AEMAL ALBINYA ALHADITHA COMPANY

شركة أعمال البنية الحديثة

للصناعات الخرسانية والطوب الأسمنتي

شركة أعمال البنية الحديثة

091.388 6363 - 091.388 6161
091.388 6464 - 091.388 6262

www.ab-h.ly
info@ab-h.ly

طرابلس – طريق السواني الإشارة الضوئية سيدي سليم
SIDI SLIM - TRAFFIC LIGHT - AL SWANI ROAD - TRIPOLI

ABOUT THE COMPANY نبذة عن الشـركة

شركة أعمـال البنية الحديثة للصناعات الخرسانية والطـوب الأسمنتي هي إحدي الشركـات الوطنية الليبية تأسست سـنة 2018 بموجب شهادة السجـل التجارة والصناعـة رقم (0184) والمتخـصصة في مجـال الخرسانة الجاهزة والعـاملة بأحدث معايير الجودة والمهـنية بتقديم أفضل الخـدمات في مجال الخرسانة الجاهزة بجميع أنوعها .

AEMAL AL BINYA ALHADITHA FOR CONCRETE AND CEMENT BLOCKS CO, is a Libyan national company, established on 2018 registered in the commercial and industrial register under No (0184), and is specialized in manufacturing pre-fabricated concrete, operating under most advanced quality and professional standers, offering the best services in the area of the all kinds of prefabricated concrete.

COMPANY CAPABILITIES

إمكانيات الشركة

الشركة لديها عدد من الألات الحديثة والتي مكنت الشركة من تقديم أفضل الخادمات

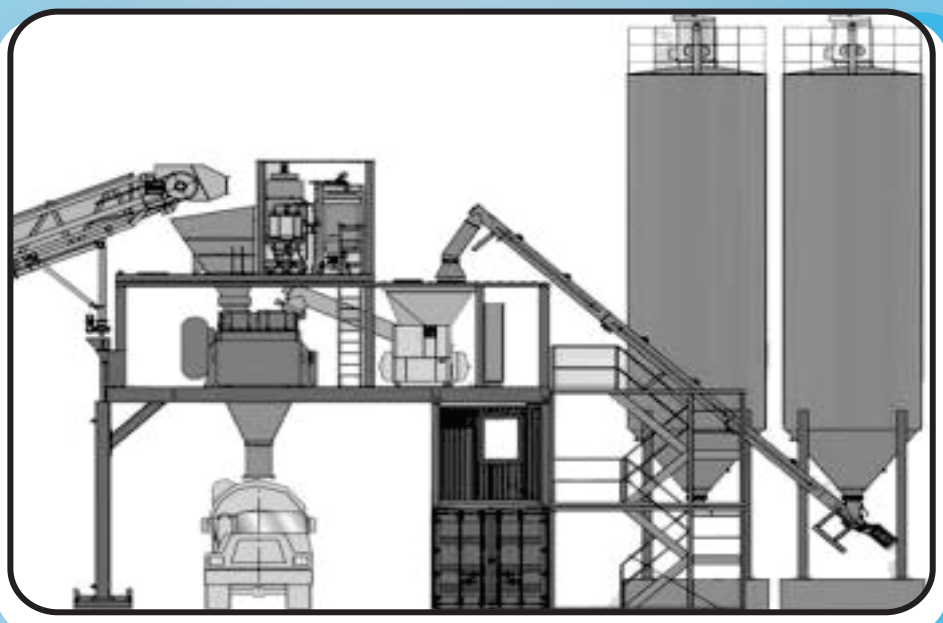
* عدد 12مضخات خرسانة بطول 35 - 56 متر (M)
* سيارات نقل الخرسانة عدد 40 بسعة من 9 ~12 متر مكعب(M^3)
* مختبر هندسي به أحدث الأجهزة والمعدات المستخدمة في ضبط جودة الإنتاج QA/QC
* لدي الشركة عدد من المهندسين والمشرفين ذو كفاءة وخبرة عالية في مجال الخرسانة

The company owns a number of advanced machinery that enabled the company to offer better services.

* Nos12 concrete pumps 35-56 m^3 in length.
* Nos 40 concrete hauling trucks 9-12 cubic meter (M^3) in capacity
* Engineering laboratory with most advanced product quality assurance and control (QA/ QC) equipment
* The company employs highly qualified engineers and supervisors with extensive experience in concrete production.

القــوة الإنتــاجية

PRODUCTION CAPACITY



تمتلك الشركة عدد 2 خــلاطة خــرسانية نوع MEKA
تتميز بأحدث المواصفات التي تمكنها من العمل بشكل
ألـــي كليا بقوة إنتاجـية 240 متر M^3 في الساعة

The company owns 2 (Two) MEKA concrete mixers, featured with advanced specification that enable the mixtures to work in a full automatic fashion with production capacity of $240m^3$/ Hour.

عملية تصنيع الخرسانة

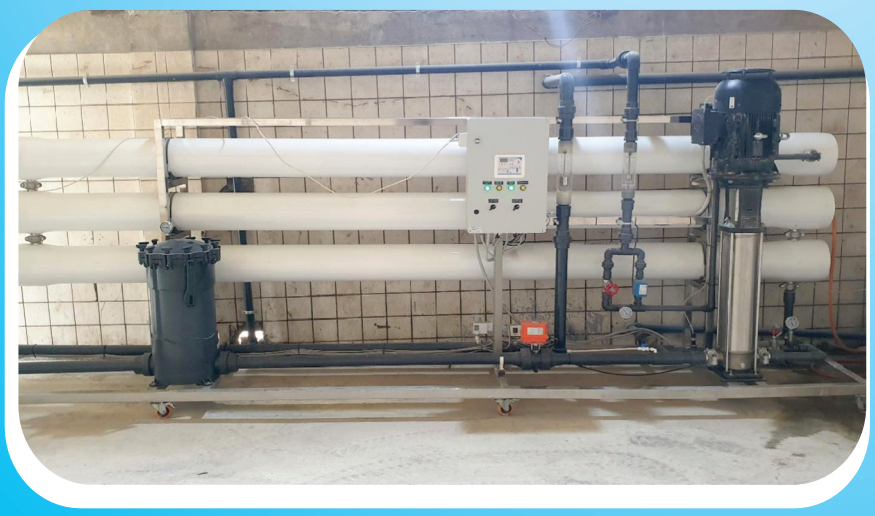
MANUFACTURE OF CONRETE

مختبر مراقبة وضبط جودة الخرسانة

CONCRETE QUALITY ASSURANCE AND CONTROL LABORATORY

محطة معالجة المياه بقدرةإنتاجية 24000 لتر في الساعة التي تتم فيها إزالة الأملاح الدائبة التي تؤاثر بشكل سلبي علي جودة الخرسانة وأزالة أي عوالق او ملوثات حتي تصبح هذه المياه مناسبة للأستخدام لضمان الحصول على أفضل خرسانة .

Water treatment plant, with production capacity of 24000 L/H, in which are removed solvent salts which negatively affects concrete quality, and any suspended matter or contaminants, so as to assure that the water is fit for consumption, and to guarantee the



مختبر مراقبة وضبط جودة الخرسانة

CONCRETE QUALITY ASSURANCE AND CONTROL LABORATORY

جهاز قياس مقاومة الخرسانة للضغط

UNIAXIAL ROCK COMPRESSION MACHINE

قالب مكعبات فياس مقاومات الخرسانة

CUBE MOULDS TO MEASURE CONCRETE STRENGTH

جهاز تقسيم العينات المثالة للركام

AGGREGATE IDEAL SAMPLING DEVICE

جهاز لوس انجلس لقياس مقاومة التآكل والبري للركام

LOS ANGELES ABRASION TESTER

مختبر مراقبة وضبط جودة الخرسانة

CONCRETE QUALITY ASSURANCE AND CONTROL LABORATORY

حوض المعالجة الخاص بالمكعبات الخرسانية

SPECIAL PROCESSING BASIN CONCRETE CUBES

طاولة ميزان الكثافة للركام

SPECIFIC GRAVITY TEST SET

فرن كهربائي لتجفيف العينات

AN ELECTRIC OVEN FOR DRYINQ SAMPLES

ميزان حساس

SENSITIVE DIGITAL BALANCE

مختبر مراقبة وضبط جودة الخرسانة

CONCRETE QUALITY ASSURANCE AND CONTROL LABORATORY

جهاز التفلطح والمطولية للركام

LENGTH GAUGE AND FLAKINESS GAUGE

جهاز قياس معامل الصدم للركام

AGGREGATE JMPACT DEVICE

المناخل القياسية لاختبار الركام

LABORATORY TEST SIEVE

اختبار الهبوط للخرسانة

SLUMPTEST DEVICE

جهاز قياس الحرارة للخرسانة

THERMOMETER FOR CONCRETE

السيارات والألات

EQUIPMENT AND CARS

مضخة خرسانة بطول M35

CONCRETE PUMP 35M

مضخة خرسانة بطول M36

CONCRETE PUMP 36M

مضخة خرسانة بطول M38 عدد 4

M38 METERS LONG CONCRETE PUMP 4

مضخة خرسانة بطول M41 عدد 2

M41METERS LONG CONCRETE PUMP 2

السيارات والألات
EQUIPMENT AND CARS

مضخة خرسانة بطول M49
CONCRETE PUMP 49 METER

مضخة خرسانة بطول M51 عدد 2
M51METERS LONG CONCRETE PUMP 2

مضخة خرسانة بطول M55
CONCRETE PUMP 55 METER

مضخة خرسانة بطول M56
CONCRETE PUMP 56 METER

السيارات والألات

EQUIPMENT AND CARS

سيارات نقل الخرسانة عدد40 بسعة من 9 ~ 12 متر مكعب

CONCRETE TRANSPORT VEHICLES 40 UNITS TONNAGE 9 AND 12- METERS M3

التاريخ: 2022/10/16

الرقم الاشاري: 2022.1037.29

السادة: شركة اعمال البنية الحديثة

بعد التحية: ،،،،،

نود اعلامكم باننا كمصنع البرج للإسمنت التابع لشركة الاتحاد العربي للمقاولات نقوم بإنتاج اسمنت بورتلاندي من النوع الأول حسب المواصفة الليبية 340 لسنة 2009، وفيما يلي التحاليل الكيميائية والخصائص الفيزيائية الخاصة به:

أولا: التحاليل الكيميائية:

CHEMICAL ANALYSIS	
Sio2	22.00
AL2O3	4.96
Fe2o3	3.58
Cao	62.70
Mgo	1.68
Na2O	0.18
K2O	0.70
SO3	2.37
Cl	0.036
BLAIN	3100
LOI	1.13

ثانيا: الخصائص الفيزيائية:

SETTING TIME		SOUNDNESS	COMPRESSIVE STRENGHT		
INITIAL	FINAL		2DAYS	7DAYS	28DAYS
205.00	245.00		20.25	39.45	58.87

رئيس قسم ضبط الجودة
م/عبدالله خليفة عبد الدائم

مدير إدارة مصنع البرج للإسمنت
م/ محسن المهدي الصيد

الشركة الليبية لخدمات المعايرة
Libyan Calibration Services Co.
Saraj Alsharqiya, 1.2 KM, Tripoli -Libya
Tel: +218 - 91-2185012
+218 - 92-2185012
www.lcs.ly
Info@lcs.ly

شهادة معايرة
Calibration Certificate

31-1CP45224-3

Customer	شركة أعمال البنية الحديثة	الزبون
Address	Tripoli - طرابلس	العنوان

مواصفات الخلاطة الخرسانية Cement Mixing Plant Specifications		
Type	Concrete Mixing Plant	النوع
Manufacturer	MEKA	الشركة المصنعة
Model	-	الموديل
Serial No.	5143	الرقم التسلسلى
Identification No.	-	الرقم التعريفى
Year	2013	السنة

This is to certify that the cement mixing plant described above has been examined and calibrated by Libyan Calibration Services co. (LCS) using ISO/IEC17025 accredited calibrated equipment in accordance with LCS calibration procedure referenced in page 2

نؤكد على أن الخلاطة الخرسانية المذكورة أعلاه قد تم فحصها ومعايرتها من قبل الشركة الليبية لخدمات المعايرة (LCS) باستخدام معدات معايرة معتمدة طبقاً ل ISO/IEC17025 وفقًا لإجراء معايرة LCS المشار إليه فى الصفحة 2.

Saif Benrhouma
Technical Manager

Calibration Report

Calibration Information

Report No.	31-1CP45224-3	Date of Calibration	2024-10-09
Calibrated by	Ahmed Hribich	Calibration Location	Onsite
Temperature	35±10˚C	Relative Humidity	50 ±10%
Procedure	LCS-CP-01-SOP	Reference	-

Reference Equipment Informatin

Type:	Weights M2 Class	Model:	554503
Manufacturer:	Accurate Weight	Weight capacity:	20 Kg
Quantity	50		

Type:	Weights M1 Class	Model:	22210
Manufacturer:	Accurate Weight	Weight capacity:	1 Kg
Quantity	6		

Type:	Thermo Hygrometer	Model:	HUMIPORT 10
Manufacturer:	E+E ELEKTRONIK	Serial No.:	P94738.0003

Tracability Information:

The equipment used is calibrated by the manufacturer and traceable to international standards which realize the physical units of measurement.

Results

Aggregates Scale	
Scale Capaciy (Kg)	4000
Scale Reading Divisions (Kg)	1

	Before Adjust					After Adjust				
Standard Weight	Reading↑	Error	Reading↓	Error	Diff Percentge %	Reading↑	Error	Reading ↓	Error	Diff Percentge %
0	0	0	-2	-2	-0.03					
100	99	-1	98	-2	-0.04					
200	200	0	200	0	0.00					
300	300	0	301	1	0.01					
400	400	0	400	0	0.00					
500	500	0	501	1	0.01					
600	601	1	601	1	0.03					
700	701	1	700	0	0.01					
800	800	0	802	2	0.03					
900	901	-1	902	-2	-0.04					
1000	1000	0	1000	0	0.00					

All mentioned values and readings above are in Kilograms

Cement Scale	
Scale Capaciy (Kg)	1000
Scale Reading Divisions (Kg)	1

	Before Adjust					After Adjust				
Standard Weight	Reading↑	Error	Reading↓	Error	Diff Percentge %	Reading↑	Error	Reading ↓	Error	Diff Percentge %
0	0	0	0	0	0.00					
40	41	-1	40	0	-0.05					
80	79	1	80	0	0.05					
120	121	-1	120	0	-0.05					
160	159	1	160	0	0.05					
200	200	0	201	-1	-0.05					
240	238	2	241	-1	0.05					
280	280	0	281	-1	-0.05					
320	318	2	321	-1	0.05					
360	360	0	361	-1	-0.05					
400	401	-1	400	0	-0.05					
440	440	0	440	0	0.00					
480	480	0	481	-1	-0.05					
500	500	0	500	0	0.00					

All mentioned values and readings above are in Kilograms

Water Scale	
Scale Capaciy (Kg)	1000
Scale Reading Divisions (Kg)	1

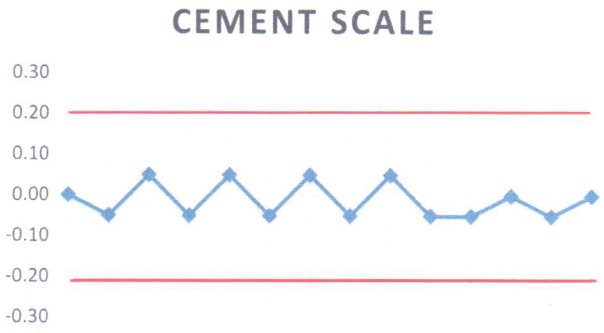
	Before Adjust					After Adjust				
Standard Weight	Reading↑	Error	Reading↓	Error	Diff Percentge %	Reading↑	Error	Reading ↓	Error	Diff Percentge %
0	0	0	0	0	0.00					
40	40	0	40	0	0.00					
80	79	1	80	0	0.05					
120	120	0	121	-1	-0.05					
160	160	0	161	-1	-0.05					
200	200	0	201	-1	-0.05					
240	240	0	241	-1	-0.05					
280	280	0	281	-1	-0.05					
320	321	-1	320	0	-0.05					

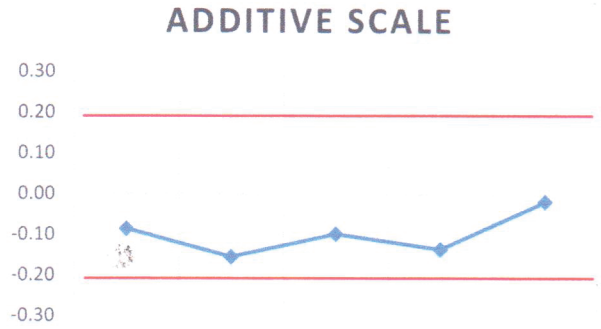
All mentioned values and readings above are in Kilograms

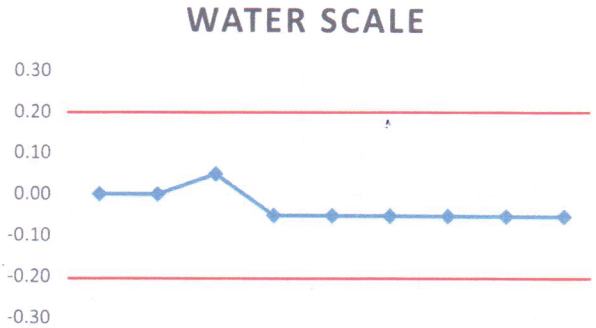
Additives Scale	
Scale Capaciy (Kg)	50
Scale Reading Divisions (Kg)	0.001

	Before Adjust					After Adjust				
Standard Weight	Reading↑	Error	Reading↓	Error	Diff Percentge %	Reading↑	Error	Reading ↓	Error	Diff Percentge %
0.000	0.000	0.000	0.086	-0.086	-0.09					
2.000	2.004	-0.004	2.150	-0.150	-0.15					
4.000	3.982	0.018	4.115	-0.115	-0.10					
6.000	6.067	-0.067	6.067	-0.067	-0.13					
8.000	8.008	-0.008	8.008	-0.008	-0.02					
10.000	9.990	0.010	9.960	0.040	0.05					

All mentioned values and readings above are in Kilograms







The uncertainties presented in this report have been calculated utilizing the methodology elaborated in the ANSI/NCSL document entitled 'Guide to the Expression of Uncertainty in Measurement', commonly referred to as the 'GUM'.
Calibration works are done using adequate standard weights equivalent to each mixing plant scale, weight readings are adjusted within ±0.2% of full scales capacity. It is recommended to calibrate the scales of the mixing plant within 6 months from the date of this certificate.
This certificate shall not be reproduced other than in full except with the permission of the laboratory.Calibration certificates without signature and seal are not valid.

** Report End **

NanoFlow® 2000

High-Range Water-reducing / New Generation Superplasticizing Chemical Admixture for Flowable Concrete

Product Definition

NanoFlow 2000 is polycarboxylate based, high-range water reducer / new generation superplasticizer type of chemical admixture designed for making different concretes from normal flowability to self-compacting concretes. NanoFlow 2000 provides high flowability and slump retention performance.

Use

NanoFlow 2000 is recommended for use in the applications and purposes below.

- Concrete production in normal and high workability classes.
- Self-compacting concrete production.
- Ready-mixed concrete production.
- Concretes designed for sections of closely spaced and congested reinforcing steel.
- Concrete production in low water to cement ratio without slump loss.
- High strength concrete production.

Advantages and Properties

- NanoFlow 2000 is polycarboxylate based, high-range water reducer / superplasticizer type of chemical admixture designed for making flowable concrete. Due to its specially designed and optimized chemical structure it provides very effective dispersion of cement particles and prevents the flocculation.
- Provides high flowability without increase in setting time.
- Provides high workability retention performance.
- NanoFlow 2000 is chemically a polymer with backbone and side chains. It is adsorbed on the surface of the cement particles and provides excellent dispersion of the cement particles by steric effect of its side chains. This mechanism makes NanoFlow 2000 a very effective dispersant to obtain self compactability in very low water to cement ratios.
- A water reduction up to 40% by satisfying the target workability can be obtained through the appropriate usage of NanoFlow 2000. This significant amount of water reduction and decreased water to cement ratio results in increased early strength gain, increased ultimate strength, enhanced durability and the other beneficial properties associated with low water to cement ratio such as decreased chloride-ion penetration.
- Provides significant increase in workability without increasing the quantity of mixing water and hence procures considerable convenience in mixing, transporting, placing and compaction of fresh concrete.
- Improves the strength and durability by ensuring that the specified target consistency is achieved with lower water to binder ratios.
- It is non-chloride admixture and does not contain any compounds that may cause corrosion of reinforcing steel.

LYKSOR Chemical Co.
Halilbeyli Mah. Bağyurdu O.S.B.
Izmir Cad. No: 9 Kemalpaşa – Izmir - Turkey
Tel: +90 232 880 70 66 Fax: + 90 232 880 70 68
www.lyksor.com info@lyksor.com

Application Details, Suggestions and Warnings

- NanoFlow 2000 should be added to the mixing water. As an alternative way, it can be mixed by 1/3 of the mixing water and added to the fresh mixture produced by 2/3 of the mixing water by a visual observation of workability and segregation. In case of the direct addition to the fresh mixture, an additional mixing time should be introduced. NanoFlow 2000 is not added to the dry mixture.
- As the dosage of the chemical admixtures is greatly influenced from cement type, properties of the concrete ingredients and mix design, it is recommended that the optimum dosage of admixture should be determined on trial batches.
- NanoFlow 2000 is generally compatible with the Portland cement types described in EN 197-1. In addition, it can be used in concrete mixes containing mineral admixtures such as silica fume, fly ash and ground granulated blast furnace slag. It should be noted that, the presence of mineral admixtures in concrete greatly influences the required dosage of the admixture for a specified target or performance. The optimum dosage of NanoFlow 2000 should be determined on trial batches.

⚠ NanoFlow 2000 is not compatible with sulfonated naphthalene and sulfonated melamine based chemical admixtures. There is no known incompatibility with the other type of chemical admixtures and can be used with the others in the same mixture. In case of the combined usage, the different types of chemical admixtures should not be mixed together and be used separately. Please contact R&D department of Lyksor for further information.

Recommended Dosage

The recommended dosage rate of NanoFlow 2000 for general concreting operations is between 0.8 % - 1.5 % of the weight of binding material (cement + mineral admixture). The maximum water reduction and superplasticizing property increases as the dosage increases up to a saturation point. However, it should be considered that the required dosage varies with the type and amount of cement and mineral admixtures, water to binder ratio, properties of the other ingredients and the ambient temperature. Exceeding the recommended or determined dosage may cause significant segregation and setting time increase. In addition, the required dosage of NanoFlow 2000 to achieve a target performance will be different for each concrete mixture. The appropriate dosage should be determined on trial batches as it will not cause any segregation and/or undesirable side effects. It is known that there is a significant effect of C_3A, SO_3 content and fineness of cement on the appropriate dosage of NanoFlow 2000.

Technical Properties

Colour and form	Brown - Liquid
Chemical base	Polycarboxylate
Density (kg/lt)	1.04 – 1.08 (at +20 ºC)
Chloride ion content	Max 0.1% - Chloride free acc. to EN 934-2
Alkali content	Max. 5%
pH	3 – 7
Conformity	TS EN 934-2 Table 3.1 – 3.2 ASTM C494 Type G

Cleaning of Tools

Concreting tools contact with NanoFlow 2000 can be easily cleaned with water.

Packaging

25 kg drum
1000 kg IBC
Bulk delivery

Storage and Shelf Life

Shelf life of NanoFlow 2000 is 12 months when stored in its original package and recommended storage conditions. NanoFlow 2000 should be stored in dry conditions between +5 °C and +35 °C. It should be protected from direct sunlight and frost.

Security and Health

In case of contact with skin, wash with clean water. In case of contact with eye, wash with clean water. Eye contact should be medically consulted immediately. For further information please refer to Material Safety Data Sheet (MSDS) of the product.

Legal Liability

The technical recommendations in this product data sheet are based on the experimental studies performed on reference concrete mixtures designed in the R&D laboratories of LYKSOR. The results may not be applicable to different concrete mixtures produced with different materials than the ones used in the experiments in Lyksor. All customers and users are required to determine the appropriate LYKSOR products for their intended use and to test the suitability of LYKSOR product for their application. Please contact LYKSOR for the appropriate product selection and usage details. LYKSOR is not responsible for the improper usage of the products.

LYKSOR Chemical Co.
Halilbeyli Mah. Bağyurdu O.S.B.
Izmir Cad. No: 9 Kemalpaşa – Izmir - Turkey
Tel: +90 232 880 70 66 Fax: + 90 232 880 70 68
www.lyksor.com info@lyksor.com

ALMESBAR Company
Engineering Foundations

شركة المسبار
لدراسة وهندسة التربة والاساسات

الرقم الإشاري : 2022\436 م

التاريخ : 2022 /12/31 م

السادة \ شركة البنية الحديثة

الموضوع \ إختبارات على عينات ركام خشن وناعم ومياه

إشارة إلى طلبكم إجراء اختبارات على عينات ركام خشن وناعم وعينة مياه تم جلبها بمعرفتكم لمعملنا بطرابلس يوم 2022/12/26 م لاستخدامها في تنفيذ خرسانة اسمنتية جاهزة لشركة العمران السريع، فقد كانت النتائج وفقا لما يلي:

1. التهشيم والاستطالة والتفلطح لعينة الركام الخشن حجم 20 مم:

طريقة الإختبار : BS 812 : PART1 بالنسبة لاختبار الاستطالة والتفلطح و BS 812 : PART3 بالنسبة لاختبار التهشيم.

الإختبار	النتيجة " %" لعينة الركام الخشن حجم 20 ملم
التهشيم	22.5
الاستطالة	7.1
التفلطح	8.2

تنص المواصفات البريطانية على ألا تزيد نسبة الاستطالة عن 15% ونسبة التفلطح عن 40% وحيث أن نتائج عينة الركام الخشن تقع في الحدود المسموح بها فأن عينة الركام يمكن استخدامها في صناعة الخرسانة الاسمنتية كذلك تنص المواصفات البريطانية على ألا تزيد درجة التهشيم عن 25% وبالتالي فإن نتيجة التهشيم لعينة الركام الخشن تقع في الحدود المسموح بها وبالتالي يمكن استخدامها في صناعة الخرسانة الاسمنتية.

شركة المسبار لدراسة وهندسة التربة والاساسات المحدودة

سجل تجارى رقم 76473 غرفة تجارية:5970 صندوق بريد 91462 دات العماد - طرابلس
هاتف / بريد مصور: 5033992-92-218+ 73 00 484 21 218 +

2. اختبارات الكيمياء "نسبتي الكبريتات والكلوريدات لعينات الركام الناعم والخشن والماء":

طريقة الإختبار : : ASTM D 512

العينة	نسبة الكبريتات "so3" %	نسبة الكلوريدات "cl" %		الاس الهيدروجيني
		Cl	NaCl	
ركام خشن كسارة الافعى	0.0019	0.0056	0.0092	8.99
قرانيليا	0.0032	0.0043	0.0071	9.09
ركام خشن كسارة الوادي	0.0227	0.0127	0.0210	9.14
رمل	0.0001	0.0028	0.0046	9.19
ماء	0.0020	0.0018	0.0030	6.86

تنص المواصفات العامة لصناعة الخرسانة الاسمنتية بتجنب استخدام الركام الخشن او الناعم الذي تزيد نسبة الكبريتات فيه عن 0.04% وتجنب استخدام المياه التي تزيد نسبة الكبريتات فيها عن 0.05%، وجميع العينات أعلاه تقع في الحدود المسموح بها، وفيما يتعلق بالكلوريدات فتنص المواصفات على ألا تزيد نسبة الكلوريدات "مقاسة كـ NaCl" عن 0.05% للركام و 0.06% للمياه وجميع العينات أعلاه تقع في الحدود المسموح بها.

والسلام عليكم ورحمة الله وبركاته

م. خالد أحمد السنوسي المغربي
المدير العام

شركة المسبار المحدودة لدراسة وهندسة التربة والاساسات

صورة للملف الدوري

AGGREGATE CRUSHING VALUE / ACV - BS 812 : PART 3-1990

Almësbar

Job No.	415/2022
Date of test	27/12/2022
Sample Type	Aggregate size 20 mm
Client	شركة البنية الحديثة
Project	

FRACTION TESTED	SEPARATING SIEVE	FRACTION USED	
28-20 mm	5.0 mm		
20-14 mm	3.35 mm	√	
14-10 mm	2.36 mm		STANDARD
		standard or smaller apparatus	
10-6.3 mm	1.70 mm		
6.3-5.0 mm	1.18 mm		
5.0-3.35 mm	0.85 mm		
3.35-2.36 mm	0.60 mm		

SPECIMEN REFERNCE					
MASS OF TRAY + TEST SPECIMEN "g					
MASS OF TRAY "g					
MASS OF ORIGINAL TEST SPECIMEN "g	M_1	1875			
MASS OF TRAY + MATERIAL PASSING SEPERATING SIEVE "					
MASS OF TRAY "g					
MASS MATERIAL PASSING SEPERATING SIEVE "	M_2	422			
MASS OF TRAY + MATERIAL RETAINED ON SEPERATING SIEVE "					
MASS OF MATERIAL RETAINED ON SEPERATING SIEVE "	M_3	1453			
AGGREGATE CRUSHING VALUE "%"	M_2/M_1	22.5			
AGGREGATE CRUSHING VALUE (MEAN VALUE) "%"					

شركة المسبار لدراسة وهندسة التربة والأساسات

ELONGATION INDEX OF AGGREGATE / EI - BS 812 : SECTION 105.2-1990

Almësbar

Job No.	415/2022
Date of test	27/12/2022
Sample Type	Aggregate size 20 mm
Test Pit No	
Depth	
Client	شركة البنية الحديثة
Project	

		FRACTION GUAGED					
PASSING SIEVE	mm	50.0	37.5	28.0	20.0	14.0	10.0
RETAINED ON SIEVE	mm	37.5	28.0	20.0	14.0	10.0	6.3
GAPS BETWEEN PINS	mm	78.7	59.0	43.2	30.6	21.6	14.7
FRACTION GUAGED							
BEFORE GUAGING							
MASS OF TRAY + AGGREGATE FRACTION	g						
MASS OF TRAY	g						
MASS OF AGGREGATE FRACTION M_0	g				604.4	380.4	
INDIVIDUAL PERCENTAGE M_0/M_1	%				61.4	38.6	
SUM OF AGGREGATE MASS M_1	g				984.8	984.8	
REMAINING SUM OF AGGREGATE MASS M_2	g				984.8	984.8	

AFTER GUAGING	
MASS OF TRAY + SUM OF AGGREGATE NOT PASSING GAPS "g"	
MASS OF TRAY "g"	
SUM OF AGGREGATE MAS NOT PASSING GAPS "g" M_3	69.6
ELONGATION INDEX EI = M_3/M_2*100 "%"	7.1

شركة المسبار المحدودة للدراسات وهندسة التربة والانشاءات

FLAKINESS INDEX OF AGGREGATE / FI - BS 812 : SECTION 105.1-1989

Almësbar

Job No.	415/2022
Date of test	27/12/2022
Sample Type	Aggregate size 20 mm
Test Pit No	
Depth	
Client	شركة البنية الحديثة
Project	

	FRACTION GUAGED						
PASSING SIEVE "mm"	63.0	50.0	37.5	28.0	20.0	14.0	10.0
RETAINED ON SIEVE "mm"	50.0	37.5	28.0	20.0	14.0	10.0	6.3
SLOTS WIDTH "mm"	33.9	26.3	19.7	14.4	10.2	7.2	4.9
FRACTION GUAGED							
BEFORE GUAGING							
MASS OF TRAY + AGGREGATE FRACTION "g"							
MASS OF TRAY "g"							
MASS OF AGGREGATE FRACTION "g" M_0					604.4	380.4	
INDIVIDUAL PERCENTAGE "%" M_0/M_1					61.4	38.6	
SUM OF AGGREGATE MASS "g" M_1					984.8	984.8	
REMAINING SUM OF AGGREGATE MASS "g" M					984.8	984.8	

AFTER GUAGING	
MASS OF TRAY + SUM OF AGGREGATE PASSING SLOTS "g"	
MASS OF TRAY "g"	
SUM OF AGGREGATE PASSING SLOTS "g" M_3	81.0
FLAKINESS INDEX FI = M_3/M_2*100 "%"	8.2

شركة المسبار المحدودة لدراسة تربة الأساسات

Modern Construction Works Company For Concrete & Hollow Blocks

CONCRETE COMPRESSIVE	Description:-	Mix Design Concrete - C 25	
STRENGTH TEST	Date Mou :	8 August 2023	Date : 5-Sep-23
BS 1881	Test No.: 0823 - 01 - WCM -341		Tested by : Eng 'r ARAFAT

Location : LABORATORY

Description :- Mix Design Concrete For C 25

Concrete Placement No.	: Concrete Strenght		Mix No.	WCM - 17
Concrete Supplier			Method of Placing	: Direct / Bucket / Pumping
Slump (ASTM C 143)	160 ~ 230	mm. .	Air Content (ASTM C 231)	N/A
Unit Weight (ASTM C 138) :	2.356	g/cm3 .	Sample Represents	: 6 Cubic

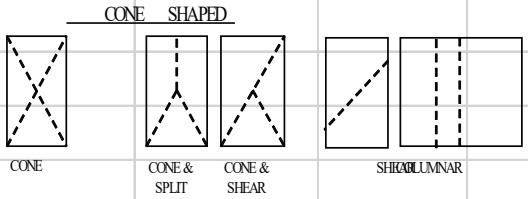
Specimen Identification	Age Days	Date Tested	Area cm^2	Comp.Strength Mpa N/mm ^{2}	Strength Mpa N/mm2
	7	15-Aug-23	225	23.4	
	7	15-Aug-23	225	22.7	Avg :
	7	15-Aug-23	225	23.5	23.2
	28	5-Sep-23	225	32.1	
	28	5-Sep-23	225	33.3	Avg :
	28	5-Sep-23	225	31.9	32.4

Design Mix. WCM-17 Cement. 300 kg. F.A 690 kg. C.A 1180 kg.

Admixture No.1 3.3Kg Admxiture No.2 N/A Admixture No.3 N/A

Water 180 L or kg. Slump. 220 mm. Cubic Wt. N/A Density N/A

Type of Fracture



Meets Specification Requirement : Yes / No

Inform Q. C Manager immediately if Fracture Type is Not CONE Shaped.

Remarks :

Reviewed by : _____ Witnessed by : _____

Modern Construction Works Company

Modern Construction Works Company For Concrete & Hollow Blocks

CONCRETE COMPRESSIVE	Description:-	Mix Design Concrete - C 30	
STRENGTH TEST	Date Mou:	7 November 2022	Date: 5-Dec-22
BS 1881	Test No.: 293 - 01 - WCM-0151		Tested by: Eng 'r ARAFAT

Location: LABORATORY

Description:- Mix Design Concrete For C30

Concrete Placement No.	: Concrete Strenght		Mix No.	WCM - 16
Concrete Supplier			Method of Placing	: Direct / Bucket / Pumping
Slump (ASTM C 143)	160~230	mm .	Air Content (ASTM C 231)	N/A
Unit Weight (ASTM C 138) :	2.378	g/cm3 .	Sample Represents	: 6 Cubic

Specimen Identification	Age Days	Date Tested	Area cm^2	Comp. Strength Mpa N/mm ^{2}	Strength Mpa N/mm2
	7	14-Nov-22	225	27.6	
	7	14-Nov-22	225	25.9	Avg:
	7	14-Nov-22	225	26.3	26.6
	28	5-Dec-22	225	36.7	
	28	5-Dec-22	225	35.4	Avg:
	28	5-Dec-22	225	37.1	36

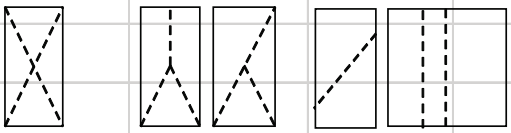
Design Mix. WCM-16 Cement. 330 kg F.A 700 kg C.A 1140 kg

Admixture No.1 3.4 Kg Admixture No.2 N/A Admixture No.3 N/A

Water 181 L or kg Slump. 190 mm Cubic Wt. N/A Density N/A

Type of Fracture

CONE SHAPED



CONE | CONE & SPLIT | CONE & SHEAR | SHEAR | COLUMNAR

Meets Specification Requirement: Yes / No

Inform Q.C Manager immediately if Fracture Type is Not CONE Shaped.

Remarks:

Reviewed by: _____ Witnessed by: _____

Modern Construction Works Company

Modern Construction Works Company For Concrete & Hollow Blocks

CONCRETE COMPRESSIVE	Description:-	Mix Design Concrete - C 35	
STRENGTH TEST	Date Mou :	1 October 2022	Date : 29-Oct-22
BS 1881	Test No.: 110 - 01 - WCM-171		Tested by : Eng 'r ARAFAT

Location : LABORATORY

Description :- Mix Design Concrete For C 35

Concrete Placement No.	: Concrete Strenght		Mix No.	WCM - 11
Concrete Supplier			Method of Placing	: Direct / Bucket / Pumping
Slump (ASTM C 143)	160~180	mm. .	Air Content (ASTM C 231)	N/A
Unit Weight (ASTM C 138) :	2.383	g/cm3 .	Sample Represents	: 6 Cubic

Specimen Identification	Age Days	Date Tested	Area cm^2	Comp.Strength Mpa N/mm ^{2}	Strength Mpa N/mm2
	7	8-Oct-22	225	33.4	
	7	8-Oct-22	225	35.1	Avg:
	7	8-Oct-22	225	32.9	33.8
	28	29-Oct-22	225	45.3	
	28	29-Oct-22	225	44.8	Avg:
	28	29-Oct-22	225	46.1	45.4

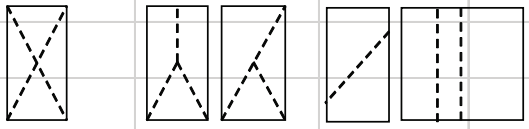
Design Mix. WCM-11 Cement. 350 kg. F.A 710 kg. C.A 1120 kg.

Admixture No.1 3.6 Kg Admxiture No.2 N/A Admixture No.3 N/A

Water 192 L or kg. Slump. 200 mm. Cubic Wt. N/A Density N/A

Type of Fracture

CONE SHAPED



CONE CONE & SPLIT CONE & SHEAR SHEAR COLUMNAR

Meets Specification Requirement : Yes / No

Inform Q. C Manager immediately if Fracture Type is Not CONE Shaped.

Remarks :

Reviewed by : _____ Witnessed by : _____

Modern Construction Works Company

Modern Construction Works Company For Concrete & Hollow Bloks

SPECIFIC GRAVITY AND ABSORPTION DATA SHEET	Location : Coarse Aggregate	Material Wadi Alhee (1")
	Sample No. 1	Date : 1-Sep-2023
	Test No. : 1222-CAB-111	Tested by Eng'r M Alharma

COARSE AGGREGATE ASTM C-127	1	2		
WT. OF OVEN DRY SAMPLE , A	3425.5			
WT. OF SURFACE DRY SAMPLE , B	3488.0			
WT. OF SAMPLE + CONTAINER IN WATER , D	2585.0			
WT. OF CONTAINER IN WATER , E	400			
WT. OF SAT. SAMPLE IN WATER , D -E = C	2185.0			
B - C	1303.0			
A - C	1240.5			
B - A	63			
1. BULK SPECIFIC GRAVITY, {A/(B-C)}	2.629			
2. BULK (S.S.D.) SP. GR. , {B/(B-C)}	2.677			
3. APPARRENT SP. GR. , {A/(A-C)}	2.761			
ABSORPTION , {(B-A)/A} x 100	1.825			
FINE AGGREGATE ASTM C-128				
WT. OF SURFACE DRY SAMPLE				
WT. OF OVEN DRY SAMPLE IN AIR , A				
WT. OF FLASK FILLED WITH WATER , B				
WT. OF FLASK + SAMPLE + WATER , C				
B + 500 - C = D				
B + A - C = E				
500 - A = F				
4. BULK SPECIFIC GRAVITY , A/D				
5. BULK (S.S.D.) SP. GR. , 500/D				
6. APPARRENT SP. GR. , A/E				
ABSORPTION , (F/A) x 100				

REMARKS :

REVIEWED BY : _____ WITNESSED BY : _____

MCWC CONSORTIUM

Modern Construction Works Company For Concrete & Hollow Bloks

SPECIFIC GRAVITY AND ABSORPTION DATA SHEET	Location :	Quarry Alradia Aziza (1")Coarse Aggregate		
	Sample No.	1	Date :	1-Sep-2023
	Test No. :	1222-CAB-114	Tested by :	Eng'r M Alharmah

COARSE AGGREGATE ASTM C-127	1	2		
WT. OF OVEN DRY SAMPLE , A	3134.0			
WT. OF SURFACE DRY SAMPLE , B	3172.0			
WT. OF SAMPLE + CONTAINER IN WATER , D	2382.0			
WT. OF CONTAINER IN WATER , E	400			
WT. OF SAT. SAMPLE IN WATER , D -E = C	1982.0			
B - C	1190.0			
A - C	1152.0			
B - A	38			
1. BULK SPECIFIC GRAVITY, {A/(B-C)}	2.634			
2. BULK (S.S.D.) SP. GR. , {B/(B-C)}	2.666			
3. APPARRENT SP. GR. , {A/(A-C)}	2.720			
ABSORPTION , {(B-A)/A} x 100	1.213			
FINE AGGREGATE ASTM C-128				
WT. OF SURFACE DRY SAMPLE				
WT. OF OVEN DRY SAMPLE IN AIR , A				
WT. OF FLASK FILLED WITH WATER , B				
WT. OF FLASK + SAMPLE + WATER , C				
B + 500 - C = D				
B + A - C = E				
500 - A = F				
4. BULK SPECIFIC GRAVITY , A/D				
5. BULK (S.S.D.) SP. GR. , 500/D				
6. APPARRENT SP. GR. , A/E				
ABSORPTION , (F/A) x 100				

REMARKS :

REVIEWED BY : WITNESSED BY :

Modern Construction Works Company For Concrete & Hollow Bloks

ABRASION TEST DATA SHEET ASTM C-131-03 LOS ANGELES MACHINE 1	Location : Quarry Alradia Aziza	
	Sample No. :	Test Date : 1-10-2023
	Test No. : 1122-01-CAI-108	Tested by : Eng'r.M Alharmah

MECHANICAL ANALYSIS				
Sieve size	Weight Retaine	Cumul. Wt. Ret.	% Retain	% Passing
3				
1 1/2				
1				
3/4				
1/2				
3/8				
1/4(3)				
4				
8				
Pan				100
Total				

GRADINGS FOR TEST				
Sieve size	Weights in grams			
	A	B	C	D
3				
1 1/2				
1	1250			
3/4	1250			
1/2	1250	2500		
3/8	1250	2500		
1/4(3)			2500	
4			2500	
8				2500

CHARGE OF SPHERES			
Grad-ing	No. of Spher	Wt. In grams	
		Spec.	As Run
A	12	5000 ± 10	
B	11	4584 ± 10	
C	8	3330 ± 10	
D	6	2500 ± 10	

ABRASION DATA		Grading B
Total sample wight , grams		5,000.0
100 Rev.	Dry wt. Washed on #12	
	assing #12 $C_{100} = A - B_1$	
	PercentWear ___ C_{100} x 100	
500 Rev.	Dry wt. Washed on #12	3,942.6
		1,057.4
	PercentWear ___ C_{500} x 100	21.1

Remarks : (Include Chope and type of coarse material) :

Prepared by

Reviewed by :

Modern Construction Works Company For Concrete & Hollow Bloks

(Fine Aggregate)

SIEVE ANALYSIS (ASTM C-136,D-422)	LOCATION : New Sand Ziltan	
	SAMPLE NO **Natural Sand**	Date: 05-9-2023
	TEST NO : 122 -50 - FAG -119	TESTED BY : ARAFAT

STANDARD TEST SIEVE SI		Weight Retained (gm)	Cummulative Wieght Retained (gm)	% Retained	% Passing	REMARKS
1/2"	12.5 mm					
3/8"	9.50 mm	0.0	0.0	0.0	100.0	
No. 4	4.75 mm	0.0	0.0	0.0	100.0	
No. 8	2.36 mm	0.0				
No. 10	2.00 mm	0	0.0	0.0	100.0	
No. 16	1.18 mm	0.0				
No. 20	850 microns	0	0.0	0.0	100.0	
No. 30	600 microns	30.5	30.5	3.9	96.1	
No. 50	300 microns	225.5	256.0	32.9	67.1	
No. 100	150 microns	478.5	734.5	94.5	5.5	
No. 200	75 microns	39.5	774.0	99.6	0.4	
PAN		3.0				
TOTAL		777.0				

REMARKS :

LOSS: 0.0 gm.

Weight of Dry Sample = **777.0** gm.

Reviewed by : _____

Witnessed by : _____

Modern Construction Works Company For Concrete & Hollow Bloks

COARSE AGGREGATE **(1")**

SIEVE ANALYSIS (ASTM C-136,D-422)	LOCATION : QUARRY WADI ALHYAH	
	SAMPLE NO : **Coarse Agg. (1")**	DATE : November 1, 2023
	Test No.: 1123-01-CAG -101	TESTED BY : ***Eng'r:- ARAFAT***

STANDARD TEST SIEVE SIZ		Weight Retained (gm)	Cummulative Wieght Retained (gm)	% Retained	% Passing	REMARKS
6"	150 mm					
4"	100 mm					
3"	75.0 mm					
2 1/2"	63.0 mm					
2"	50.0 mm					
1 1/2"	37.5 mm	0.0	0.0	0.0	100.0	100
1"	25.0 mm	0.0	0.0	0.0	100.0	95 ~ 100
3/4"	19.0 mm	0	0.0	0.0	100.0	
1/2"	12.5 mm	1913.1	1913.1	60.5	39.5	25 ~ 60
3/8"	9.50 mm	1141.6	3054.7	96.5	3.5	
No. 4	4.75 mm	81.0	3135.7	99.1	0.9	0 ~ 10
No. 8	2.36 mm	0.8	3136.5	99.1	0.9	0 ~ 5
No. 200	75 microns	7.0	3143.5	99.3	0.7	
PAN		19.7	3163.2			
TOTAL		3163.2				

REMARKS :

LOSS: 1.1

Weight of Dry Sample = **3164.3** gm.

Tested by : _____

Reviewed by : _____

Modern Construction Works Company For Concrete & Hollow Bloks

COARSE AGGREGATE **(1")**

SIEVE ANALYSIS (ASTM C-136,D-422)	LOCATION : QUARRY ALRIDIAH AZIZA	
	SAMPLE NO : **Coarse Agg. (1")**	DATE : November 1, 2023
	Test No.: 1123-01-CAG -102	TESTED BY : ***Eng'r:- ARAFAT***

STANDARD TEST SIEVE SIZE		Weight Retained (gm)	Cummulative Wieght Retained (gm)	% Retained	% Passing	REMARKS
6"	150 mm					
4"	100 mm					
3"	75.0 mm					
2 1/2"	63.0 mm					
2"	50.0 mm					
1 1/2"	37.5 mm	0.0	0.0	0.0	100.0	100
1"	25.0 mm	0.0	0.0	0.0	100.0	95 ~ 100
3/4"	19.0 mm	0	0.0	0.0	100.0	
1/2"	12.5 mm	1303.8	1303.8	44.5	55.5	25 ~ 60
3/8"	9.50 mm	658.3	1962.1	67.0	33.0	
No. 4	4.75 mm	930.1	2892.2	98.8	1.2	0 ~ 10
No. 8	2.36 mm	22.3	2914.5	99.5	0.5	0 ~ 5
No. 200	75 microns	9.3	2923.8	99.9	0.1	
PAN		2.9	2926.7			
TOTAL		2926.7				

REMARKS :

LOSS: 1.1

Weight of Dry Sample = **2927.8** gm.

Tested by : _____

Reviewed by : _____

Modern Construction Works Company For Concrete & Hollow Bloks

COARSE AGGREGATE (3/8")

SIEVE ANALYSIS (ASTM C-136,D-4	LOCATION QUARRY ALMAWAL AZIZA				
	SAMPLE NO Coarse Agg(3/8")			DATE : November 1, 20	
	Test No.: 1123-01-CAG -103			TESTED B' Eng'r:- ARAFA	
STANDARD TEST SIEVE	Weight Retained (gm)	Cummulative Wieght Retaine (gm)	% Retained	% Passing	REMARKS
6" 150 mm					
4" 100 mm					
3" 75.0 mm					
2 1/2" 63.0 mm					
2" 50.0 mm					
1 1/2" 37.5 mm	0.0	0.0	0.0	100.0	100
1" 25.0 mm	0.0	0.0	0.0	100.0	95 ~ 100
3/4" 19.0 mm	0	0.0	0.0	100.0	
1/2" 12.5 mm	0.0	0.0	0.0	100.0	25 ~ 60
3/8" 9.50 mm	0.0	0.0	0.0	100.0	
No. 4 4.75 mm	995.1	995.1	60.3	39.7	0 ~ 10
No. 8 2.36 mm	627.5	1622.6	98.4	1.6	0 ~ 5
No. 16 1.18 mm	14.9	1637.5	99.3	0.7	
No. 30 600 microns	2.1	1639.6	99.4	0.6	
No. 50 300 microns	1.3	1640.9	99.5	0.5	
No. 100 150 microns	0.8	1641.7	99.5	0.5	
No. 200 75 microns	2.1	1643.8	99.7	0.3	
PAN	3.7	1647.5			
TOTAL	1647.5				

REMARKS :

LOSS: 1.9

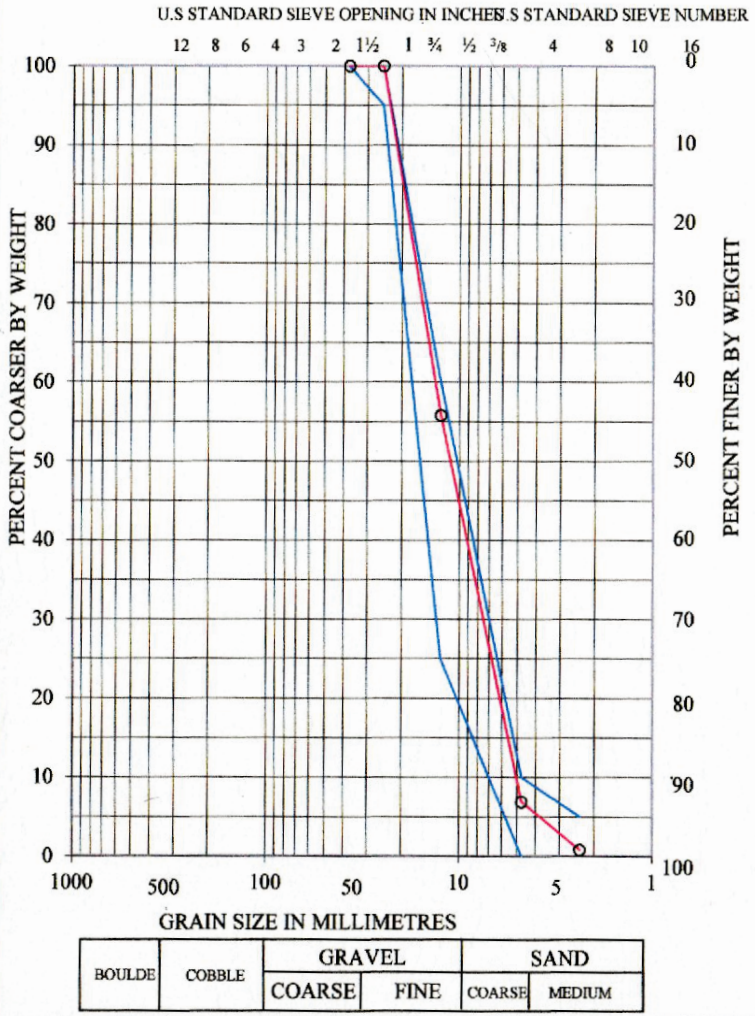
Weight of Dry Sample = 1649.4 gm.

Tested by : _____

Reviewed by

Modern Construction Works Company For Concrete & Hollow Bloks

Location : Patchplant	**GRADATION CURVES**	Sampling Date: 31-OCT-2023	Testing Date : 01-Nov-23
Sample No. : **COARSE AGGREGATE**	**(ASTM C 136, D 1140)**	Tested by : ***Eng'r:- ARAFAT***	



COMBINED GRADATION BETWEEN COARSE AND FINE GRAVEL

1. Test Results of Each Aggregate (% Passing)

Sieve	37.5mm	25.0mm	12.5mm	4.75mm	2.36mm	Remarks
1"W Coarse Agg. 25mm)	100.0	100.0	39.5	0.9	0.9	
1"A Coarse Agg. 25mm)	100.0	100.0	55.5	1.2	0.5	
C.S3/8" Coarse Agg. (9.5mm)	100.0	100.0	100.0	39.7	1.6	

2. Test Results of Combined Aggregate (% Passing)

Sieve	37.5mm	25.0mm	12.5mm	4.75mm	2.36mm	Remarks
1"W Coarse Agg. 25mm)	40.0	40.0	15.8	0.4	0.4	
1"A Coarse Agg. 25mm)	45.0	45.0	25.0	0.5	0.2	
C.S3/8" Coarse Agg. (9.5mm)	15.0	15.0	15.0	6.0	0.2	
Total (%)	100.0	100.0	55.8	6.9	0.8	
Spec's Limit	100	95-100	25-60	0-10	0-5	

Sample No.	Elev. of Depth	Classification	Net Wt. %	LL	PL	PI	Remarks
		N					Test No.
		A					Test No.: 1123-01-CAG -104

Reviewed by : _____

Witnessed by : _____

بعض المشاريع التي انجزتها الشركة

SOME WORKS AND PROJECTS WITH COMPANIES

مشروع بوابة طرابلس
مشروع مستشفي كلينكا للنفط
مشروع مباني البحوث الجنائية
مشروع تطوير مطار معيتيقة الدولي
مشروع تطوير مطار طرابلس الدولي
بعض المشاريع التابعة لشركة الاشغال العامة
مشروع جهاز الحرس الرئاسي / طريق السكة / طرابلس
مشروع مبني مستشفي غوط الشعال / طرابلس
مشروع مباني مركز الجراحات المتقدمة / طرابلس
مشروع مبني مركز الاورام / عين زاره / طرابلس
مشروع انشاء و تطوير مبني النائب العام / طريق السكة / طرابلس
مشروع انشاء و تطوير ديوان المحاسبة / الفرناج / طرابلس
مشروع انشاء و تطويرمباني شركة البريقة لتسويق النفط / الكريمية
مشروع انشاء و تطوير مبني الاسعاف الطائر / شارع الجمهورية طرابلس
مشروع انشاء و تطويرمبني مجمع الصحي / عرادة / طرابلس

شركة أعمال البنية الحديثة

للصناعات الخرسانية والطوب الأسمنتي