138 : No significant anomaly, pile is OK



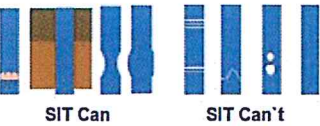
A127 : No significant anomaly, pile is OK



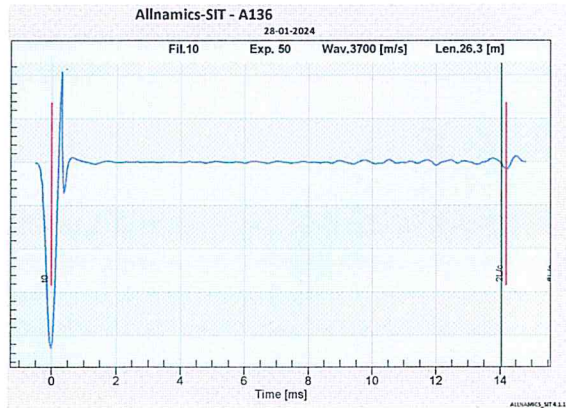
A128 : No significant anomaly, pile is OK



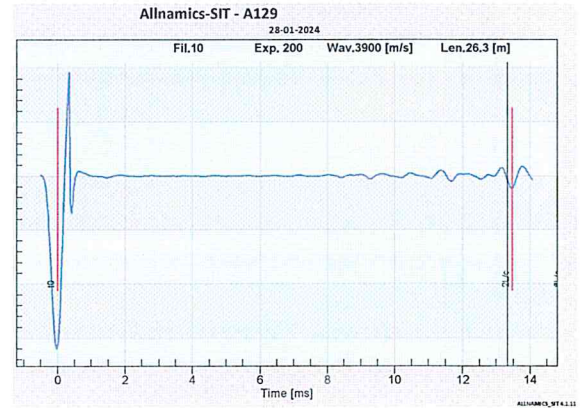
A137 : No significant anomaly, pile is OK



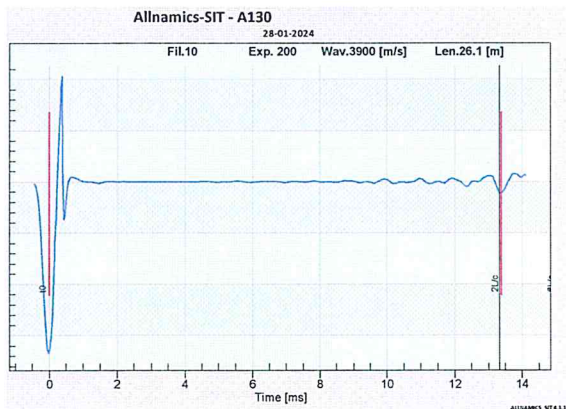
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Jan 28th, 2024



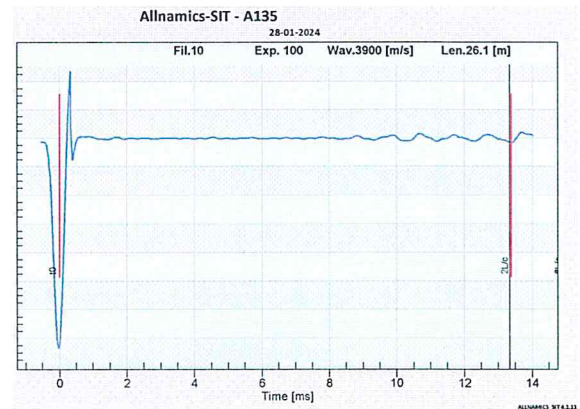
A136 : No significant anomaly, pile is OK



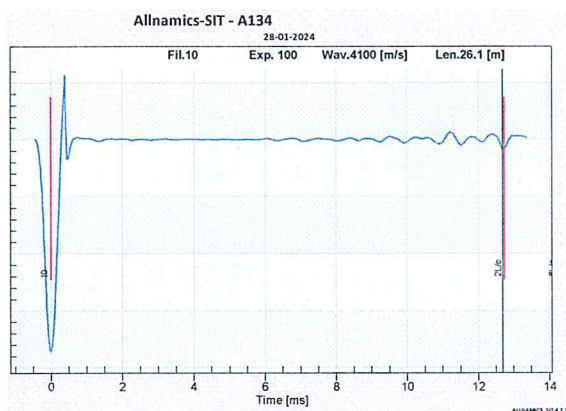
A129 : No significant anomaly, pile is OK



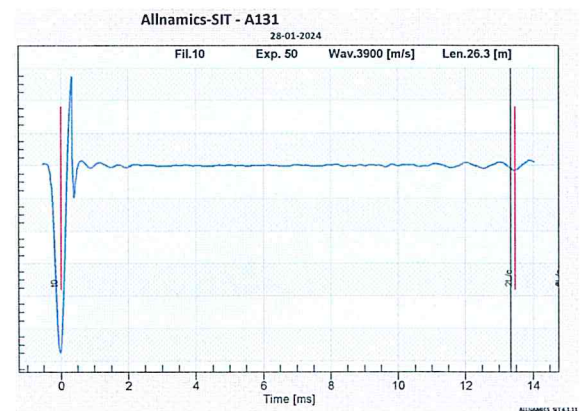
A130 : No significant anomaly, pile is OK



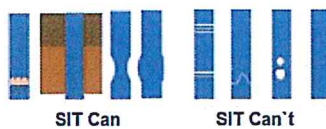
A135 : No significant anomaly, pile is OK



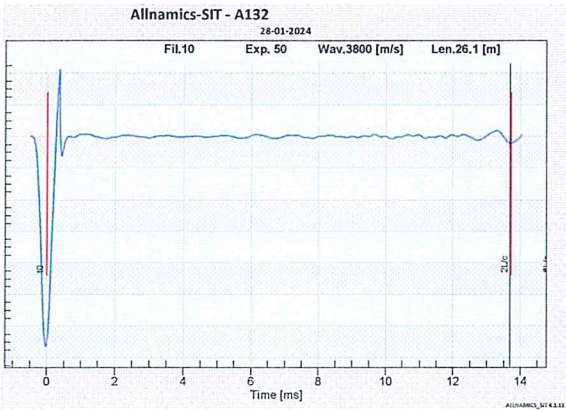
A134 : No significant anomaly, pile is OK



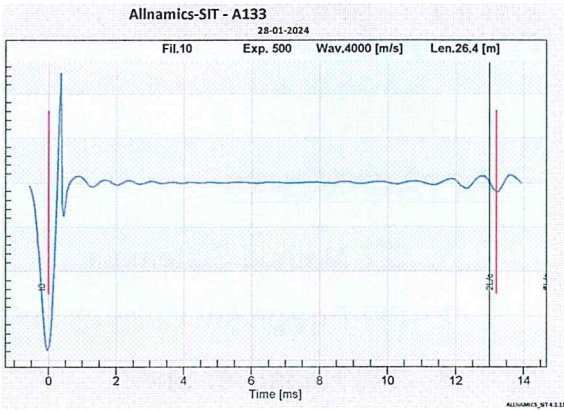
A131 : No significant anomaly, pile is OK



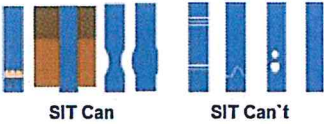
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Jan 28th, 2024



A132 : No significant anomaly, pile is OK



A133 : No significant anomaly, pile is OK



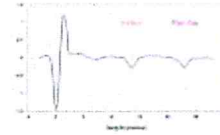


ATTACHMENTS

1. SIT Method Statement.
2. SIT Equipment Calibration Certificate.
3. Site Handover Sheet.



Sonic Integrity Testing (SIT) – Generic Method Statement



Rev	Status	Date	Editor	Checked by
0	Final	May, 2022	SHERIF SALAH, BSc	DR. ENG. A. F. EL – KADI

Sherif Salah

A. F. EL – KADI

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1) General

- Integrity testing of piles is designed to provide data about the physical dimensions, continuity, and consistency of material used in piles, not to give direct information about the performance of piles under the conditions of loading.
- An acoustic technique, developed by the institute for building material and building construction research of the Netherlands (TNO). The method, called Sonic Integrity Testing, has been in use in Europe since 1965.
- SIT classified as a most quickly and cheapest testing of pile integrity.
- The test itself takes no more than a few minutes, and over 100 piles a day can be easily tested.

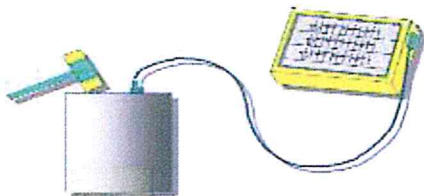


Fig. 1 SIT General Scheme

2) Applicable Standard

SIT-system fully complies with the following standard : **ASTM Standard D 5882; CUR109, EA PFähle, AFNOR, NF, P94-160-214.**

3) SIT Requirement

3.1 In the cast –in- place concrete piles, integrity tests shall not be carried out until at least 5 days from the casting date or reach to 75% of the designed strength.

3.2 "Client Obligation"

3.2.1 The pile head must be clean, accessible, sound, and free from standing water so that a small

accelerometer can be pressed against it.

3.2.2 All related data for the tested piles (pile numbers, lengths, diameters, soil data, execution sheets) should be turned over to NECB's technical office as required via any available form "E-mail, Whatsup, or hard copy".

4) Testing equipment and tools

Testing equipment consists of:

- 4.1 Portable Computer containing required software;
- 4.2 Accelerometer connected to the computer
- 4.3 Teflon Head Hammer; and
- 4.4 Pile head cleaning tool.

NECB has a four sets of Testing equipment as follows:

- **SIT⁺** Sys. manufactured by Profound B.V;
- **SIT Pro.** manufactured by Profound B.V; and
- **Two ALLSIT sys.** manufactured Allnamics USA.

The available equipment will do the required tests as available.

The related testing equipment information and calibration certificates shall be included in the test results reports.

5) Testing procedure

The testing of the piles shall follow the following steps:

- 5.1 Preparation of pile heads to avoid any loose concrete particles and standing water;
- 5.2 Press a small accelerometer against the pile head, and implement a number of three hits to the pile head using a Teflon Hammer;
- 5.3 Receive the equivalent waves on the portable computer screen;

- 5.4 Check that at least three waves are as similar as possible;



Fig.2 Pile head preparation

- 5.5 Check the waves and implement preliminary evaluation;
- 5.6 In case a defect is obvious it is recommended to implement several tests to assure the defect; and
- 5.7 Save results on the computer for later thorough interpretation and reporting.

5.8 SIT duration:

- 5.8.1 Test takes about 3 to 5 minute /pile in the normal conditions, poor pile head preparation, wet surface or other reasons may affect this duration.

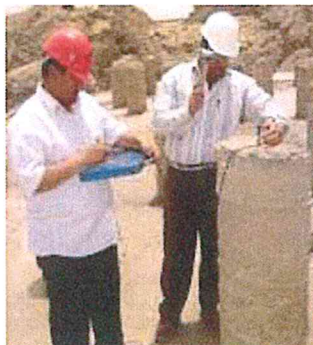


Fig.4 Test in progress

6) Interpretation of results

- 6.1 It must be emphasized that results of integrity testing need to be interpreted with the requisite experience, and that all methods have limitations.
- 6.2 It should be appreciated that anomalous results can arise which may be capable of alternative interpretations. Integrity testing may also identify minor defects, which shall not necessarily affect pile performance, and the experienced person(s) shall have to

exercise his judgment as to the acceptability or refusal of such a pile. Full details of the ground conditions, pile dimensions construction method and, logs shall be made available to the specialist in order to facilitate interpretation of the results.

7) SIT accuracy

- 7.1 The accuracy of the pile length depends directly on the accuracy of the stress wave velocity. When the pile length is known, the stress wave velocity can be measured by adjusting this velocity until the pile length corresponds with the known pile length.

- 7.2 Also to be clarified that the pile length is not one of the major findings of the test and does have an accuracy of 90-95%, while the stress wave velocity range (3000 to 4400m/sec), where:

7.2.1 Length of the pile <25 Diameter, the accuracy is about 95%;

7.2.2 Length of the pile >25 Diameter, the accuracy is about 90%.

- 7.3 The pile length is for the stored signal data. If the pile length is too short, the measured signal will be too short to determine the pile toe. The pile length should be estimated between 80% and 130% of the real pile length.

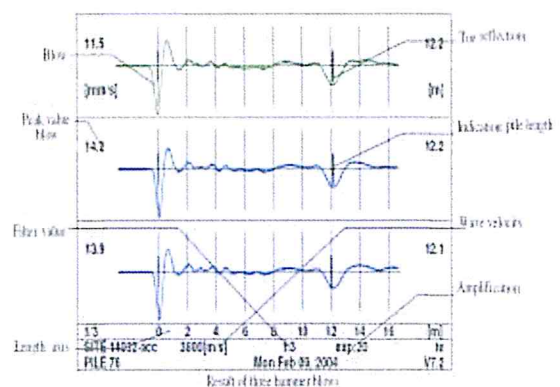


Fig. 5 SIT interface

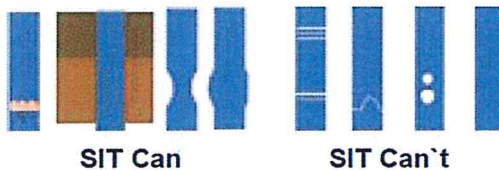
8) Advantages of SIT

- 8.1 First line quality assurance against major faults;
- 8.2 Hundreds of piles can be tested in a single day;
- 8.3 Testing on any accessible pile;

- 8.4 Defects discovered at an early stage;
- 8.5 Quick and economical compared to other methods;
- 8.6 Equipment is portable and easy to operate.

9) Limitations of SIT include

- 9.1 Can not estimate bearing capacity;
- 9.2 Minor defects are not easily seen (local loss of cover to steel or small inclusions);
- 9.3 Length is difficult to determine for very long piles with very high shaft friction;
- 9.4 The thickness of a debris layer at the pile toe can not be determined.



10) SITWAVE (optional)

- 10.1 Numerical analysis (SITWAVE) is a finite element using the computer program TNOWAVE based on one-dimensional wave propagation theory. This allows the behavior of a pile and the Surrounding ground under an impact load to be simulated. The algorithm for the program in the past was developed by TNO and applied in the program TNOWAVE.
- 10.2 SITWAVE analysis consists of two or three phases. The first step is to create a computer model based on the reliable reference pile with the ground profile. There are the theoretical dimensions of the pile and bring the sounding introduced (cone resistance with a depth of soil).
- 10.3 After entering the data, the measurement results of the reference pile are compared with the output of the theoretical model. By means of (signal processing/ comparison techniques) and signal matching the basic model in the computer is adjusted so that as much as possible consistent with the measurement of the reference pile. The reference piles will not usually be a pile of constant diameter and in the second phase, a match is made on the pile diameters.

- 10.4 The third phase is to run a match to the suspect signal pile. This is the basic model taken from the previous stage and the pile diameter is adjusted to that corresponding to the measurement of the suspect pile.

- SITWAVE calculates the wave signal of a modeled pile (with or without discontinuities or soil behavior) Experience with simulated SIT signals greatly helps the understanding of real SIT signals. When normal interpretation is not possible or too difficult, TNOWAVE calculations can clarify a discontinuity in a pile.

- SITWAVE may use for the following causes:

- I. Recording a major problem during the pile execution,
- II. Recording an abnormal SIT result from the rest of the result; and
- III. The client requested an analysis of a random sample.

Therefore, official approval to conduct the analysis is required.

11) SITWAVE requirement

- IV. Measurement signals for selected pile ;
- V. Pile record sheet including all casting data (theoretical and actual concrete, casting date, pile diameter, pile toe penetration, and any related information);
- VI. Related or nearest borehole;
- VII. Static and /or dynamic test report (if available);

- SITWAVE output

- I. Graph of velocity as a function of time or length;
- II. Graph of Radius and velocity as a function of time;
- III. Graph of equivalent diameter along pile axis;
- IV. Graph of pile cross-section along pile axis; and Excel sheet of the defected segments reading.

12) Reports:

- SIT final report for **each site visit** will be ready to submit at NECB office in Nasr City branch within less than 48Hr. Soft copy will be available as needed.

CALIBRATION SHEET

SIT-ACCELERATION SENSOR

Transducer information:

Serial number : **SA217**
Manufacturer : Allnamics Pile Testing Experts
Calibration factor : Teflon pile, 1 m, wave velocity 700 m/s
Calibration date : 31-1-2023
Calibrated by : Allnamics



1) The end user is responsible for a recalibration of the transducer.

Typical sensor specification:

Model	:	Model 333D01		
Manufacturer	:	PCB Piezotronics		
Range	:	10/20 g	Non-linearity	: 2 % FS
Interface	:	USB 2.0	Transverse sens.	: 5 % FS
ADC	:	24 bit	Freq. range	: 1 to 8000 Hz
Max range/shock	:	7000 g	Operating range	: -10 to 55 °C

Wiring and mounting:

Connector : USB, A Male
Cable : 2.9m, PVC
USID : none
Dimensions : 75x30x30 mm (lxbxh)
IP Class : 66



Allnamics Pile Testing Experts B.V.

Address : Waterpas 96
2495 AT The Hague
The Netherlands
Web : <https://allnamics.com>
Tel. : +31 - 88 -255 62 64



This certificate shall not be reproduced.
<https://allnamics.com/>



Rev. 03

إستلام موقع
Site Handover Sheet (SIT)

قطر وطول القيسون الدائم (إن وجد)		تاريخ الزيارة: 2023 / 1 / 18		إستلام أمر العمل: 2023 / /	
المالك (Owner): وزارة النقل - المنطقة الشرقية للطرق والكباري					
العميل (NECB Client): شركة السلام - استشارات جيوتقنية					
المشروع (Project Name): القطاع الرابع - منطقة إغزانيا - برج إفرنج					
إستشاري المالك (OE):					
ملاحظات أثناء الاختبار	Pile ID Cap/No.	Diameter (cm)	Length (m) from level of test	Total # tested in cap	Pile Type
	A153 → A138	60	26	36	Bored Straws
					C.F.A Micro
					Other
					Other measurements
					Layout
					Soil data
SITWAVE request					
Free hand Layout (If layout not available)					
إجمالي عدد الاختبارات Total # of tests: 36 Pile					
ممثل المكتب NECB Represe					
ممثل العميل Client Represen tative					
ممثل الاستشاري OE Representative					
صحة أرقام وأعداد وبيانات الخوازيق المسجلة مسئولية العميل دون غيره، ويلزم التأكد منها من خلال لوحة معتمدة بالموقع.					
The truth of the tested elements data is in the client responsibility and should be checked via a stamped layout at site.					



إسم العميل : شركة السلام انترناشيونال
إسم المشروع : القطار الكهربائي السريع - القطاع الخامس - قرية الغربانيات - برج العرب - الإسكندرية
الموضوع : اختبارات الجس الصوتي
رقم الصادر : E - 062
التاريخ : 2024/02/15

تحية طيبة وبعد ،،،

بالإشارة إلى الموضوع عاليه، مرفق لسيادتكم عدد (2) نسخة من تقرير اختبارات الجس الصوتي الزيارة التي تمت بتاريخ

2024/02/12 - لعدد (60) خازوق

وتفضلوا سيادتكم بقبول فائق الإحترام ،،،

مكتب النيل الهندسي الاستشاري (مصر)
د. مهندس / أنور فاروق القاضي
العضو المنتدب

مكتب النيل الهندسي الاستشاري

المرفقات :

■ عدد (2) نسخة من التقرير.

بيت خبرة هندسي استشاري N.E.C.B	
مكتب النيل الهندسي الاستشاري (مصر)	
صا.م.ن. رقم : E-62	
رقم المشروع : ٢٠٤٤/٩/١٥	التاريخ : ٢٠٢٤/٩/١٥



JAS-ANZ

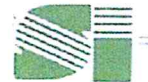




CONCERNING: **SIT** REPORT ON (60) CONCRETE PILE(S) IN

ELECTRIC EXPRESS TRAIN, SECTOR 5, AL-GHARBANIYAT VILLAGE, BURJ AL-ARAB

إدارة الأعمال
تصميم و إنشائها
(GARBLT)



Rev 0 Status FINAL Date 12-FEB-2024

Editor SHERIF SALAH, BSc

sherif salah

Checked by DR. ENG. A. F. EL – KADI



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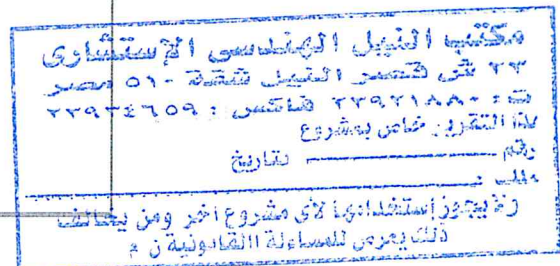
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Nile Engineering Consulting Bureau – Geotechnical Q.C&Q.A Department
Subject : **SIT Final Report** _ EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
To : El Salam International for Contracting & Trading.
NECB Ref. : SIT017/0105/2024.
Checked by : **A. F. El-Kadi, PhD**



Document History

Title	NECB Ref.	Rev.	Status	Date	Remark
SIT Report	SIT017/0105/024	0	Formal/ Final	12-02-2024	-



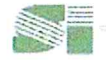


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1. Introduction

1.1 Upon the request of "El Salam International for Contracting & Trading"



Sonic Integrity Testing (SIT) following the Project specifications executed to verify the integrity of (60) concrete pile(s).

1.2 The testing activities may be summarized as follows:

Project /Location	EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab
Date /Time	12-Feb-2024
Witnessed	Project Engineer; and Client Engineer
NECB Staff	Mohamed Salah, Geotec. Mohamed Ali, Geotec.
Tested Element (s) Information	All piles information as stated in annex 1
Visual Inspection	As stated in the Reflectogram footer



FIG. 1 SIT IN PROGRESS

2. The Measuring Technique

2.1 Applicable standards:

2.1.1 The measuring technique fully complies with ASTM Standard D5882-17, EA Pfähle 2012, CUR-Aanbeveling 109:2013, AFNOR NF P 94-160-2, and NF P 94-160-4.

2.1.2 The detailed method statement attached in the attachments.

2.2 Additional measurement

2.2.1 Not used.

2.3 Testing Equipment

2.3.1 The used testing equipment manufactured by Allnamics USA.



2.3.2 All testing equipment data are in the attachments.

3. Conclusion

Based on test results interpretation using available nearest borehole logs, the following may be stated:

3.1 The test results for all tested and report piles shows acceptable lengths according to the pile's execution data as shown in annex 1;

3.2 The Test results for all tested and reported piles are matching soil layers' sequence.

Generally, it is be concluded that:

- 1) No major construction anomalies are evident from the test results;
- 2) All tested and reported piles are **Integrity Wisely Accepted.**

- يمكن تلخيص نتائج الاختبار لعدد (60) خازوق خرساني والموضحين بالجدول المرفق أدناه بان جميع الخوازيق المختبرة ذات تكاملية جيدة ومقبولة (في الطول المقاس من منسوب الاختبار ومتوسط القطر)، وبدون أي عيوب جوهرية أو اختناقات مؤثرة على تكامليتها.

Nile Engineering Consulting Bureau – Geotechnical Q.C&Q.A Department
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General Tips

- Depending on our instrument accuracy, while the pile length is greater than 25 times the pile diameter. The measurement accuracy is about 90%;
- Pile marked (poor pile head preparation) means surface cracks appear due to pile head demolishing, which does not affect either the wave quality or the integrity of this pile.
- Pile marked (anomaly @ pile head) means the marked pile needs to demolish for about 10 to 20 cm to reach sound concrete.
- The truth of the tested elements ID and input data is the client's responsibility.

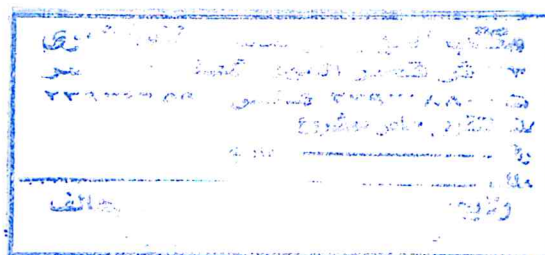
Cairo, 12 Feb 2024

NILE ENGINEERING CONSULTING BUREAU

(NECB-MISR)

Dr. ENG. A. F. EL – KADI

CEO



Nile Engineering Consulting Bureau – Geotechnical Q.C&Q.A Department

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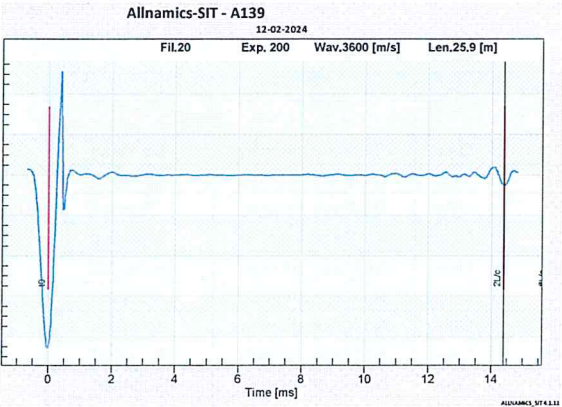
ANNEXES

ANNEX 1

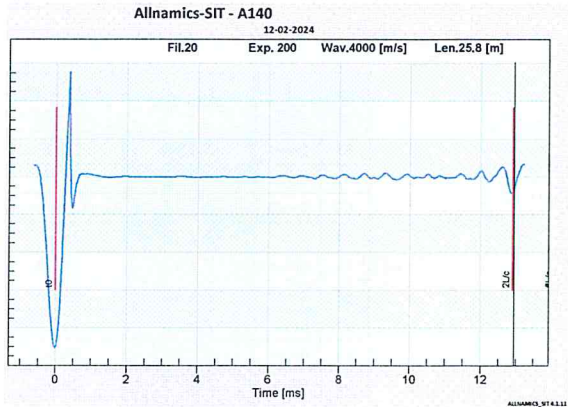
Tested Pile(s) on February 12th, 2024

Serial	Type	Pile ID	Ref. Length (meter)	Ref. Diameter (meter)	Pile Toe	Analysis	Conclusion
1	Bored	A139	25.90	0.60	Clear	No Major anomaly	Accepted
2	Bored	A140	25.90	0.60	Clear	No Major anomaly	Accepted
3	Bored	A141	25.90	0.60	Clear	No Major anomaly	Accepted
4	Bored	A142	25.90	0.60	Clear	No Major anomaly	Accepted
5	Bored	A143	25.90	0.60	Clear	No Major anomaly	Accepted
6	Bored	A144	25.90	0.60	Clear	No Major anomaly	Accepted
7	Bored	A145	25.90	0.60	Clear	No Major anomaly	Accepted
8	Bored	A146	25.90	0.60	Clear	No Major anomaly	Accepted
9	Bored	A147	25.90	0.60	Clear	No Major anomaly	Accepted
10	Bored	A148	25.90	0.60	Clear	No Major anomaly	Accepted
11	Bored	A149	25.90	0.60	Clear	No Major anomaly	Accepted
12	Bored	A150	25.90	0.60	Clear	No Major anomaly	Accepted
13	Bored	A151	25.90	0.60	Clear	No Major anomaly	Accepted
14	Bored	A152	25.90	0.60	Clear	No Major anomaly	Accepted
15	Bored	A153	25.90	0.60	Clear	No Major anomaly	Accepted
16	Bored	A154	25.90	0.60	Clear	No Major anomaly	Accepted
17	Bored	A155	25.90	0.60	Clear	No Major anomaly	Accepted
18	Bored	A156	25.90	0.60	Clear	No Major anomaly	Accepted
19	Bored	A157	25.90	0.60	Clear	No Major anomaly	Accepted
20	Bored	A158	25.90	0.60	Clear	No Major anomaly	Accepted
21	Bored	A159	25.90	0.60	Clear	No Major anomaly	Accepted
22	Bored	A160	25.90	0.60	Clear	No Major anomaly	Accepted
23	Bored	A161	25.90	0.60	Clear	No Major anomaly	Accepted
24	Bored	A162	25.90	0.60	Clear	No Major anomaly	Accepted
25	Bored	A163	25.90	0.60	Clear	No Major anomaly	Accepted
26	Bored	A164	25.90	0.60	Clear	No Major anomaly	Accepted
27	Bored	A165	25.90	0.60	Clear	No Major anomaly	Accepted
28	Bored	A166	25.90	0.60	Clear	No Major anomaly	Accepted
29	Bored	A167	25.90	0.60	Clear	No Major anomaly	Accepted
30	Bored	A168	25.90	0.60	Clear	No Major anomaly	Accepted
31	Bored	A169	25.90	0.60	Clear	No Major anomaly	Accepted
32	Bored	A181	25.90	0.60	Clear	No Major anomaly	Accepted
33	Bored	A170	25.90	0.60	Clear	No Major anomaly	Accepted
34	Bored	A171	25.90	0.60	Clear	No Major anomaly	Accepted
35	Bored	A172	25.90	0.60	Clear	No Major anomaly	Accepted
36	Bored	A173	25.90	0.60	Clear	No Major anomaly	Accepted
37	Bored	A174	25.90	0.60	Clear	No Major anomaly	Accepted
38	Bored	A175	25.90	0.60	Clear	No Major anomaly	Accepted
39	Bored	A176	25.90	0.60	Clear	No Major anomaly	Accepted
40	Bored	A177	25.90	0.60	Clear	No Major anomaly	Accepted
41	Bored	A178	25.90	0.60	Clear	No Major anomaly	Accepted
42	Bored	A179	25.90	0.60	Clear	No Major anomaly	Accepted
43	Bored	A180	25.90	0.60	Clear	No Major anomaly	Accepted
44	Bored	A182	25.90	0.60	Clear	No Major anomaly	Accepted
45	Bored	A183	25.90	0.60	Clear	No Major anomaly	Accepted
46	Bored	A184	25.90	0.60	Clear	No Major anomaly	Accepted
47	Bored	A185	25.90	0.60	Clear	No Major anomaly	Accepted
48	Bored	A186	25.90	0.60	Clear	No Major anomaly	Accepted
49	Bored	A187	25.90	0.60	Clear	No Major anomaly	Accepted
50	Bored	A188	25.90	0.60	Clear	No Major anomaly	Accepted

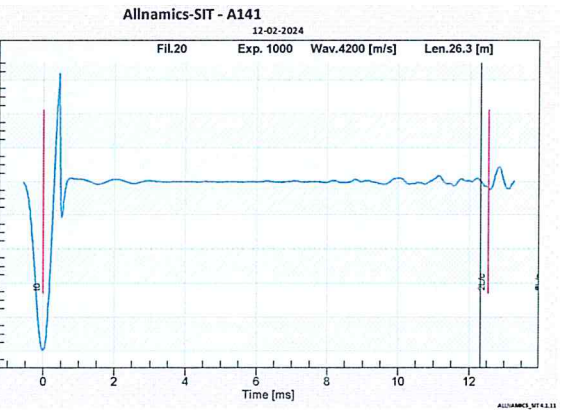
Serial	Type	Pile ID	Ref. Length (meter)	Ref. Diameter (meter)	Pile Toe	Analysis	Conclusion
51	Bored	A189	25.90	0.60	Clear	No Major anomaly	Accepted
52	Bored	A190	25.90	0.60	Clear	No Major anomaly	Accepted
53	Bored	A191	25.90	0.60	Clear	No Major anomaly	Accepted
54	Bored	A192	25.90	0.60	Clear	No Major anomaly	Accepted
55	Bored	A193	25.90	0.60	Clear	No Major anomaly	Accepted
56	Bored	A194	25.90	0.60	Clear	No Major anomaly	Accepted
57	Bored	A195	25.90	0.60	Clear	No Major anomaly	Accepted
58	Bored	A196	25.90	0.60	Clear	No Major anomaly	Accepted
59	Bored	A197	25.90	0.60	Clear	No Major anomaly	Accepted
60	Bored	A198	25.90	0.60	Clear	No Major anomaly	Accepted



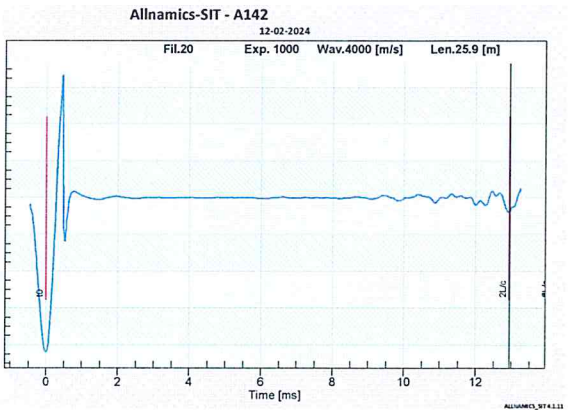
A139 : No significant anomaly, pile is OK



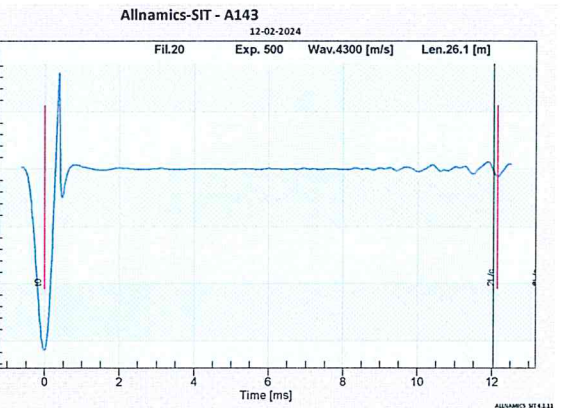
A140 : No significant anomaly, pile is OK



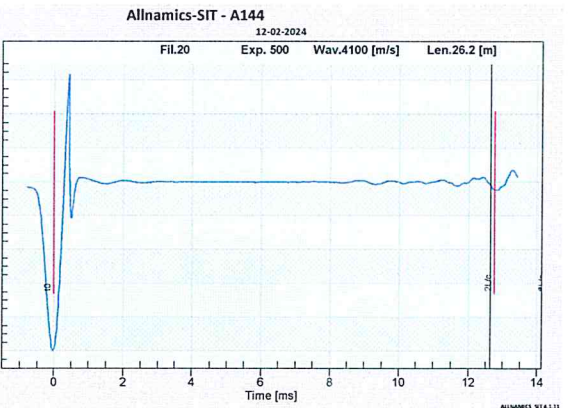
A141 : No significant anomaly, pile is OK



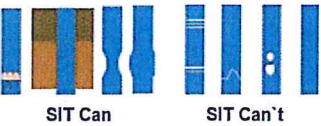
A142 : No significant anomaly, pile is OK



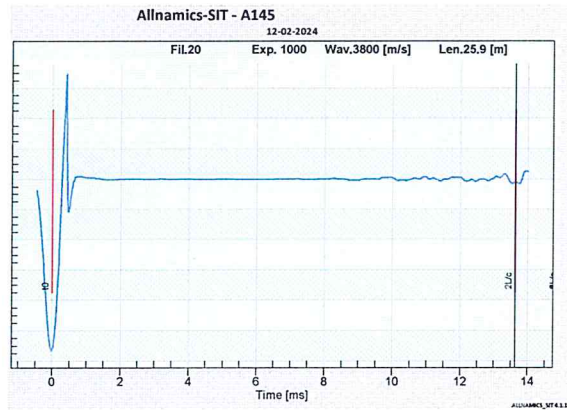
A143 : No significant anomaly, pile is OK



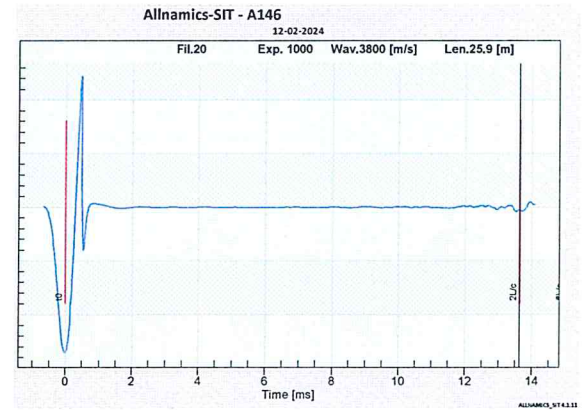
A144 : No significant anomaly, pile is OK



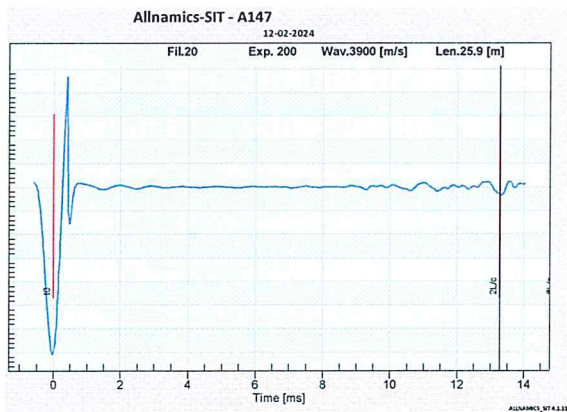
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Feb 12th, 2024



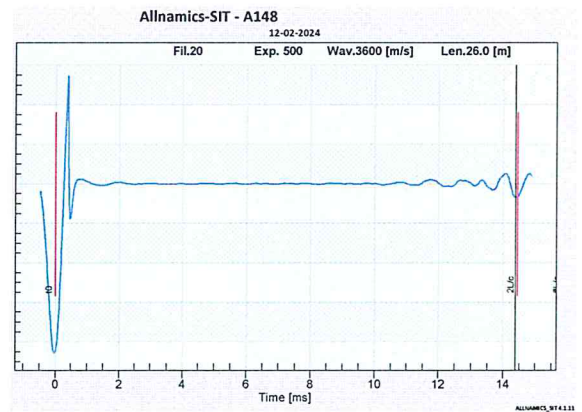
A145 : No significant anomaly, pile is OK



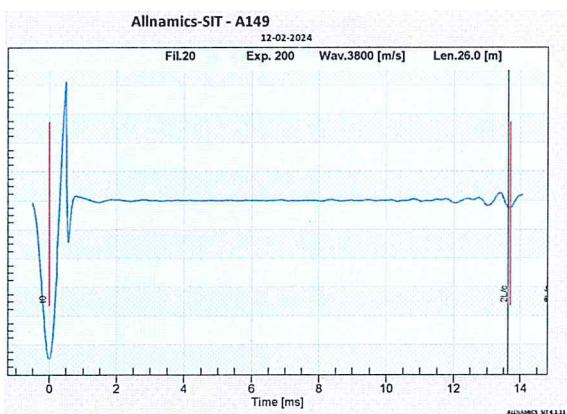
A146 : No significant anomaly, pile is OK



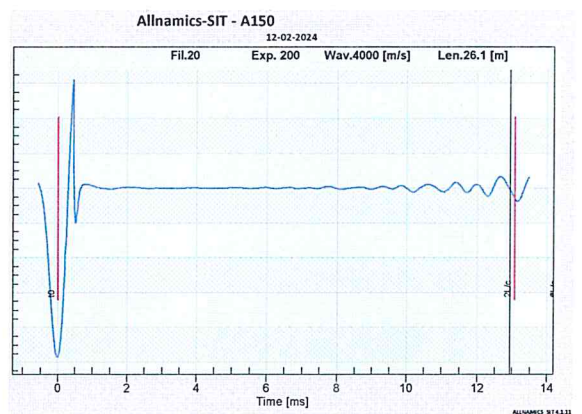
A147 : No significant anomaly, pile is OK



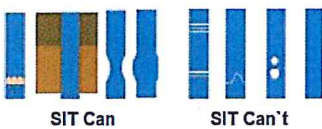
A148 : No significant anomaly, pile is OK



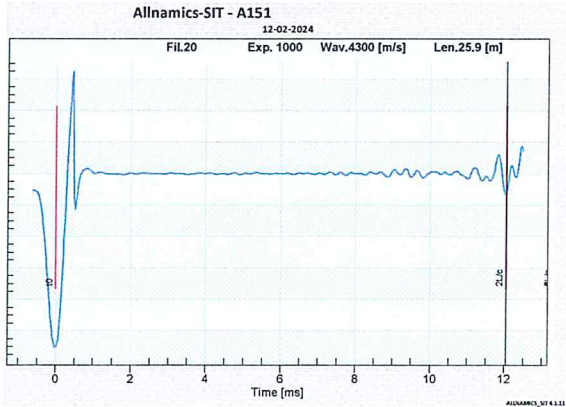
A149 : No significant anomaly, pile is OK



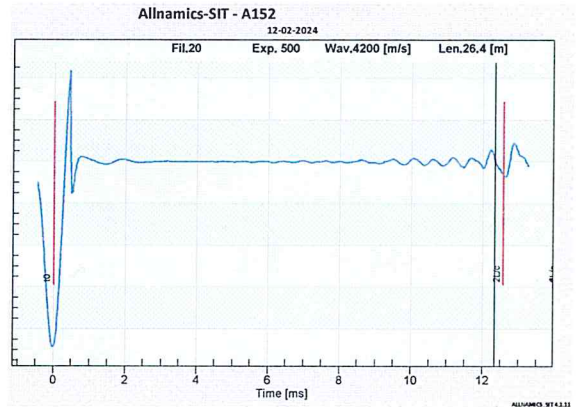
A150 : No significant anomaly, pile is OK



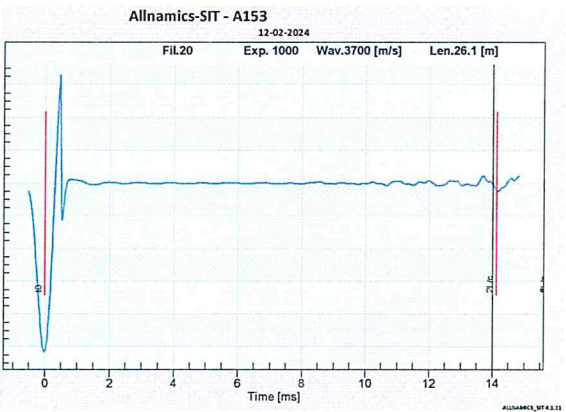
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Feb 12th, 2024



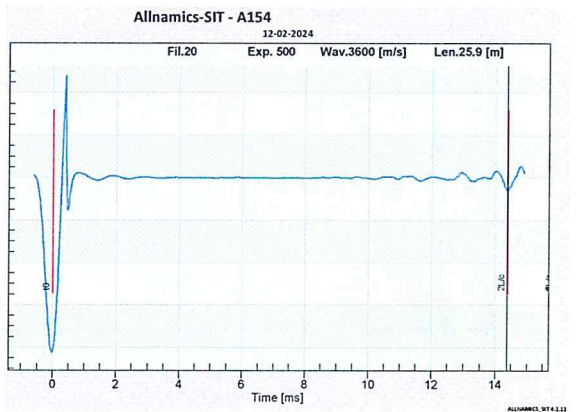
A151 : No significant anomaly, pile is OK



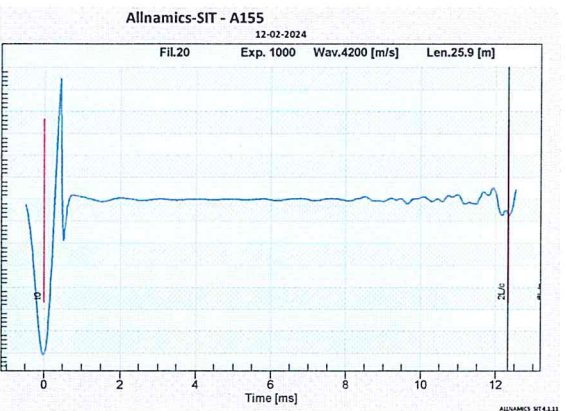
A152 : No significant anomaly, pile is OK



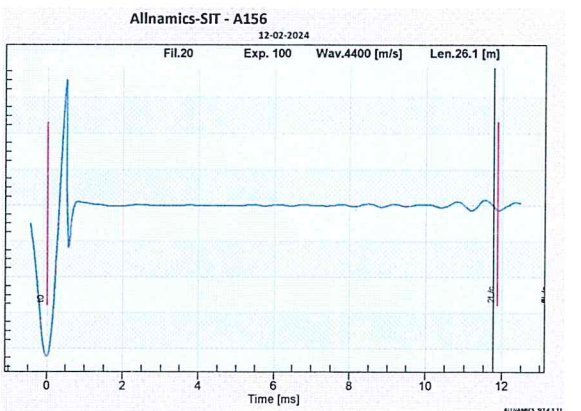
A153 : No significant anomaly, pile is OK



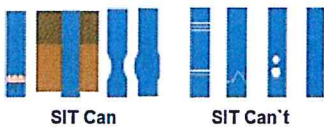
A154 : No significant anomaly, pile is OK



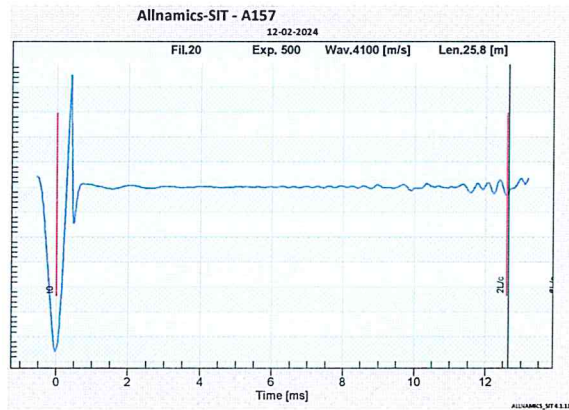
A155 : No significant anomaly, pile is OK



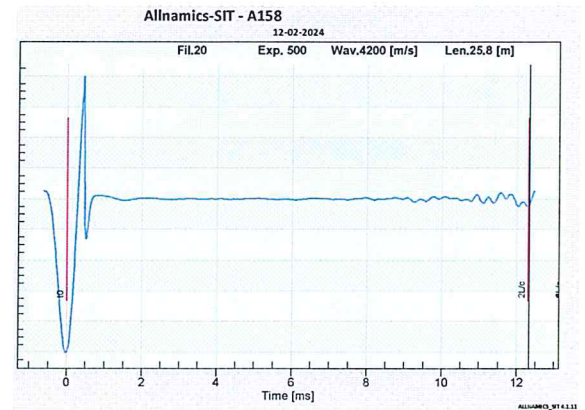
A156 : No significant anomaly, pile is OK



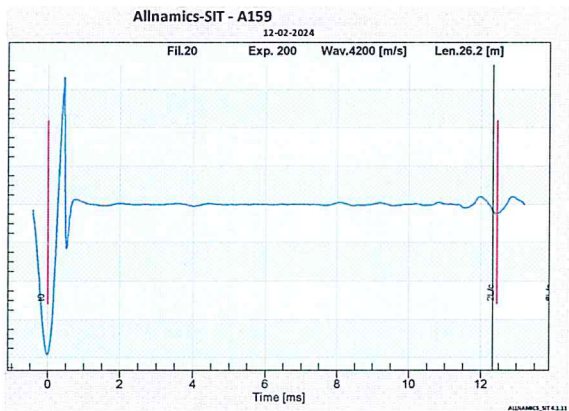
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Feb 12th, 2024



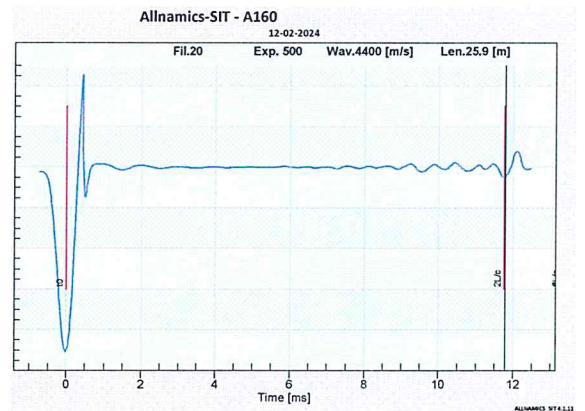
A157 : No significant anomaly, pile is OK



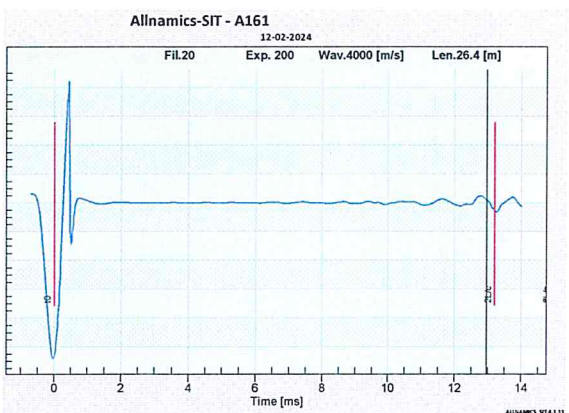
A158 : No significant anomaly, pile is OK



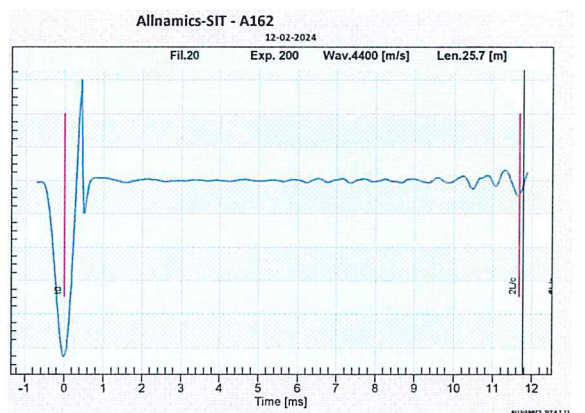
A159 : No significant anomaly, pile is OK



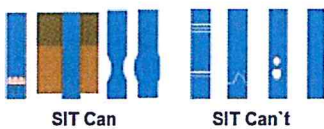
A160 : No significant anomaly, pile is OK

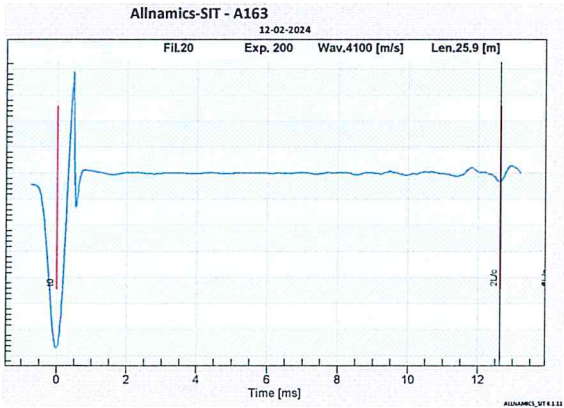


A161 : No significant anomaly, pile is OK

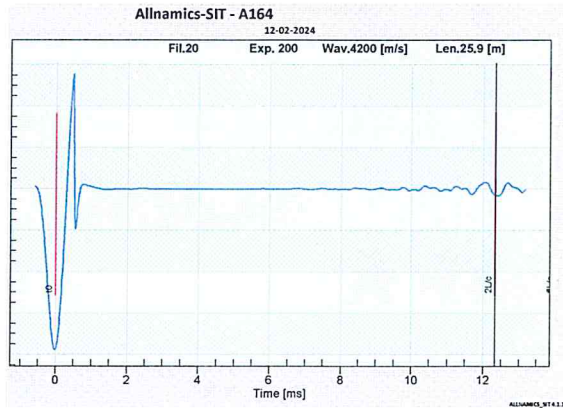


A162 : No significant anomaly, pile is OK

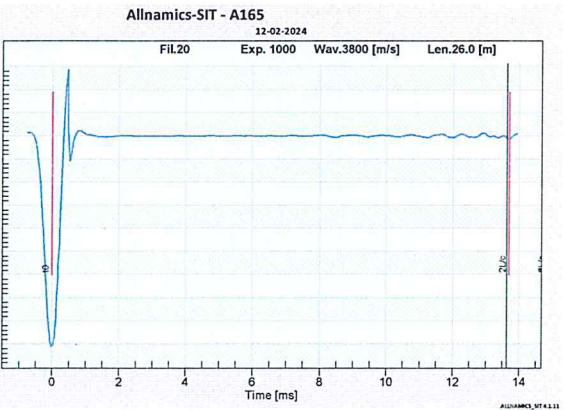




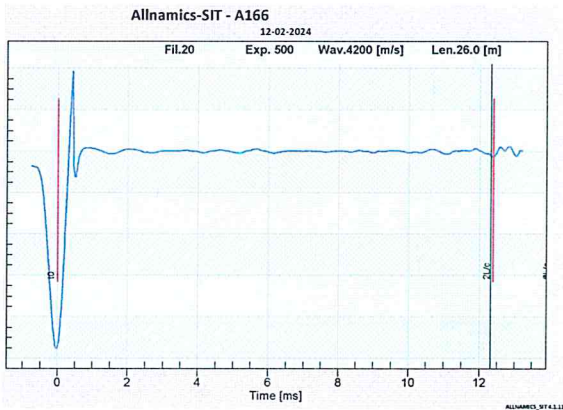
A163 : No significant anomaly, pile is OK



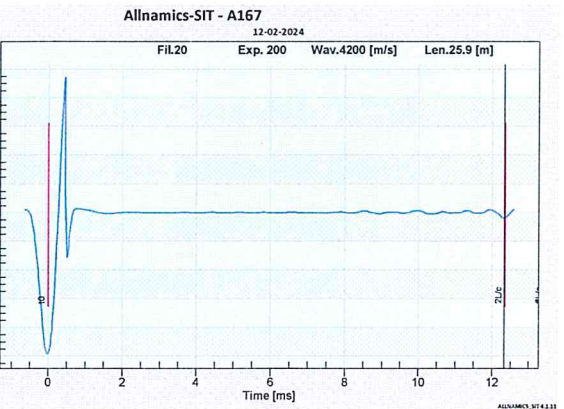
A164 : No significant anomaly, pile is OK



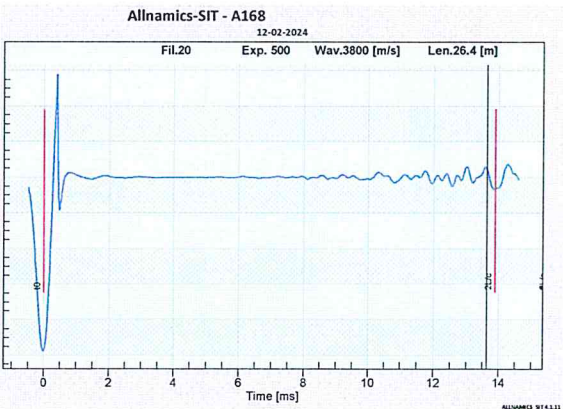
A165 : No significant anomaly, pile is OK



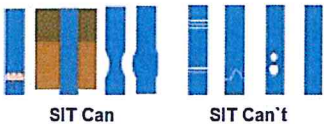
A166 : No significant anomaly, pile is OK



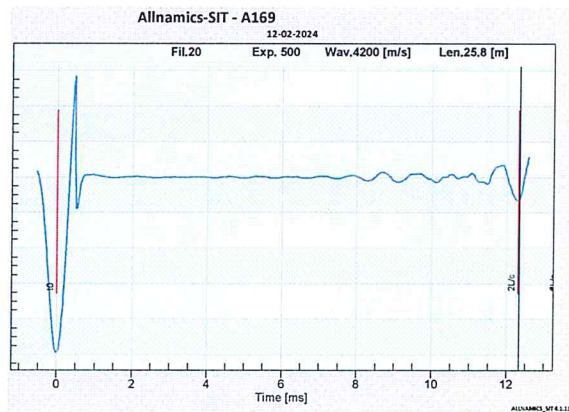
A167 : No significant anomaly, pile is OK



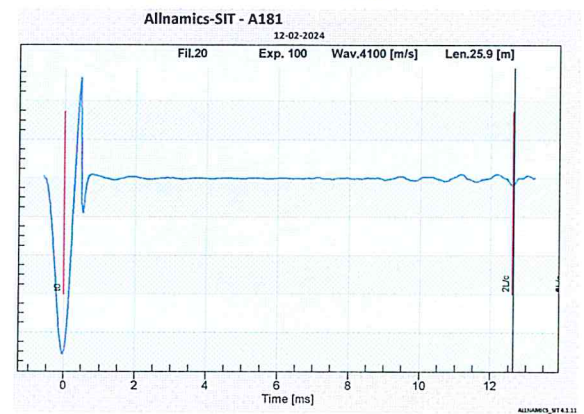
A168 : No significant anomaly, pile is OK



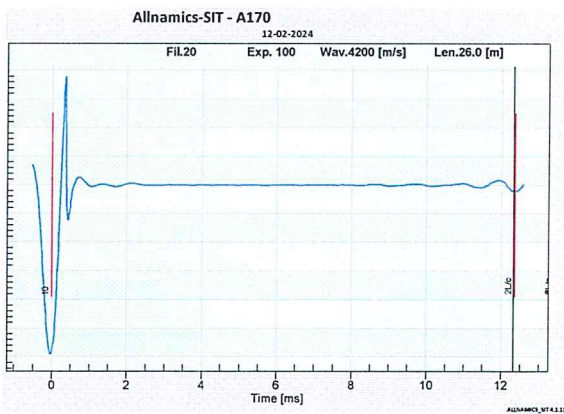
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Feb 12th, 2024



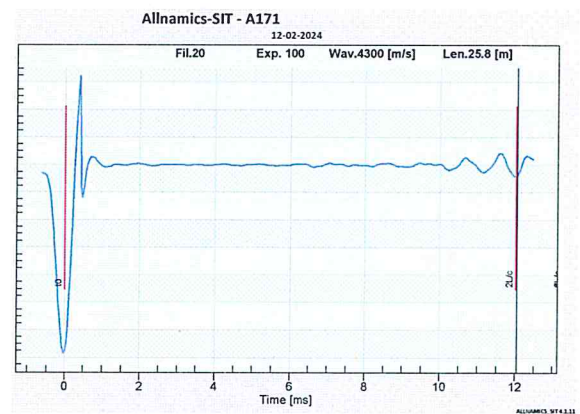
A169 : No significant anomaly, pile is OK



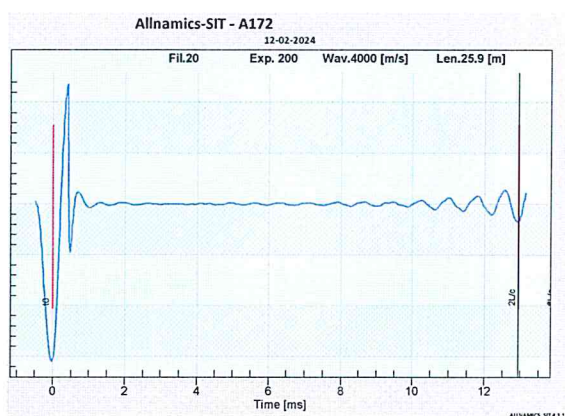
A181 : No significant anomaly, pile is OK



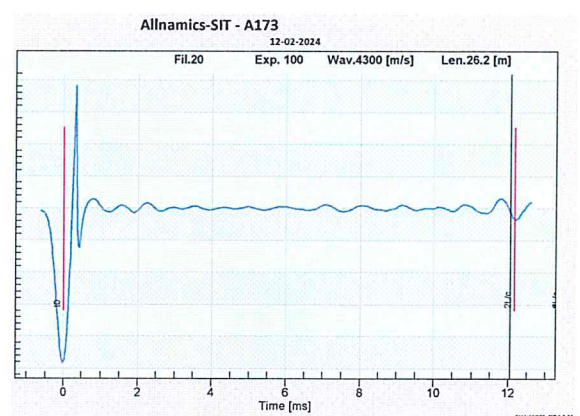
A170 : No significant anomaly, pile is OK



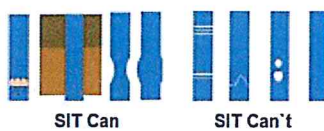
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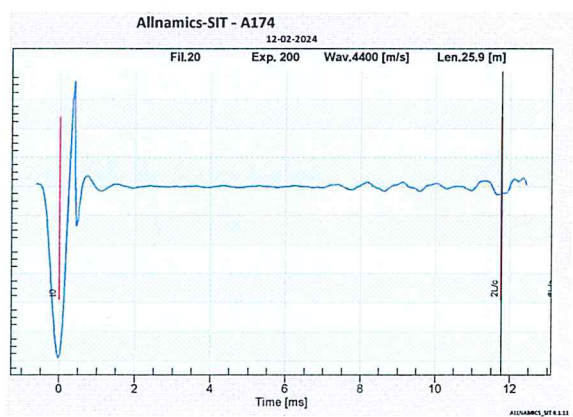
A172 : No significant anomaly, pile is OK



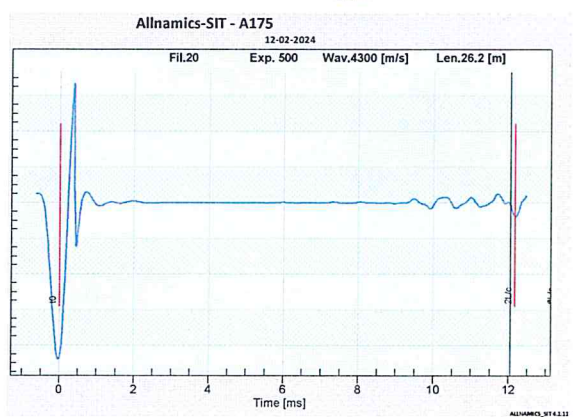
A173 : No significant anomaly, pile is OK



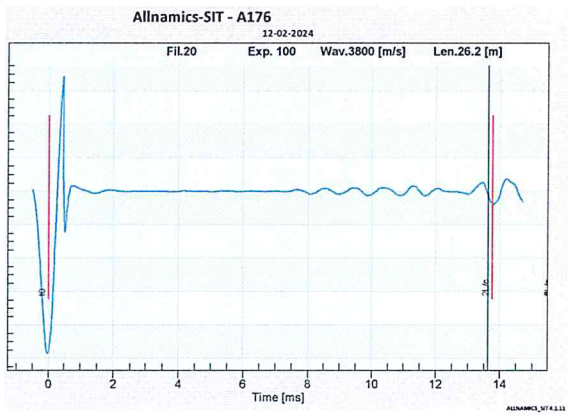
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Feb 12th, 2024



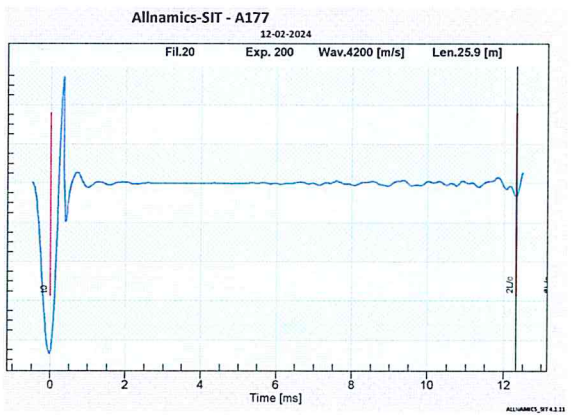
A174 : No significant anomaly, pile is OK



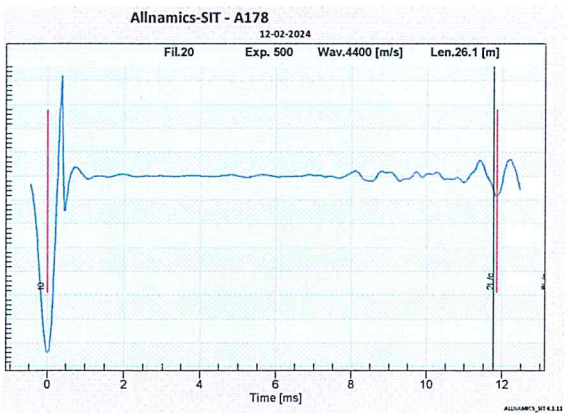
A175 : No significant anomaly, pile is OK



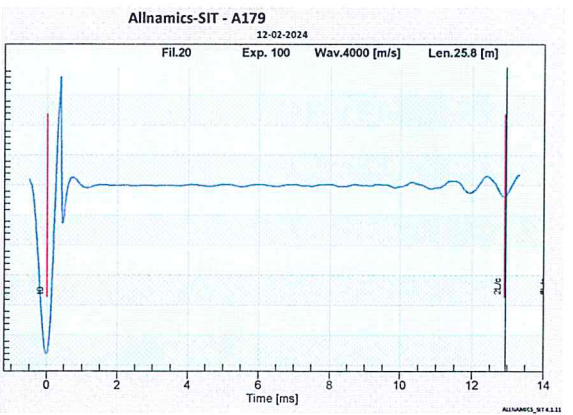
A176 : No significant anomaly, pile is OK



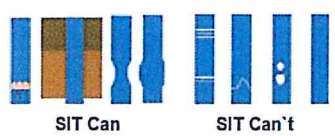
A177 : No significant anomaly, pile is OK



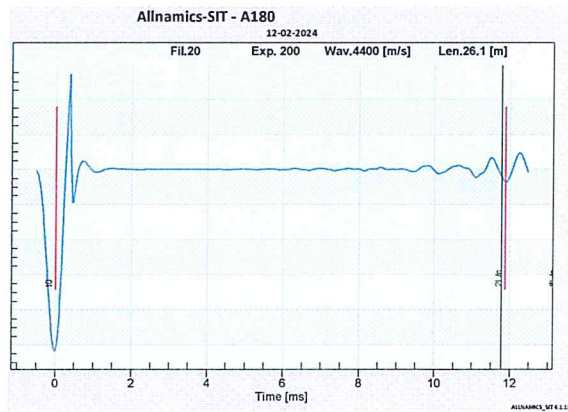
A178 : No significant anomaly, pile is OK



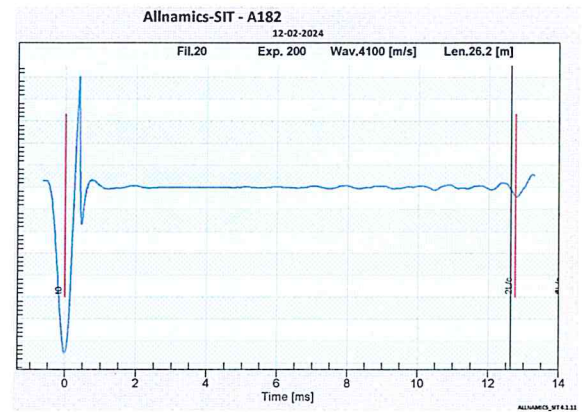
A179 : No significant anomaly, pile is OK



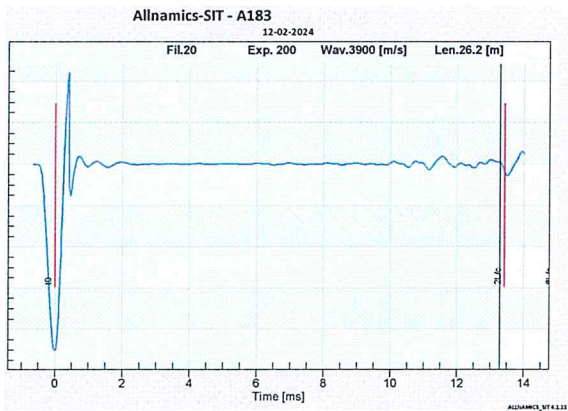
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Feb 12th, 2024



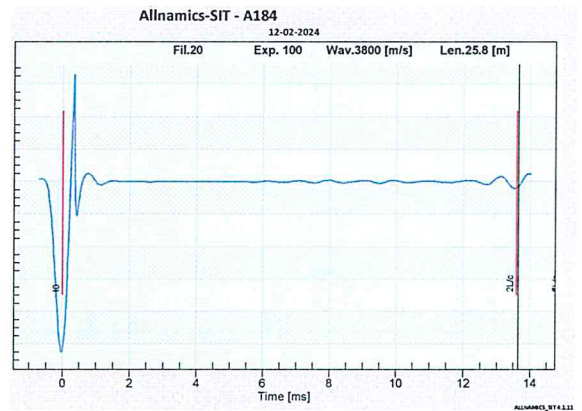
A180 : No significant anomaly, pile is OK



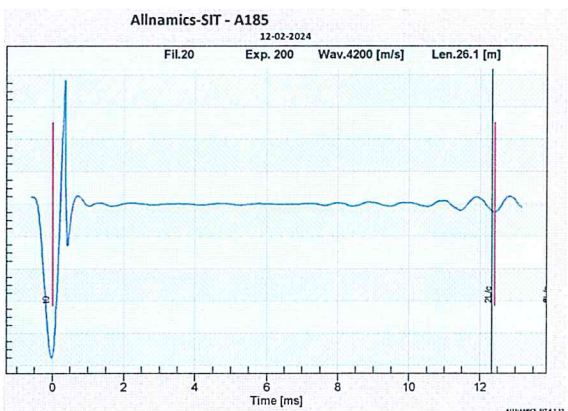
A182 : No significant anomaly, pile is OK



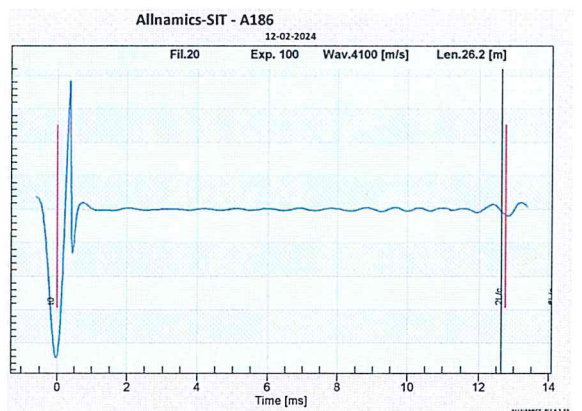
A183 : No significant anomaly, pile is OK



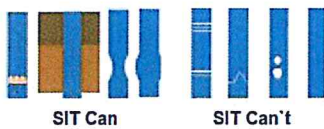
A184 : No significant anomaly, pile is OK



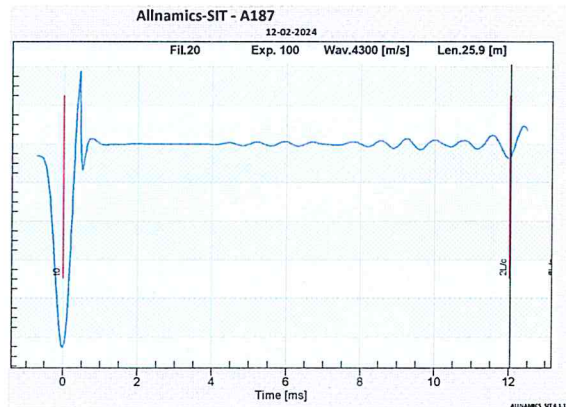
A185 : No significant anomaly, pile is OK



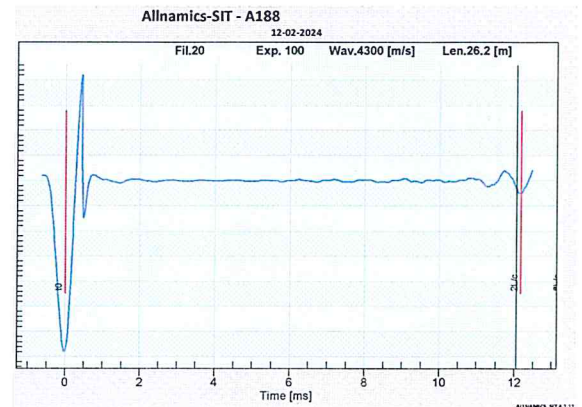
A186 : No significant anomaly, pile is OK



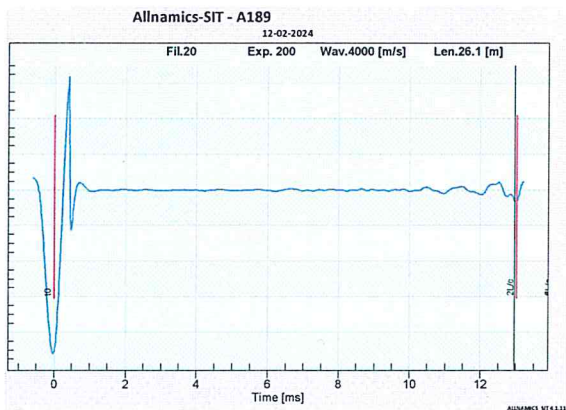
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Feb 12th, 2024



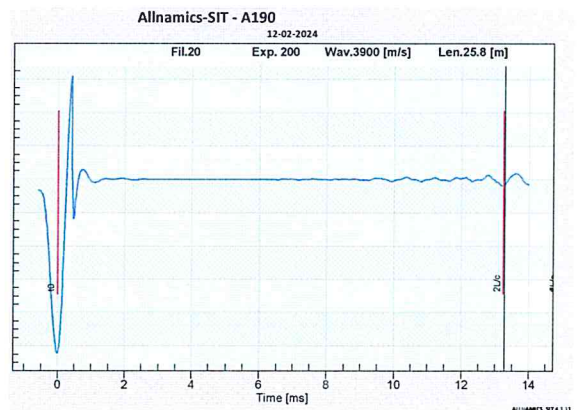
A187 : No significant anomaly, pile is OK



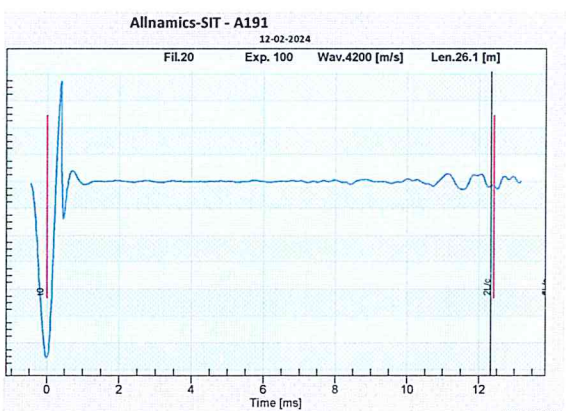
A188 : No significant anomaly, pile is OK



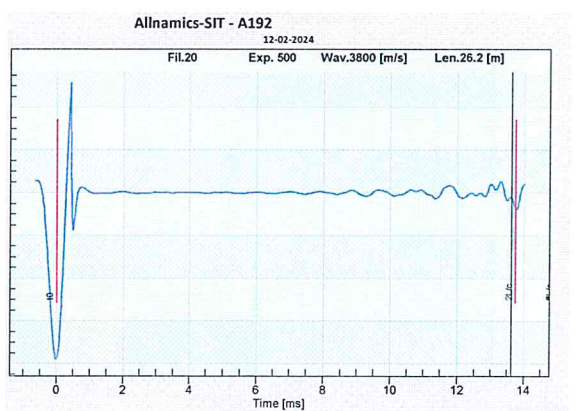
A189 : No significant anomaly, pile is OK



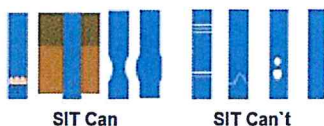
A190 : No significant anomaly, pile is OK



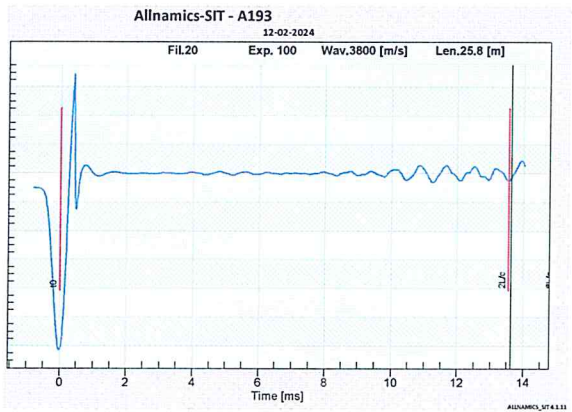
A191 : No significant anomaly, pile is OK



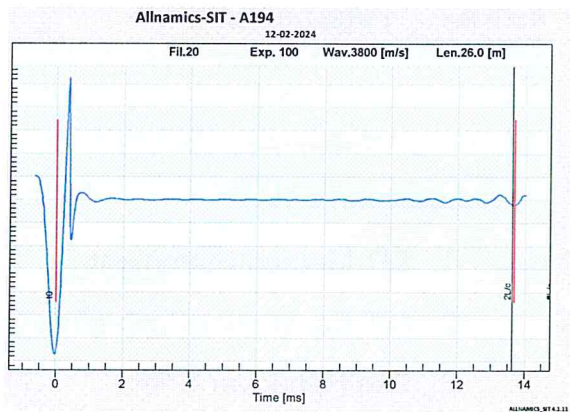
A192 : No significant anomaly, pile is OK



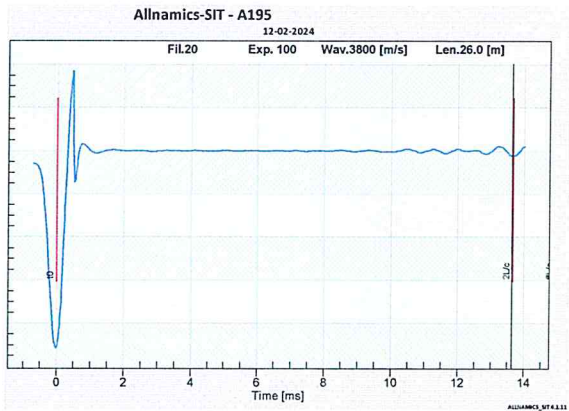
EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
SIT Field Results on Feb 12th, 2024



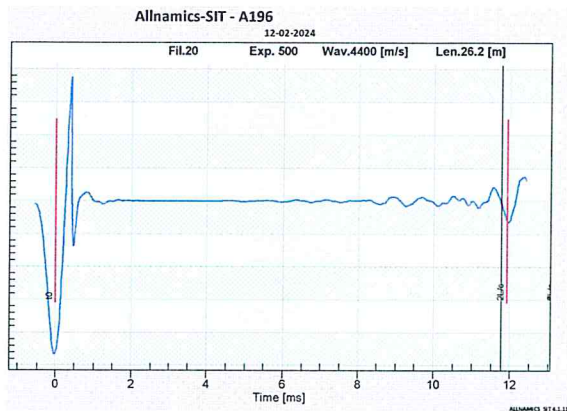
A193 : No significant anomaly, pile is OK



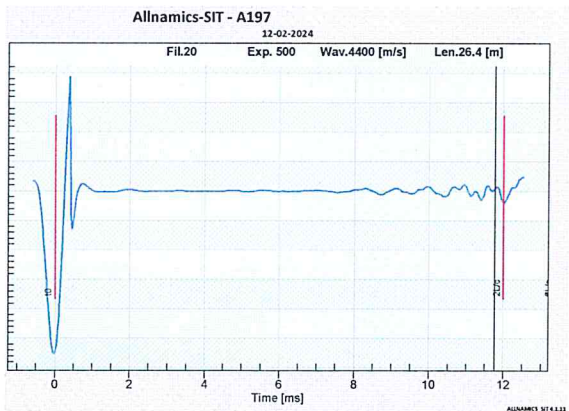
A194 : No significant anomaly, pile is OK



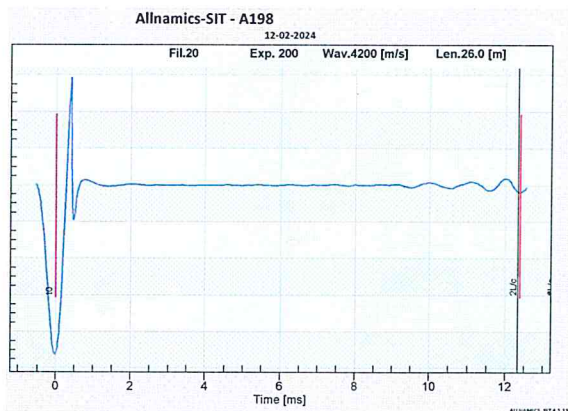
A195 : No significant anomaly, pile is OK



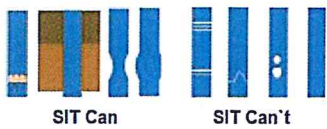
A196 : No significant anomaly, pile is OK



A197 : No significant anomaly, pile is OK



A198 : No significant anomaly, pile is OK



Nile Engineering Consulting Bureau – Geotechnical Q.C&Q.A Department
Subject : **SIT Final Report** _ EET, Sector 5, Al-Gharbaniyat Village, Burj Al-Arab.
To : El Salam International for Contracting & Trading.
NECB Ref. : SIT017/0105/2024.
Checked by : **A. F. El-Kadi, PhD**

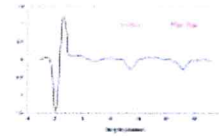


ATTACHMENTS

1. SIT Method Statement.
2. SIT Equipment Calibration Certificate.
3. Site Handover Sheet.



Sonic Integrity Testing(SIT) – Generic Method Statement



Rev 0	Status Final	Date May, 2022	Editor SHERIF SALAH, BSc	Checked by DR. ENG. A. F. EL – KADI
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Sherif Salah

A. F. El-Kadi

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1) General

- Integrity testing of piles is designed to provide data about the physical dimensions, continuity, and consistency of material used in piles, not to give direct information about the performance of piles under the conditions of loading.
- An acoustic technique, developed by the institute for building material and building construction research of the Netherlands (TNO). The method, called Sonic Integrity Testing, has been in use in Europe since 1965.
- SIT classified as a most quickly and cheapest testing of pile integrity.
- The test itself takes no more than a few minutes, and over 100 piles a day can be easily tested.

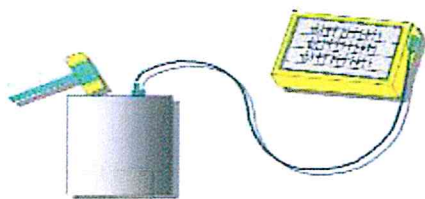


Fig. 1 SIT General Scheme

2) Applicable Standard

SIT-system fully complies with the following standard : **ASTM Standard D 5882; CUR109, EA PFähle, AFNOR, NF, P94-160-214.**

3) SIT Requirement

3.1 In the cast –in- place concrete piles, integrity tests shall not be carried out until at least 5 days from the casting date or reach to 75% of the designed strength.

3.2 “Client Obligation”

3.2.1 The pile head must be clean, accessible, sound, and free from standing water so that a small

accelerometer can be pressed against it.

3.2.2 All related data for the tested piles (pile numbers, lengths, diameters, soil data, execution sheets) should be turned over to NECB’s technical office as required via any available form "E-mail, Whatsup, or hard copy".

4) Testing equipment and tools

Testing equipment consists of:

- 4.1 Portable Computer containing required software;
- 4.2 Accelerometer connected to the computer
- 4.3 Teflon Head Hammer; and
- 4.4 Pile head cleaning tool.

NECB has a four sets of Testing equipment as follows:

- **SIT⁺** Sys. manufactured by Profound B.V;
- **SIT Pro.** manufactured by Profound B.V; and
- **Two ALLSIT sys.** manufactured Allnamics USA.

The available equipment will do the required tests as available.

The related testing equipment information and calibration certificates shall be included in the test results reports.

5) Testing procedure

The testing of the piles shall follow the following steps:

- 5.1 Preparation of pile heads to avoid any loose concrete particles and standing water;
- 5.2 Press a small accelerometer against the pile head, and implement a number of three hits to the pile head using a Teflon Hammer;
- 5.3 Receive the equivalent waves on the portable computer screen;

- 5.4 Check that at least three waves are as similar as possible;



Fig.2 Pile head preparation

- 5.5 Check the waves and implement preliminary evaluation;
- 5.6 In case a defect is obvious it is recommended to implement several tests to assure the defect; and
- 5.7 Save results on the computer for later thorough interpretation and reporting.

5.8 SIT duration:

- 5.8.1 Test takes about 3 to 5 minute /pile in the normal conditions, poor pile head preparation, wet surface or other reasons may affect this duration.

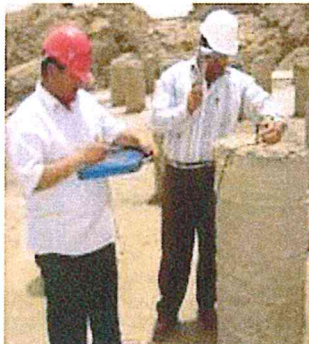


Fig.4 Test in progress

6) Interpretation of results

- 6.1 It must be emphasized that results of integrity testing need to be interpreted with the requisite experience, and that all methods have limitations.
- 6.2 It should be appreciated that anomalous results can arise which may be capable of alternative interpretations. Integrity testing may also identify minor defects, which shall not necessarily affect pile performance, and the experienced person(s) shall have to

exercise his judgment as to the acceptability or refusal of such a pile. Full details of the ground conditions, pile dimensions construction method and, logs shall be made available to the specialist in order to facilitate interpretation of the results.

7) SIT accuracy

- 7.1 The accuracy of the pile length depends directly on the accuracy of the stress wave velocity. When the pile length is known, the stress wave velocity can be measured by adjusting this velocity until the pile length corresponds with the known pile length.
- 7.2 Also to be clarified that the pile length is not one of the major findings of the test and does have an accuracy of 90-95%, while the stress wave velocity range (3000 to 4400m/sec), where:
- 7.2.1 Length of the pile <25 Diameter, the accuracy is about 95%;
- 7.2.2 Length of the pile >25 Diameter, the accuracy is about 90%.
- 7.3 The pile length is for the stored signal data. If the pile length is too short, the measured signal will be too short to determine the pile toe. The pile length should be estimated between 80% and 130% of the real pile length.

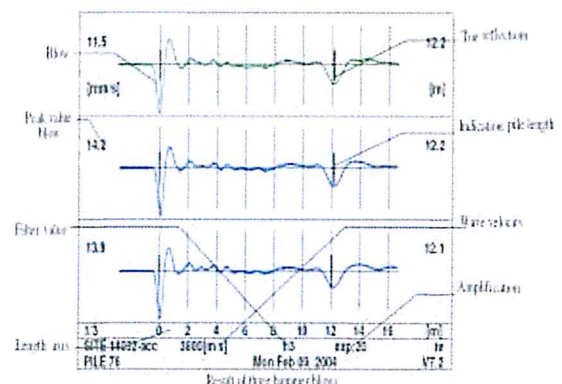


Fig. 5 SIT interface

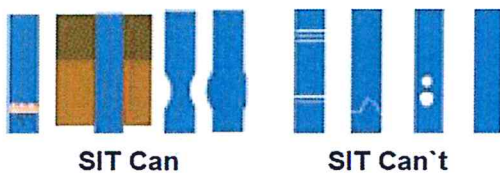
8) Advantages of SIT

- 8.1 First line quality assurance against major faults;
- 8.2 Hundreds of piles can be tested in a single day;
- 8.3 Testing on any accessible pile;

- 8.4 Defects discovered at an early stage;
- 8.5 Quick and economical compared to other methods;
- 8.6 Equipment is portable and easy to operate.

9) Limitations of SIT include

- 9.1 Can not estimate bearing capacity;
- 9.2 Minor defects are not easily seen (local loss of cover to steel or small inclusions);
- 9.3 Length is difficult to determine for very long piles with very high shaft friction;
- 9.4 The thickness of a debris layer at the pile toe can not be determined.



10) SITWAVE (optional)

- 10.1 Numerical analysis (SITWAVE) is a finite element using the computer program TNOWAVE based on one-dimensional wave propagation theory. This allows the behavior of a pile and the Surrounding ground under an impact load to be simulated. The algorithm for the program in the past was developed by TNO and applied in the program TNOWAVE.
- 10.2 SITWAVE analysis consists of two or three phases. The first step is to create a computer model based on the reliable reference pile with the ground profile. There are the theoretical dimensions of the pile and bring the sounding introduced (cone resistance with a depth of soil).
- 10.3 After entering the data, the measurement results of the reference pile are compared with the output of the theoretical model. By means of (signal processing/ comparison techniques) and signal matching the basic model in the computer is adjusted so that as much as possible consistent with the measurement of the reference pile. The reference piles will not usually be a pile of constant diameter and in the second phase, a match is made on the pile diameters.

10.4 The third phase is to run a match to the suspect signal pile. This is the basic model taken from the previous stage and the pile diameter is adjusted to that corresponding to the measurement of the suspect pile.

- SITWAVE calculates the wave signal of a modeled pile (with or without discontinuities or soil behavior) Experience with simulated SIT signals greatly helps the understanding of real SIT signals. When normal interpretation is not possible or too difficult, TNOWAVE calculations can clarify a discontinuity in a pile.

▪ SITWAVE may use for the following causes:

- I. Recording a major problem during the pile execution,
- II. Recording an abnormal SIT result from the rest of the result; and
- III. The client requested an analysis of a random sample.

Therefore, official approval to conduct the analysis is required.

11) SITWAVE requirement

- IV. Measurement signals for selected pile ;
- V. Pile record sheet including all casting data (theoretical and actual concrete, casting date, pile diameter, pile toe penetration, and any related information);
- VI. Related or nearest borehole;
- VII. Static and /or dynamic test report (if available);
- **SITWAVE output**
 - I. Graph of velocity as a function of time or length;
 - II. Graph of Radius and velocity as a function of time;
 - III. Graph of equivalent diameter along pile axis;
 - IV. Graph of pile cross-section along pile axis; and Excel sheet of the defected segments reading.

12) Reports:

- SIT final report for **each site visit** will be ready to submit at NECB office in Nasr City branch within less than 48Hr. Soft copy will be available as needed.

CALIBRATION SHEET

SIT-ACCELERATION SENSOR

Transducer information:

Serial number : **SA217**
Manufacturer : Allnamics Pile Testing Experts
Calibration factor : Teflon pile, 1 m, wave velocity 700 m/s
Calibration date : 31-1-2023
Calibrated by : Allnamics



1) The end user is responsible for a recalibration of the transducer.

Typical sensor specification:

Model	: Model 333D01		
Manufacturer	: PCB Piezotronics		
Range	: 10/20 g	Non-linearity	: 2 % FS
Interface	: USB 2.0	Transverse sens.	: 5 % FS
ADC	: 24 bit	Freq. range	: 1 to 8000 Hz
Max range/shock	: 7000 g	Operating range	: -10 to 55 °C

Wiring and mounting:

Connector : USB, A Male
Cable : 2.9m, PVC
USID : none
Dimensions : 75x30x30 mm (lxbxh)
IP Class : 66



Allnamics Pile Testing Experts B.V.

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The Netherlands
Web : <https://allnamics.com>
Tel. : +31 – 88 -255 62 64

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Rev. 03

