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# Your Smart Way to Quality



## Prequalification



Contact us



[Quality-testing.com](http://Quality-testing.com)



[Info@quality-testing.com](mailto:Info@quality-testing.com)

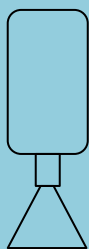


010-25-808-673





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# ABOUT QUALITY TESTING Co. "Q LAB"

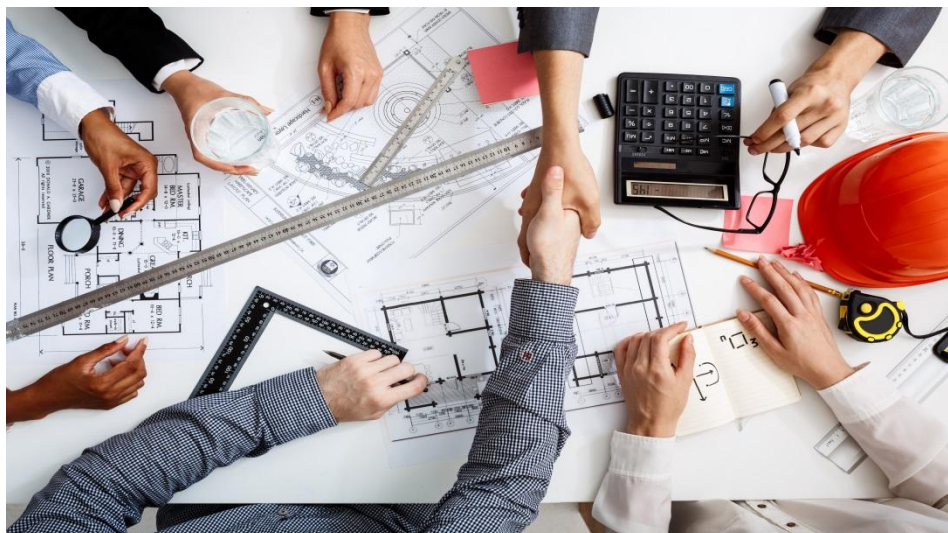
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Q Lab is a specialized laboratory in the field of testing soil, concrete, and asphalt. The laboratory is founded to provide the construction market with the latest testing technology that is aligned with modern construction.

In Q Lab, we believe that testing is the root that enriches quality consultancy. We provide our clients testing services with a mind set to give him the quality advice that he needs to have his work been accepted and meets with project specifications.

With such mentality, we deal with our client as partners to achieve the common quality objects. Q Lab has distinguished team who is dedicated to provide our clients with the highest standard testing services.

Q Lab adopts all the required technologies required to provide fast, accurate, and reliable results to cope with the Mega Projects requirements and the recent fast track construction culture.



## Why Q Lab?

- ✓ Q Lab is certified laboratory according to [ISO 9001:2015](#)
- ✓ We work with our clients to build the right quality plans for their projects.
- ✓ We use the latest testing technology to insure fast / accurate results
- ✓ Our team is consisting of a group of experts who participated in delivering high quality testing solutions

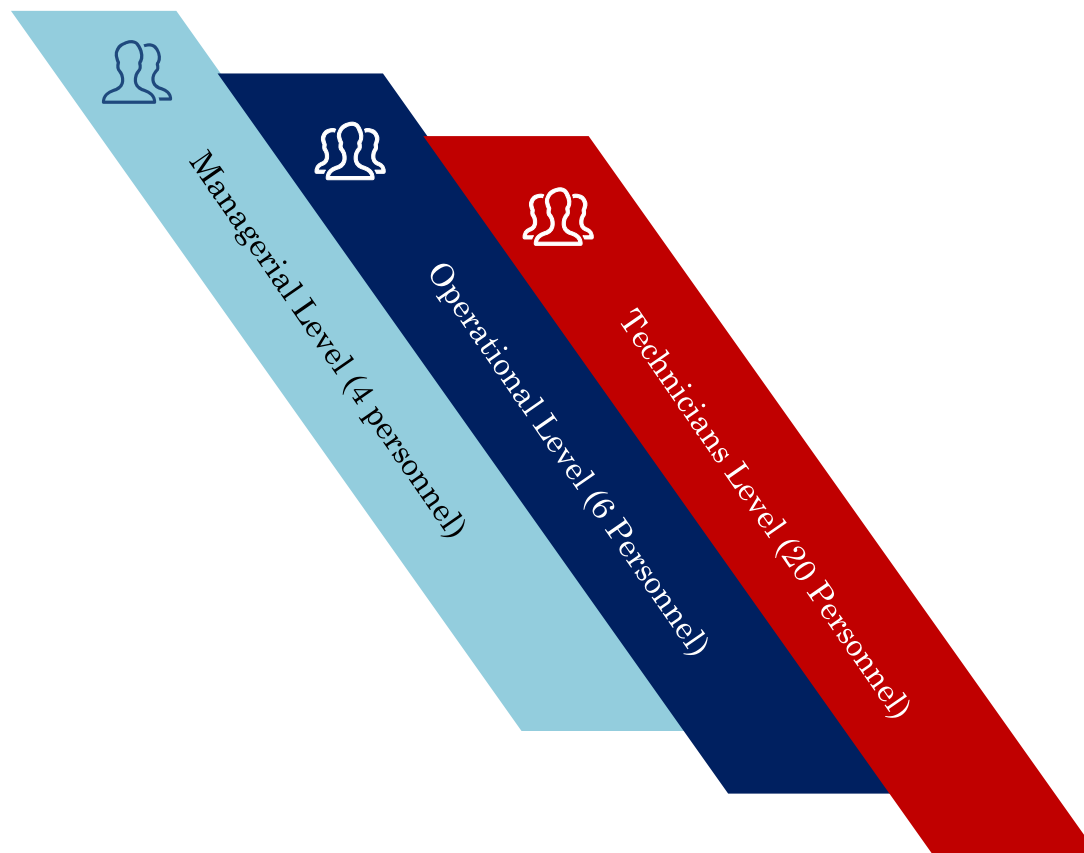
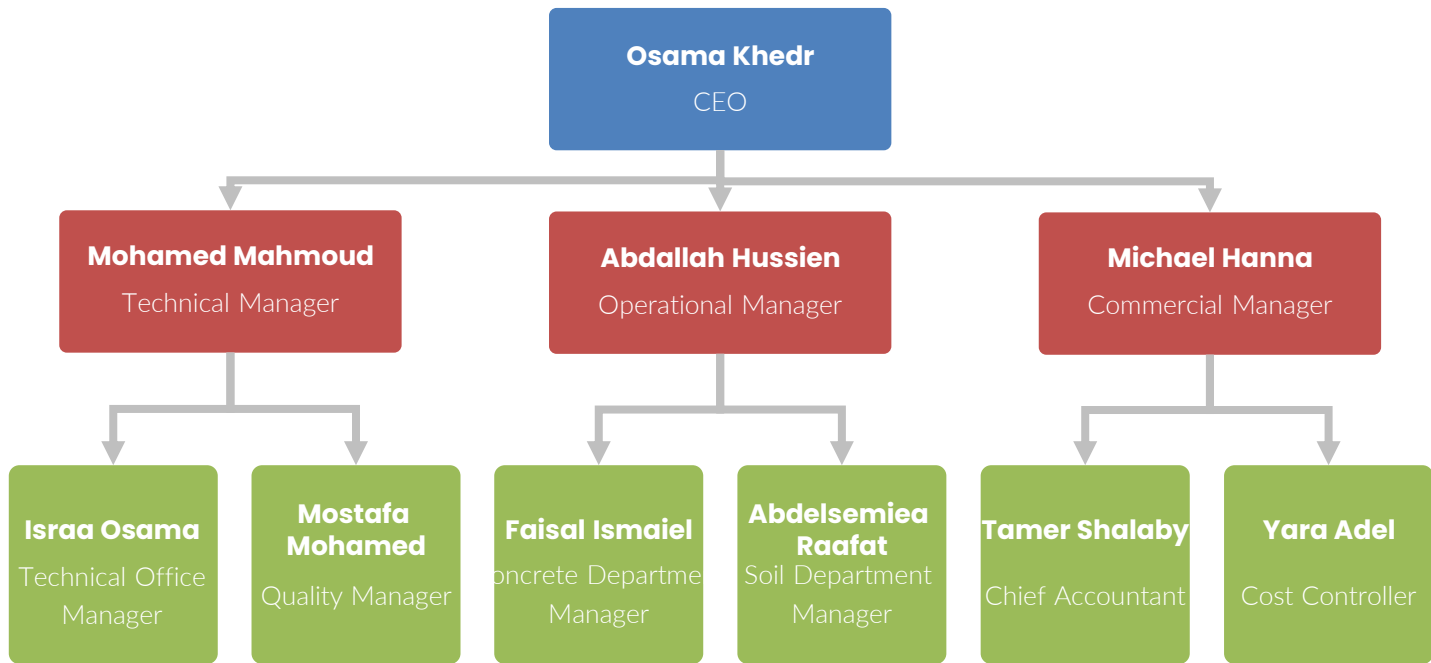




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# ORGANIZATION CHART

Q LAB organization chart is following hierarchical structure as show in the below figure. Eng. Osama Khedr is the Chief Executive Officer. He is following up on the reports from the three departments: technical department, operation department and commercial department.







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# Chief Executive Officer

Eng. Osama Khedr is the Chief Executive of Officer of Q Lab Organization. He has more than 30 years of extensive experience in the field of materials testing and quality control / quality assurance in the construction industry. He worked in too many mega projects in different construction sectors like :

- Airports ( Cairo East Air Base ) – Contrack
- Highways (more than 100 Raod and Highways Projects
- Bridges (King Abdallah Bridge)
- Tunnels (Prince Sultan Tunnel)
- Residential buildings
- Touristic villages
- Malls
- Hospitals

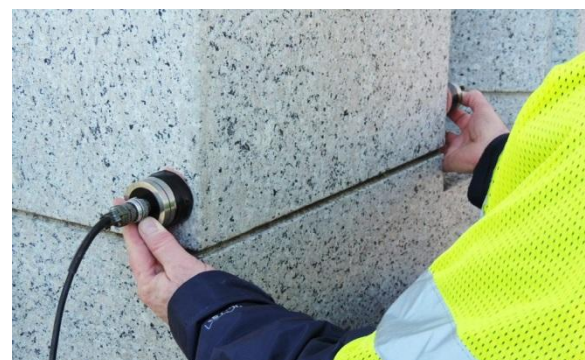
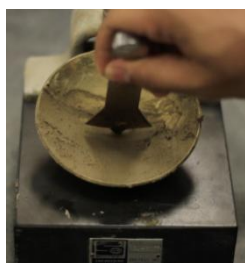
He has excellent knowledge with different International Standards and codes : ACI , AASHTO , ECP , EN , BS , DIN



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# Our Services

Q LAB provides testing services in three different construction fields : Soil , Concrete , and Asphalt. Beside these services Q LAB provides quality consulting services for different construction sectors: residential, commercial, roads, airports, tunnels, bridges, hospitals, hotels ... etc.



Soil Testing Services

Asphalt Testing Services

Concrete Testing Services



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# Soil Services

- Gradation Analysis
- Liquid Limit
- Plastic Limit
- Soil Classification
- Proctor Test
- Sand Cone Test
- Sand Replacement Test
- Water Replacement Test
- Double Infiltration Ring
- Speedy Moisture Determination
- Static Plate Load Test (EV1/EV2)
- Dynamic Plate Load Test (EVD)
- CBR Test
- Soil Chemical Analysis
- Los Angeles Test
- Design soil mixture from different soil materials
- Determine the optimum water content for compaction
- Test Area to determine compaction procedure
- Selecting materials from different sources
- Soil Stabilization



Soil Testing Services







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# Asphalt Services

- Extraction & Marshall
- Density of asphalt cores
- Gmm
- Loss of Stability
- Tensile Strength Ratio
- Stripping Test
- Compaction to Refusal
- Asphalt Mix Design
- Inspection of existing asphaltic roads



Asphalt Testing Services



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# Concrete Services

- Temperature & Slump
- Concrete cube and cylinder samples
- Air content
- Concrete Durability Testing (RCPT – Water Penetration – ISAT – Water Absorption - Chemical)
- Schmidt Hammer
- Concrete cores
- Ultrasonic
- Slab and Beam Loading Test
- Flatness and Levelness Numbers for Concrete Surfaces
- Heat gain systems
- Detecting steel rebars imbedded into concrete
- Quality Services
- Concrete Mix Design
- Evaluation of Strength test results and adjusting concrete mix design
- Thermal analysis for Mass Concrete
- Selecting raw materials from different sources



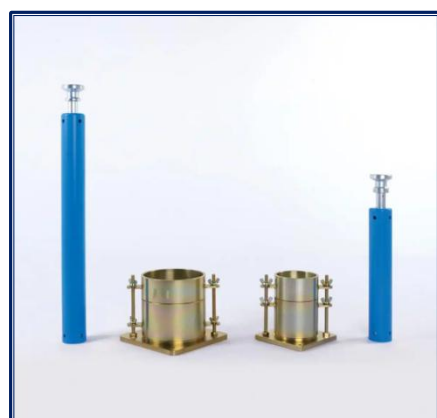
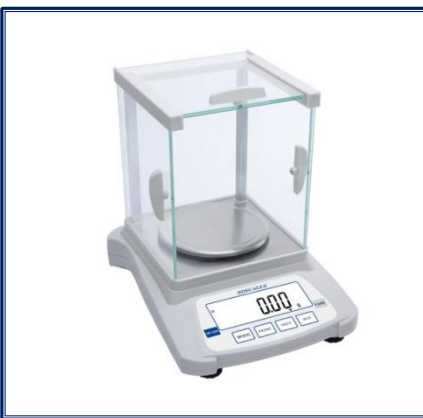
Concrete Testing Services





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# SOIL EQUIPMENT



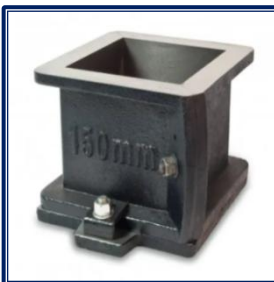
Q LAB





# CONCRETE EQUIPMENT

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# ASPHALT EQUIPMENT

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# Projects Profile

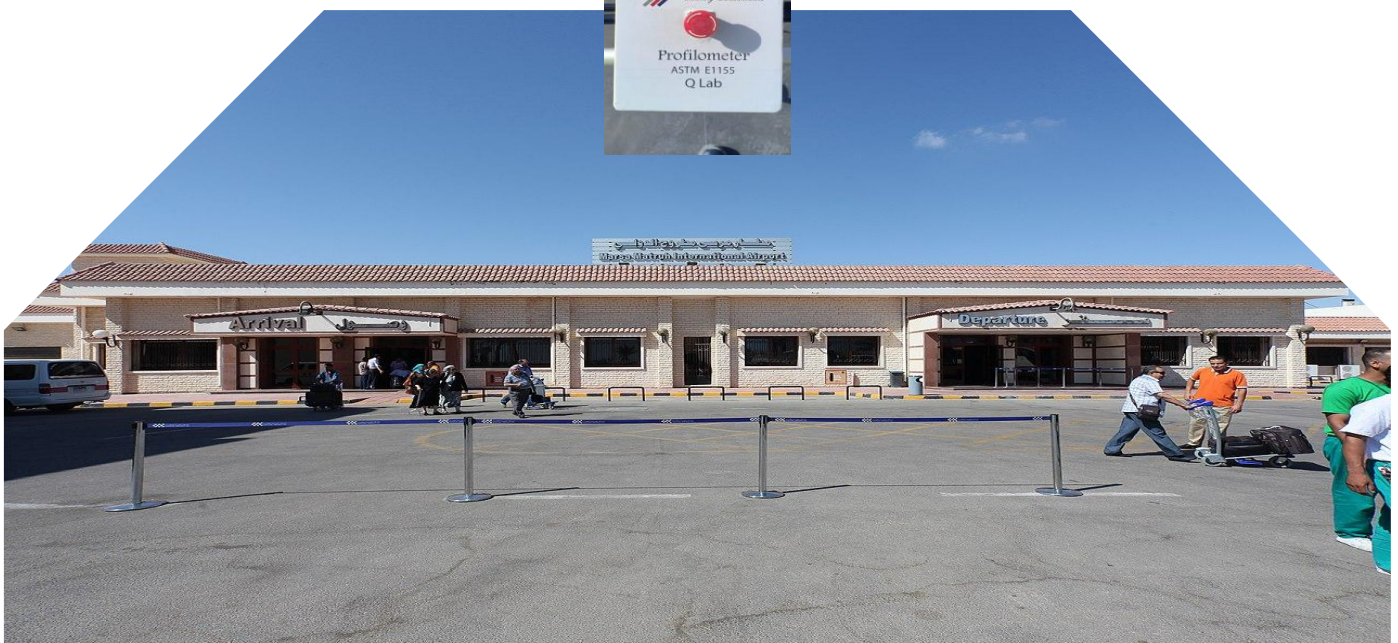
## 1. Project: Testing Concrete Floor Flatness and Levelness Numbers at Marsa Matrouh Airbase

**Client:** Archirodon Company

**Consultant:** USA Corps of Engineers

Q Lab was responsible to run the F numbers testing as per ASTM E1155 for the new maintenance hangar in Marsa Matrouh Airbase (6000 m<sup>2</sup>). Our team used Type II Profilometer equipped with the latest technological sensors to estimate the profile of the concrete surface.

The F-numbers system is more accurate than the measurements taken with a straightedge. The acquired data is processed with special software that is programmed to determine the composite  $F_f$  and  $F_l$  numbers.







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# Projects Profile

## 2. Soil Quality Control Testing – Cargo Train ( Al-Robaiky)

Client: Different Contractors

Consultant: Cairo University

Q Lab is the approved laboratory in the project to test soil suitability and soil compaction and strain modulus characteristics. Q Lab is providing soil testing services for different contractors in the project. Hereafter is the list of contractors that we are pleased to provide them with our soil testing services:

- Trust Company
- Al-Amal Company
- A. Abdelrahman Company
- Al-Watanya Company
- Al-Nokhba Company
- Rotac Company
- Al Marasi Company
- Semma Company
- Warset Yousri
- Al Reida Company
- Al-Mahmoud Company
- Al-Masriah Company





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# Projects Profile

## 3. Concrete Quality Control Testing – Cargo Train ( Al-Robaiky)

Client: Different Contractors

Consultant: Cairo University

Q Lab is the approved laboratory in the project to test the crushing of concrete cubes. Q Lab is providing concrete testing services for two main contractors in the project. Hereafter is the list of contractors that we are pleased to provide them with our concrete testing services:

- Al-Zahraa Company
- Al-Salam Company





# Projects Profile

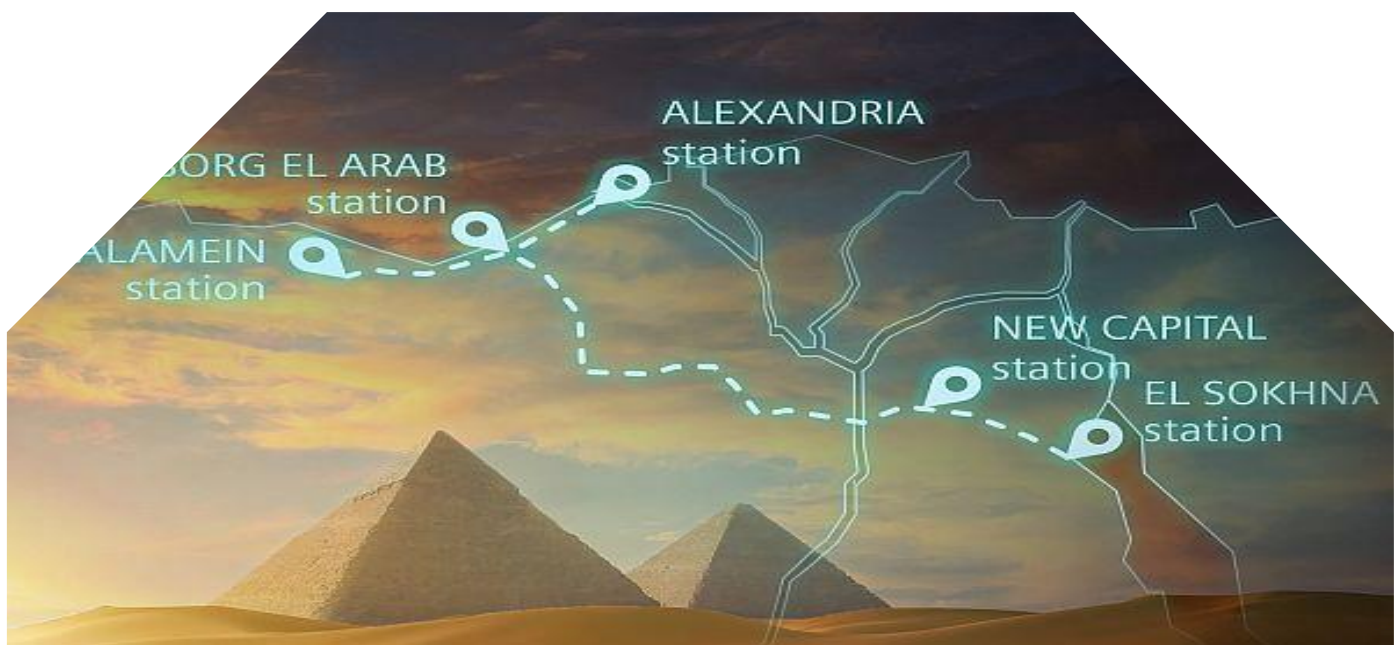
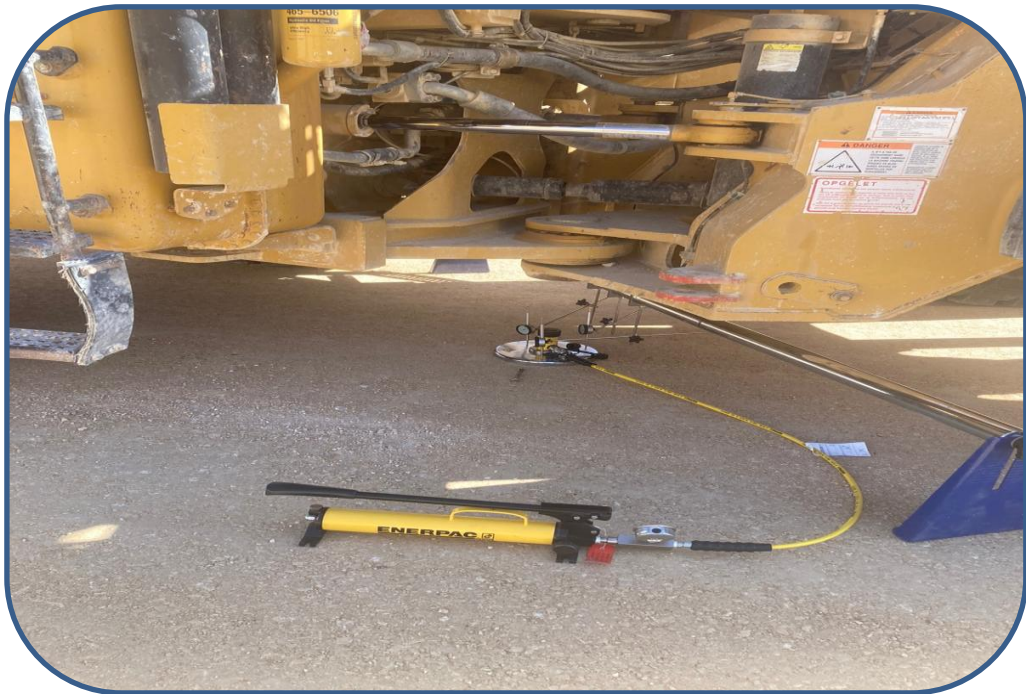
## 4. Soil Testing at the High Speed Train

Client: Al - Nasr Company

Consultant: Dr. Hassan Mahdy & Spectrum Offices

QLab is engaged in the soil testing at the high speed train with different contractors. QLab scope is summarized as follows:

- EV1 / EV2 Soil testing
- Sand Replacement testing
- Sandcone testing







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# Projects Profile

## 5. Soil Quality Control Testing – Sodic East ( Al-Shorouk)

Client: Different Contractors

Consultant: ACE – Moharam Bakhom

Q Lab is the approved laboratory in the project to test soil suitability and soil compaction and strain modulus characteristics. Q Lab is providing soil testing services for different contractors in the project. Hereafter is the list of contractors that we are pleased to provide them with our soil testing services:

- Farag Sultan Company
- Al - Tawheed Company
- Al- Taqwa Company
- Al- Moustafa Company
- ASEC Company
- Demco Company
- ASSAS Company
- Egy-Scape
- Al – Edessy
- Al – Shorouk Construction





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# Projects Profile

## 6. Soil Quality Control Testing – Aliva ( Mountain View)

Client: Different Contractors

Consultant: GEO-CONSULTANTS

Q Lab is the approved laboratory in the project to test soil suitability and soil compaction and strain modulus characteristics. Q Lab is providing soil testing services for different contractors in the project. Hereafter is the list of contractors that we are pleased to provide them with our soil testing services:

- Farag Sultan Company
- Future Builders Company





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# Projects Profile

## 7. Concrete Quality Control Testing – Aliva ( Mountain View)

Client: Masriah Construction Company

Consultant: DMC-CONSULTANTS

Q Lab is the approved laboratory in the project to Quality control of concrete testing throughout the project, including slump testing, concrete temperature monitoring, curing control, and compressive strength (crushing) tests to ensure compliance with project specifications and relevant standards.







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# Projects Profile

## 8. Testing Basalt Aggregates – Al Galala Quarry

Client : Makkah Al Barakah

Consultant: Systra

Q Lab performs special basalt aggregates testing procedures as per EN Standards for Al-Galala quarry to be used as ballast aggregates for the Electric Express Train. The Testing procedures are as follows:

- Sonnenbrand Test
- Organic Content Test





# Projects Profile

## 9. Testing Soil in Road Projects in Gulf Area

Client: Toplink Company

Consultant: Idroesse

Q Lab has an experience in working in Gulf Area (United Arab of Emirates). The company was responsible for the quality control activities in the following projects in the eastern area:

- Upgrading, Development and Continuation of Maliha Road Linking Sheikh Khalifa Road to E99
- Link Road between Sheikh Khalifa Street with Khatam Al Mualaha Border Post





# Projects Profile

## 10. Concrete Durability Testing – New Administration Building and New Non-sterilized Plant & Warehouse - Algeria

**Client:** Orascom Construction

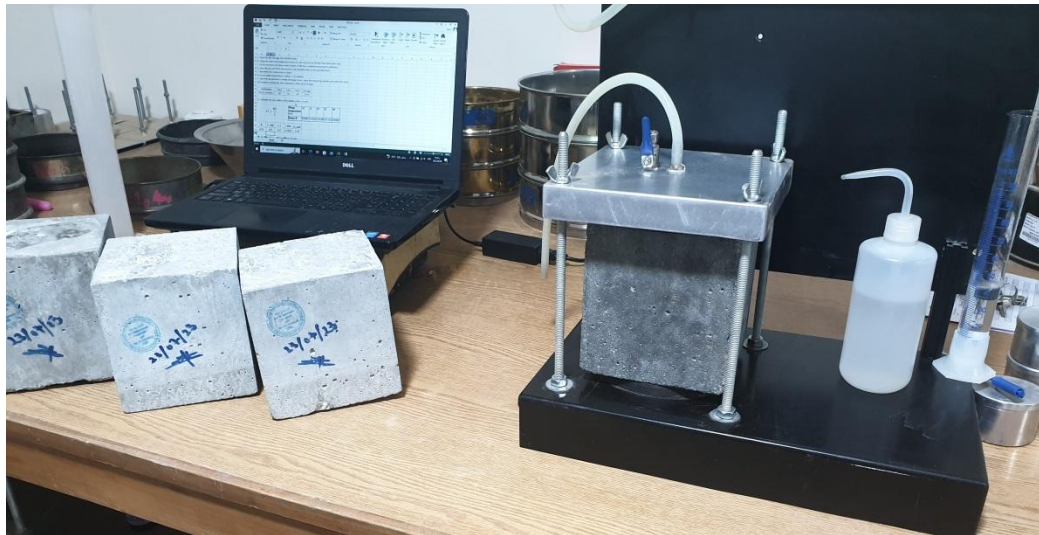
**Consultant:** Dar Al-Handasah

Q Lab has an extensive experience in the field of concrete durability tests. The lab was responsible for the concrete durability testing for the concrete mixes trial performed at The Non Sterilizing Building in Algeria. The samples were shipped to our lab from Algeria and the following tests were conducted to approve the trial mix from Dar Al Handasah:

Rapid Chloride Penetration Tests (RCPT)

Initial Surface Absorption Test (ISAT)

Water Penetration Test (WPT)







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# Projects Profile

## 11. Soil Quality Control Testing – UPTOWN CAIRO (EMAAR MISR)

Client: El-Mahdy Company

Consultant: GEO-CONSULTANTS

Q Lab is the approved laboratory in the project to test soil suitability and soil compaction and strain modulus characteristics. Q Lab is providing soil testing services for different contractors in the project. Hereafter is the list of contractors that we are pleased to provide them with our soil testing services:

- El-Mahdy Company
- El-Kelany Company
- United Company
- Al-Handasya



# Projects Profile

## 12. Non-Destructive Testing- Shahrazad Hotel – El agouza

Client: RTC

Consultant: DR/ RAGAB MEGAHER

QLAB was responsible for the inspection and assessment of the reinforced concrete structural elements of Shahrazad Hotel using the latest non-destructive testing (NDT) methods, including the Schmidt Hammer Test, Ultrasonic Pulse Velocity (UPV) Test, and Reinforcement Steel Detector Survey.







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# Projects Profile

## 13. Non-Destructive Testing– Hurgada

Client: POSEIDON MARINE

Consultant: QUALITY TESTING

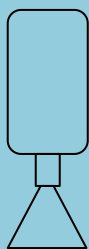
QLAB was responsible for the inspection and assessment of the floating pontoons at North Bay Marina – El Gouna using the latest non-destructive testing (NDT) methods, including the Schmidt Hammer Test, Ultrasonic Pulse Velocity (UPV) Test, and Reinforcement Steel Detector Survey.





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# APPROVALS





# APPROVALS

EGYPTIAN ORGANIZATION FOR  
STANDARDIZATION & QUALITY (EOS)



الهيئة المصرية العامة  
للمواصفات والجودة

وحدة تسجيل الشهادات الدولية

F-RU (07)

305/H16

السادة / شركة QUALITY TESTING

قطعة ٢٢٠٤ - الحي الخامس - الهضبة الوسطى - المقطم - القاهرة

تحية طيبة وبعد،،،

بالإشارة إلى قرار السيد المهندس / وزير التجارة والصناعة رقم ١٥ لسنة ٢٠١٠ بشأن إجراءات التسجيل والتحقق لشهادات الأيزو لنظم إدارة الجودة أو البيئة أو السلامة أو علامات الجودة الدولية أو الإقليمية أو الأجنبية أو أي شهادات نظم إدارة محلية أو دولية أخرى

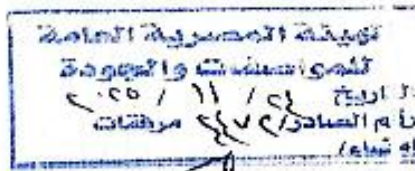
وبناءً على الطلب المقدم من شركتكم برقم ٨٢٢٦ بتاريخ ٢١/١٠/٢٠٢٥ بشأن تسجيل شهادة ISO9001

الصادرة من شركة MAS برقم QM152025102061 بتاريخ ٢٠٢٥/١٠/٦

نتشرف بالإحاطة بأنه تم التسجيل لدى الهيئة برقم ( 10922/01-2 ) دون ادنى مسئولية على الهيئة

وننتهي العمل بهذا الخطاب في ٥/١٠/٢٠٢٦

وتفضلوا بقبول فائق الاحترام!!!



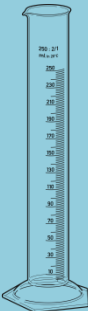
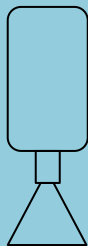
15 Tadreeb El-Modarbeen St., Ameriya, CAIRO - EGYPT  
Customer Service : +20222845524 - +20222845522  
Fax : +20222845504

E-mail : eos@kfec.net.eg

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الفاكس : +٢٢٢٨٤٥٥٠٤



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**MAS**  
MASTERS IN QUALITY MANAGEMENT

## CERTIFICATE

MAS Quality Certification awards a certificate to

### QUALITY TESTING

6204 FIFTH DISTRICT , AL HADABA AL WOSTA , ALMOKATTAM, CAIRO – EGYPT

Has Been Assessed and found to Conform to Requirements of

# ISO 9001 : 2015

Complying with the requirements of Quality Management Standard

For the Following Scope

**TESTING BUILDING MATERIALS ( CONCRETE,SOIL AND ASPHALT.) PREPARATION OF SMART QUALITY CONTROL SYSTEM**

|                       |            |                              |                |
|-----------------------|------------|------------------------------|----------------|
| IAF / EA Code(s)      | 34-35      |                              |                |
| Date of initial issue | 06/10/2025 | 1 <sup>st</sup> Surveillance | 05/10/2026     |
| Date of issue         | 06/10/2025 | 2 <sup>nd</sup> Surveillance | 05/10/2027     |
| Expiry Date           | 05/10/2028 | Registration No.             | QM152025102061 |



The Validity of This Certificate will be Maintained by Annual Surveillance Audits and renewal Audit Every Three Years  
**Certificate Verification** : The Certification Validity can be Checked at [www.mas-esc.com](http://www.mas-esc.com) at Verify Certificate

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# APPROVALS



مركز بحوث ودراسات الهندسة المدنية  
كلية الهندسة – جامعة القاهرة  
Research and Studies Center of Civil Engineering (RSCCE)  
Faculty of Engineering – Cairo University



الموضوع: إعداد دراسات فنية وتوفير استشاريين إشراف لبعض  
مشروعات السكك الحديدية الجديدة (الرويكي / بليس).  
بخصوص اعتماد معمل كيولاب في اجراء اختبارات الجسور  
بمواقع الشركات

ملف رقم: بليس/الرويكي/إشراف موقع - 18  
تاريخ: 2023/06/28

السيد المهندس / محمد امين مدير المشروعات

هينه الطرق والكباري – منطقة شرق الدلتا

السلام عليكم ورحمة الله وبركاته

مرفق طيه معمل كيولاب بعد اعتماده من الاستشاري العام وذلك لاجراء الاختبارات المعملية بمواقع المشروع لجميع  
اعمال الجسور الموجوده بالمشروع وليس لدينا اى مانع في حال توفير الشركات معملها الخاص بالموقع

ولسيادتكم وافر التحية والاحترام



مدير المشروع .

م / محمد يحيى

Faculty of Engineering – Cairo University  
Administration Building – Second Floor  
Postal Code (12613)  
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Website: [www.rscce.cu.edu.eg](http://www.rscce.cu.edu.eg)



|            |                     |                            |                            |                             |
|------------|---------------------|----------------------------|----------------------------|-----------------------------|
| صفحة : 1/1 | مدة الحفظ : 5 سنوات | تاريخ التحويل : 0000/00/00 | تاريخ الإصدار : 2021/06/01 | رقم الإصدار / التحويل : 0/1 |
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# APPROVALS



مركز بحوث ودراسات الهندسة المدنية  
كلية الهندسة – جامعة القاهرة  
Research and Studies Center of Civil Engineering (RSCCE)  
Faculty of Engineering – Cairo University



الموضوع: إعداد دراسات فنية وتوفير استشاريين إشراف لبعض  
مشروعات السكك الحديدية الجديدة (الروبيكي / بليس).  
بخصوص اعتماد معمل كيولاب في اجراء الاختبارات  
الخرسانية للاعمال الصناعيه

ملف رقم: بليس/الروبيكي/إشراف موقع - 37  
تاريخ: 2023/08/23

الساده شركات / شركه الزهراء

/ شركه السلام

السلام عليكم ورحمه الله وبركاته

مرفق طيه معمل كيولاب بعد اعتماده من الاستشاري العام وذلك لاجراء الاختبارات الخرسانيه بالموقع لجميع  
الاعمال الصناعيه الموجوده بالمشروع وليس لدينا اى مانع في حال توفير الشركه معملها الخاص بالموقع

ولسيادتكم وافر التحيه والاحترام

مدير المشروع  
م / محمد يحيى

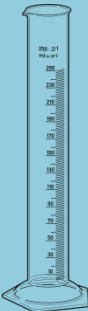
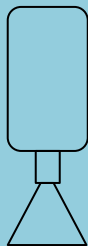
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Tel:(202)35678002 – (202)35678438  
Tel-fax:(202)35714183 Mob:(+2)01004339991  
Email: [rsccc\\_engr@ yahoo.com](mailto:rsccc_engr@ yahoo.com)  
Website: [www.rsccc.engr.cu.edu.eg](http://www.rsccc.engr.cu.edu.eg)







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# APPROVALS

| SODIC EAST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      | ARAB CONSULTING ENGINEERS<br>MOHARRAM - BAKHOUM |                                                                                                                                    | ACE CONSULTING ENGINEERS<br>MOHARRAM BAKHOUM |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--|----------------------------------------|------------------------------------------------------|--------------------------------------------|-----------------------------------------|------------------------------------------|----------------------------------------------|-------------------------------|----------------------------------|------------------------------|------------------------------------------|---------------------------------------|--------------------------------|
| <b>DOCUMENT SUBMITTAL (DOS)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                      |                                                 |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Project Name:</b> 655 Feddan -Sodic East<br><b>Project No.:</b> 655-004-CC-P33<br><b>Employer:</b> SODIC<br><b>Project Manager:</b> Eslam AHMED<br><b>Project Director :</b> Amr Selim                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                      |                                                 | <b>Package:</b> SF-03<br><b>Phase:</b> 1<br><b>Supervision Consultant:</b> ACE<br><b>Contractor:</b> ELTAWHEED CONTRACTING COMPANY |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>From :</b> ELTAWHEED CONTRACTING COMPANY<br><b>To :</b> ACE " MOHARRAM.BAKHOUM "<br><b>Attn. :</b> Eng. Mohamed Ali                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                 | <b>Date:</b> 30-1-2025<br><b>Submittal No.:</b> 141<br><b>References:</b> ECC-SE-ACE-SF3-DOS-CIVIL-141                             |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Subject:</b> Q LAB FOR CONCERT AND SAND CONE TESTS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                      |                                                 |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Type of Submittal:</b><br><table border="0"><tr><td><input type="checkbox"/> Test plan</td><td><input type="checkbox"/> Samples</td><td><input type="checkbox"/> Product/Tech.Data</td></tr><tr><td><input type="checkbox"/> Time Schedule</td><td><input type="checkbox"/> Survey</td><td><input type="checkbox"/> Others</td></tr></table>                                                                                                                                                                                                                                                                                                                        |                                                      |                                                 |                                                                                                                                    |                                              |  | <input type="checkbox"/> Test plan     | <input type="checkbox"/> Samples                     | <input type="checkbox"/> Product/Tech.Data | <input type="checkbox"/> Time Schedule  | <input type="checkbox"/> Survey          | <input type="checkbox"/> Others              |                               |                                  |                              |                                          |                                       |                                |
| <input type="checkbox"/> Test plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> Samples                     | <input type="checkbox"/> Product/Tech.Data      |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <input type="checkbox"/> Time Schedule                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <input type="checkbox"/> Survey                      | <input type="checkbox"/> Others                 |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Submittal Discipline:</b><br><table border="0"><tr><td><input type="checkbox"/> Architectural</td><td><input checked="" type="checkbox"/> Civil/structural</td><td><input type="checkbox"/> Electrical</td></tr><tr><td><input checked="" type="checkbox"/> MEP</td><td><input type="checkbox"/> Fire Protection</td><td><input checked="" type="checkbox"/> Plumbing</td></tr><tr><td><input type="checkbox"/> HVAC</td><td><input type="checkbox"/> General</td><td><input type="checkbox"/> ID.</td></tr><tr><td><input type="checkbox"/> Master planning</td><td><input type="checkbox"/> Coordination</td><td><input type="checkbox"/> Other</td></tr></table> |                                                      |                                                 |                                                                                                                                    |                                              |  | <input type="checkbox"/> Architectural | <input checked="" type="checkbox"/> Civil/structural | <input type="checkbox"/> Electrical        | <input checked="" type="checkbox"/> MEP | <input type="checkbox"/> Fire Protection | <input checked="" type="checkbox"/> Plumbing | <input type="checkbox"/> HVAC | <input type="checkbox"/> General | <input type="checkbox"/> ID. | <input type="checkbox"/> Master planning | <input type="checkbox"/> Coordination | <input type="checkbox"/> Other |
| <input type="checkbox"/> Architectural                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <input checked="" type="checkbox"/> Civil/structural | <input type="checkbox"/> Electrical             |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <input checked="" type="checkbox"/> MEP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/> Fire Protection             | <input checked="" type="checkbox"/> Plumbing    |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <input type="checkbox"/> HVAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> General                     | <input type="checkbox"/> ID.                    |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <input type="checkbox"/> Master planning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> Coordination                | <input type="checkbox"/> Other                  |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Attachments</b><br><input checked="" type="checkbox"/> Hard Copy <input type="checkbox"/> Soft Copy (CD)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                      |                                                 | <b>Main Contractor Authorized Representative</b><br>                                                                               |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Submitted for:</b><br><input checked="" type="checkbox"/> Approval <input type="checkbox"/> Information <input type="checkbox"/> Others                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                 |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Action Code Legend:</b><br>(A) Approved    (B) Approved as Noted    (C) Revise and Resubmit    (D) Rejected                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |                                                 |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Notes:</b><br>• Production, supply and/or installation shall proceed only when action code is A / or B.<br>• Regarding action code C, re-submission shall be within the limit set in the contract.<br>• Decision does not relieve the contractor from responsibility of compliance with all requirements of contract documents.<br>• If rejected please see comments.                                                                                                                                                                                                                                                                                               |                                                      |                                                 |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Consultant Comments:</b><br><br><br>Consultant Engineer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                      |                                                 |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |
| <b>Resident Engineer/Employer Representative</b><br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      |                                                 |                                                                                                                                    |                                              |  |                                        |                                                      |                                            |                                         |                                          |                                              |                               |                                  |                              |                                          |                                       |                                |

# APPROVALS

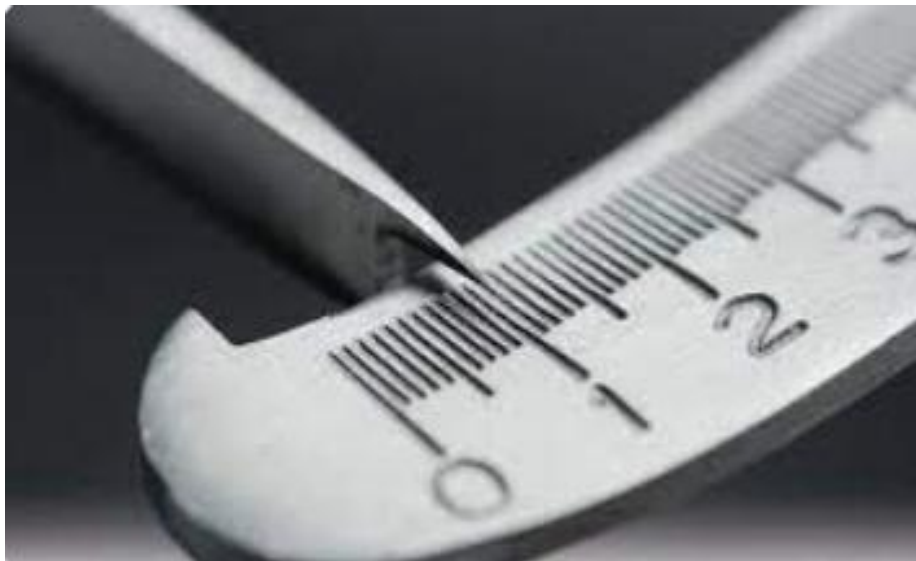
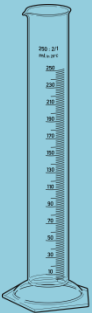
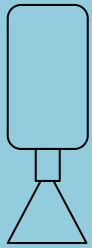
| SODIC                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | FSC                  |                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------|
| <b>DOCUMENT SUBMITTAL (DOS)</b>                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <b>Project Name</b>                                                                                                                                                                                                                                                                                                                                                                                               | : Sodie East Project (655 Feddan)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Date</b>          | : 22-01-2026                                  |
| <b>Employer</b>                                                                                                                                                                                                                                                                                                                                                                                                   | : SODIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Submittal No.</b> | : E.W - DOS -FSC-CIVIL-(1)- Rev02-            |
| <b>Project Manager</b>                                                                                                                                                                                                                                                                                                                                                                                            | : Eng. Amr Selim                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Contract</b>      | : 655-002-CC-P13                              |
| <b>Consultant</b>                                                                                                                                                                                                                                                                                                                                                                                                 | : KHATIB & ALAMI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>From</b>          | : Farag Sultan Contracting and Transportation |
| <b>Contractor</b>                                                                                                                                                                                                                                                                                                                                                                                                 | : Farag Sultan Contracting and Transportation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>To</b>            | : KHATIB & ALAMI                              |
| <b>Submittal Category:</b>                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> Architecture - (ARCH) <input checked="" type="checkbox"/> Civil/Structure - (ST) <input type="checkbox"/> Survey - (SURV)<br><input type="checkbox"/> MEP - (MEP) <input type="checkbox"/> Fire Protection - (FF) <input type="checkbox"/> Plumbing - (PL)<br><input type="checkbox"/> HVAC - (HVAC) <input type="checkbox"/> Electrical - (ELECT) <input type="checkbox"/> Low Current - (E-LC)<br><input type="checkbox"/> Infrastructure - (INFRA) <input type="checkbox"/> Mobilization - (MOB) <input type="checkbox"/> Time Schedule - (T.SCH)<br><input type="checkbox"/> Safety - (SAF) <input type="checkbox"/> Organization Chart - (ORG) <input type="checkbox"/> Landscape - (LS)<br><input type="checkbox"/> Elevators - (ELEV) <input type="checkbox"/> General - (GEN) |                      |                                               |
| <b>Type of Submittal:</b>                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/> Product/Tech. Data <input type="checkbox"/> Quantities Survey <input type="checkbox"/> Certificates<br><input type="checkbox"/> Procurement Plan <input type="checkbox"/> Proposal <input type="checkbox"/> Method Statement<br><input type="checkbox"/> Others                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |                                               |
| <b>Subject :</b> Q LAB FOR AND SAND CONE TESTS.                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <b>Location:</b> - MF-08                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <b>Attachments:</b>                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <input checked="" type="checkbox"/> Hard Copy ( ) Sheets <input type="checkbox"/> Soft Copy (CD)                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <b>Note:</b> Please Clarify the Attachments if any.                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <b>Action Code Legend:</b>                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| (A) Approved    (B) Approved as Noted    (C) Revise and Resubmit    (D) Rejected                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <b>Notes :</b>                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <ul style="list-style-type: none"> <li>Production, supply and/or implementation shall proceed only when action code is A / or B.</li> <li>Regarding action code C, resubmittal shall be within the limit set in the contract.</li> <li>Review does not relieve the contractor from responsibility of compliance with all requirements of contract documents.</li> <li>If rejected please see comments.</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <b>Consultant Comments:</b>                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| Ensure Calibration Certificates for devices and tools to be renewed on time                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <div style="text-align: center;">  </div>                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |
| <div style="text-align: right;"> <br/> <b>Engineer</b> </div>                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                               |





✓ISO 9001 Certified

# CALIBRATION



## CALIBRATION CERTIFICATE FOR LOAD CELL

Certificate Number : 194/2026/Force  
Calibrated by : Khaled EL-Dorry  
Date of Calibration : 12 July 2026  
Client Name : **Q Lab**

### Calibrated Load Cell Identification :

Manufacturer : Transdutech  
Type : CP-8  
Serial number(s) : 404600  
Rated Force(s) : 40 Ton

Calibration Mode : Compression

The calibration data were taken at an average ambient temperature of 23° C

The following terms are used :

Dial Reading :  
Gives the value read on the gauge scale.  
Actual Load :  
Gives the value of the applied Load.

### Calibration Procedure

The calibration was carried out in accordance with ISO 7500/1  
Metallic materials - Verification of static uniaxial testing machines.

The reference standard force transducer used is traceable to the PTB of Germany  
primary standard.

Relative uncertainty of the force-proving instrument in the measurement range : 0.03 %  
≤

**THIS LOAD CELL IS DUE FOR CALIBRATION ON: 12 July 2027**

**Recalibration is necessary immediately after making any repair or  
adjustment to the instrument.**

For the director  
National Calibration Office

Eng. K. M. EL-Dorry





## CALIBRATION CERTIFICATE FOR LOAD CELL

Certificate Number : 194/2026/Force  
Calibrated by : Khaled EL-Dorry  
Date of Calibration : 12 July 2026

### Calibrated Proving ring Identification :

#### Load Cell

Manufacturer : Transdutec  
Type : CP-8  
Serial number(s) : 404600  
Rated Force(s) : 40 Ton

#### Readout

Manufacturer : Wonder Scales  
Type : LP7510  
Range : 40000  
Serial number(s) : 4211098501895  
Function : KG

Calibration Mode : Compression

### CALIBRATION RESULTS

| Readout Reading<br>KG | Applied Force<br>KG |
|-----------------------|---------------------|
| 1000                  | 1000                |
| 2000                  | 2000                |
| 3000                  | 3000                |
| 4000                  | 4000                |
| 5000                  | 5000                |
| 10000                 | 10000               |
| 15000                 | 15000               |
| 20000                 | 19999               |
| 25000                 | 24998               |
| 30000                 | 29998               |
| 35000                 | 34998               |
| 40000                 | 39998               |

Values of the applied loads are equal to the average of three loading runs  
The maximum repeatability error = 0.10 %





## CALIBRATION CERTIFICATE FOR ELECTRIC OVEN

Certificate Number : 21/2026/Heat  
Calibrated by : Khaled El-Dorry  
Date of Calibration : 25 Feb 2026  
Client Name : Q Lab  
Date of request : 25 Feb 2026

### Calibrated Instrument Identification :

Instrument : Electric Oven  
Model : BTC  
Type : BT 2170  
Serial number : None  
Heating range : 0 - 250 C°  
Resolution/Scale : 1 C°

### Calibration Procedure

The calibration was carried out in accordance with Egypt Standard ES 297

### Traceability

Equipment used in this calibration is traceable to the length standard of the National Institute for Standards (NIS) of Egypt

### Results

| Indicated<br>C° | Actual<br>C° |
|-----------------|--------------|
| 60.0            | 60.5         |
| 110.0           | 110.5        |
| 160.0           | 160.5        |
| 210.0           | 210.5        |

**THIS OVEN IS DUE FOR CALIBRATION ON : 25 Feb 2027**

### Conclusion :

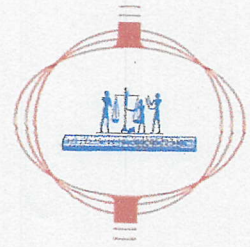
The error was found within the limits mentioned in the ES Standard

For the director  
National Calibration Office

Eng. K. M. El-Dorry

Date : 25 Feb 2026





**CALIBRATION REPORT FOR  
HYDRAULIC JACK**

Report Number : 24/2026/Force

Date of Calibration : 25 Feb 2026

Calibrated by : Khaled El-Dorry

Calibrated Device : Pump: ENERPAC P39 J3221K  
Gauge: Enerpac 1000 Bar  
Cylinder: ENERPAC 10 TON RC102 F3021K

Test requested by : **Q Lab**

Request reference number : None

Date of request : 25 Feb 2026

The following terms are used :

Dial Reading :

Gives the value read on the jack scale.

Actual Load :

Gives the value of the applied Load.

The calibration is carried out in accordance with ISO 7500-1  
(Metallic materials - Verification of static uniaxial Testing Machines - Part 1).

The reference standard force transducer used is traceable to the EOS of Egypt  
primary standard.

UNCERTAINTIES IN THE APPLIED LOAD DOES NOT EXCEED 0.002 TON

This report consists of 2 pages.

The calibration was carried out at temperature of 23 Celsius.

**THIS JACK IS DUE FOR CALIBRATION ON : 25 Feb 2027**

The calibration results attached herewith are valid up to: 25 Feb 2027  
only or recalibration is necessary after making any repair or adjustment to the jack.

For the director  
National Calibration Office

Eng. K. M. El-Dorry





## CALIBRATION REPORT FOR HYDRAULIC JACK

Report Number : 24/2026/Force

Date of Calibration : 25 Feb 2026

Calibrated by : Khaled El-Dorry

Calibrated Device : Pump: ENERPAC P39 J3221K  
Gauge: Enerpac 1000 Bar  
Cylinder: ENERPAC 10 TON RC102 F3021K

Calibration Mode : Compression

### CALIBRATION RESULTS

| Dial Reading | Applied Load |
|--------------|--------------|
| bar          | Ton          |
| 100          | 1.46         |
| 200          | 2.80         |
| 300          | 4.16         |
| 400          | 5.51         |
| 500          | 6.76         |
| 600          | 8.07         |

$$P = 74.586 * F - 6.5791$$

$$F = 0.0134 * P + 0.0898$$

Where F = Average Force in Ton

P = Dial Reading in Bar

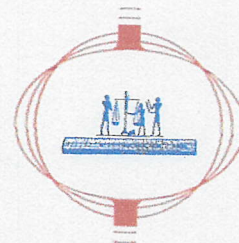
The calibration results attached herewith are valid up to:

25 Feb 2027





# National Calibration Office (NCO)



## CALIBRATION CERTIFICATE

Certificate Number : 54/2026/Dimension  
Calibrated by : Khaled El-Dorry  
Date of Calibration : 25 Feb 2026  
Client Name : Q Lab

### Calibrated Instrument Identification :

Instrument : Sieve  
Manufacturer : Egyptian Industry  
Origin : Egypt  
Serial Number : None

### Calibration Procedure

The calibration was carried out in accordance with Egypt Standard ES 436

| Nominal Aperture | Average Measured | Nominal Aperture | Average Measured |
|------------------|------------------|------------------|------------------|
| 63.00 mm         | 63.00 mm         | 9.50 mm          | 9.50 mm          |
| 50.00 mm         | 50.00 mm         | 4.75 mm          | 4.75 mm          |
| 37.50 mm         | 37.50 mm         | 2.00 mm          | 2.00 mm          |
| 25.00 mm         | 25.00 mm         | 425 µm           | 425 µm           |
| 19.00 mm         | 19.00 mm         | 75 µm            | 75 µm            |
| 12.50 mm         | 12.50 mm         | 75 µm            | 75 µm            |

**THIS SIEVE IS DUE FOR CALIBRATION ON : 25 Feb 2027**

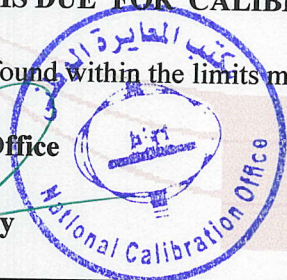
### Conclusion

The error was found within the limits mentioned in the ES Standard

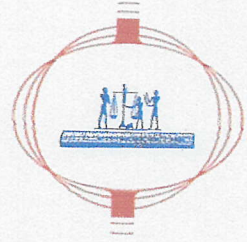
For the director  
National Calibration Office

Date : 25 Feb 2026

Eng. K. M. El-Dorry







**CALIBRATION CERTIFICATE FOR  
ELECTRONIC DIGITAL BALANCE**

Certificate Number : 17/2026/Mass

Calibrated by : Khaled EL-Dorry  
Date of Calibration : 25 Feb 2026

Client Name : Q Lab

**Calibrated Balance Identification :**

Balance : Electronic weighing balance  
Manufacturer : None  
Type : None  
Serial number : None  
Max. Capacity : 15 kg  
Resolution : 1 g

**Calibration Method :**

Comparison method using a set of masses of accuracy class M3 based on OIML R 76, 2015

**Traceability :**

The traceability of measurement results to the SI units is assured by the National Standard maintained at NIS of EGYPT.

The calibration data were taken at an average ambient temperature of 22° C

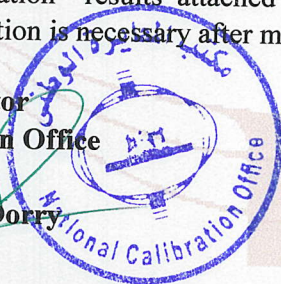
**THIS DIGITAL BALANCE IS DUE FOR CALIBRATION ON : 25 Feb 2027**

The calibration results attached herewith are valid up to the due date only or recalibration is necessary after making any repair or adjustment to the balance.

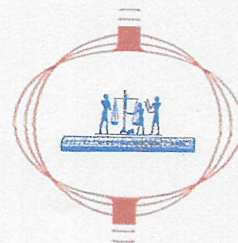
For the director  
National Calibration Office

Eng. K. M. EL-Dorry

Date : 25 Feb 2026







## CALIBRATION CERTIFICATE FOR ELECTRONIC DIGITAL BALANCE

Certificate Number : 17/2026/Mass  
Calibrated by : Khaled EL-Dorry

Date of Calibration : 25 Feb 2026

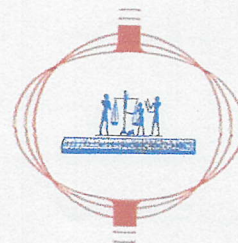
15 kg Electronic Precision Balance

### Results

#### 1- Weighing Performance :

| Load<br>kg | Increasing Load |       | Decreasing Load |       |
|------------|-----------------|-------|-----------------|-------|
|            | Reading         | Error | Reading         | Error |
| 0.1        | 0.100           | 0.000 | 0.100           | 0.000 |
| 0.2        | 0.200           | 0.000 | 0.200           | 0.000 |
| 0.3        | 0.300           | 0.000 | 0.300           | 0.000 |
| 0.4        | 0.400           | 0.000 | 0.400           | 0.000 |
| 0.5        | 0.500           | 0.000 | 0.500           | 0.000 |
| 0.6        | 0.600           | 0.000 | 0.600           | 0.000 |
| 0.7        | 0.700           | 0.000 | 0.700           | 0.000 |
| 0.8        | 0.800           | 0.000 | 0.800           | 0.000 |
| 0.9        | 0.900           | 0.000 | 0.900           | 0.000 |
| 1.0        | 1.000           | 0.000 | 1.000           | 0.000 |
| 1.2        | 1.200           | 0.000 | 1.200           | 0.000 |
| 1.4        | 1.400           | 0.000 | 1.400           | 0.000 |
| 1.6        | 1.600           | 0.000 | 1.600           | 0.000 |
| 1.8        | 1.800           | 0.000 | 1.800           | 0.000 |
| 2.0        | 2.000           | 0.000 | 2.000           | 0.000 |
| 2.5        | 2.500           | 0.000 | 2.500           | 0.000 |
| 3.0        | 3.000           | 0.000 | 3.000           | 0.000 |
| 3.5        | 3.500           | 0.000 | 3.500           | 0.000 |
| 4.0        | 4.000           | 0.000 | 4.000           | 0.000 |
| 4.5        | 4.500           | 0.000 | 4.500           | 0.000 |
| 5.0        | 5.000           | 0.000 | 5.000           | 0.000 |
| 6.0        | 6.000           | 0.000 | 6.000           | 0.000 |
| 7.0        | 7.000           | 0.000 | 7.000           | 0.000 |
| 8.0        | 8.000           | 0.000 | 8.000           | 0.000 |
| 9.0        | 9.000           | 0.000 | 9.000           | 0.000 |
| 10.0       | 10.000          | 0.000 | 10.000          | 0.000 |
| 15.0       | 15.000          | 0.000 | ----            | ----  |





## CALIBRATION CERTIFICATE FOR ELECTRONIC DIGITAL BALANCE

Certificate Number : 17/2026/Mass  
Calibrated by : Khaled EL-Dorry

Date of Calibration : 25 Feb 2026

15 kg Electronic Precision Balance

### 2- Repeatability Test :

| Load<br>kg | Reading<br>kg |        |        |        |        |
|------------|---------------|--------|--------|--------|--------|
| 5          | 5.000         | 5.000  | 5.001  | 5.000  | 5.000  |
| 10         | 10.000        | 10.000 | 10.001 | 10.000 | 10.000 |

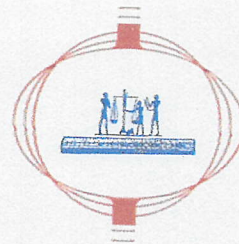
### 3- Eccentricity Test

| Position    | 1      | 2      | 3      | 4      | 5      |
|-------------|--------|--------|--------|--------|--------|
| Load in kg  | 10     |        |        |        |        |
| Reading     | 10.000 | 10.000 | 10.000 | 10.000 | 10.001 |
| Error in kg | 0.000  | 0.000  | 0.000  | 0.000  | -0.001 |

**Conclusion** The error was found within the limits mentioned in the OIML Standard







**CALIBRATION CERTIFICATE FOR  
STATIC UNIAXIAL TESTING MACHINE**

Certificate Number : 27/2026/Force

Calibrated by : Khaled El-Dorry

Date of Calibration : 25 Feb 2026

Client Name : **Q Lab**

**Calibrated Machine Identification :**

Machine : 50 kN CBR TESTER  
Manufacturer : None  
Type : None  
Serial number : None  
Rated Force : 50 kN

Indicator : Proving Ring  
Manufacturer : None  
Type : ELE  
Serial number : None  
No. of Scales : 1  
Scales' Value : 50 kN  
Resolution/Scale : 0.002 mm

Calibration Mode : Compression

The calibration data were taken at an average ambient temperature of 22° C

**THIS TESTING MACHINE IS DUE FOR CALIBRATION ON : 25 Feb 2027**

The calibration results attached herewith are valid up to the due date only or recalibration is necessary after making any repair or adjustment to the machine.

For the director  
National Calibration Office

Eng. K. M. El-Dorry





## CALIBRATION CERTIFICATE FOR STATIC UNIAXIAL TESTING MACHINE

Certificate Number : 27/2026/Force  
Calibrated by : Khaled El-Dorry

Date of Calibration : 25 Feb 2026

50 kN CBR Tester  
Proving Ring , Dial Gauge SN: DLD082

### Calibration Procedure

The calibration was carried out in accordance with ISO 7500/1  
Metallic materials - Verification of static uniaxial testing machines.

Calibrated Range Form 0 to 50 kN

### Force-proving Instrument Used

**Force Transducer** : Compression Force Transducer with electrical deflection measurement.  
**Manufacturer** : Interface  
**Type** : 100kN-G00  
**Serial number(s)** : 3594  
**Rated Force(s)** : 100 kN  
**Calib. Certificate No.** : 95/14/2026  
**Expiration Date** : 1 \ 2027

**Indicator** : Digital Indicator  
**Manufacturer** : HBM  
**Type** : MDV - 2555  
**Serial number** : 9789  
**Resolution** : 0.000005

Relative uncertainty of the force-proving instrument in the measurement range :  $\leq$  0.03 %

### Measurement Results

The measurement results are shown in the tables 1 to 4.

### Tables Overview:

Table 1: True forces indicated by the force-proving instrument with increasing test force series 1, 2 & 3  
Table 2: Relative {repeatability errors ( $b$ ), Equation errors ( $a$ )}.  
Table 3: Relative zero error,  $f_0$   
Table 4: Classification according to Table 2 of the ISO-7500-1:2011





## CALIBRATION CERTIFICATE FOR STATIC UNIAXIAL TESTING MACHINE

Certificate Number : 27/2026/Force  
Calibrated by : Khaled El-Dorry

Date of Calibration : 25 Feb 2026

50 kN CBR Tester  
Proving Ring , Dial Gauge SN: DLD082

**Table 1: True forces indicated by the force-proving instrument with increasing test force series 1, 2 & 3**

| $F_i$<br>Machine Nominal Reading<br>in Division | Series 1<br>0 degree<br>kN | Series 2<br>120 degree<br>kN | Series 3<br>240 degree<br>kN |
|-------------------------------------------------|----------------------------|------------------------------|------------------------------|
| 50                                              | 2.073                      | 2.067                        | 2.067                        |
| 100                                             | 4.100                      | 4.083                        | 4.107                        |
| 150                                             | 6.200                      | 6.153                        | 6.183                        |
| 200                                             | 8.167                      | 8.117                        | 8.133                        |
| 250                                             | 10.167                     | 10.133                       | 10.133                       |
| 300                                             | 12.167                     | 12.163                       | 12.167                       |
| 350                                             | 14.167                     | 14.160                       | 14.167                       |
| 400                                             | 16.233                     | 16.100                       | 16.167                       |
| 450                                             | 18.242                     | 18.149                       | 18.191                       |
| 500                                             | 20.261                     | 20.154                       | 20.203                       |
| 550                                             | 22.281                     | 22.160                       | 22.214                       |
| 600                                             | 24.300                     | 24.165                       | 24.225                       |
| 650                                             | 26.319                     | 26.170                       | 26.237                       |
| 700                                             | 28.339                     | 28.175                       | 28.248                       |
| 750                                             | 30.358                     | 30.180                       | 30.259                       |
| 800                                             | 32.378                     | 32.185                       | 32.270                       |
| 850                                             | 34.397                     | 34.190                       | 34.282                       |
| 900                                             | 36.417                     | 36.195                       | 36.293                       |
| 950                                             | 38.436                     | 38.200                       | 38.304                       |
| 1,000                                           | 40.456                     | 40.206                       | 40.316                       |
| 1,050                                           | 42.475                     | 42.211                       | 42.327                       |
| 1,100                                           | 44.494                     | 44.216                       | 44.338                       |
| 1,150                                           | 46.514                     | 46.221                       | 46.350                       |
| 1,200                                           | 48.533                     | 48.226                       | 48.361                       |

**Note:**  $F_i$  is the machine Nominal reading indicated by the machine dial gauge in division





## CALIBRATION CERTIFICATE FOR STATIC UNIAXIAL TESTING MACHINE

Certificate Number : 27/2026/Force  
Calibrated by : Khaled El-Dorry

Date of Calibration : 25 Feb 2026

50 kN CBR Tester

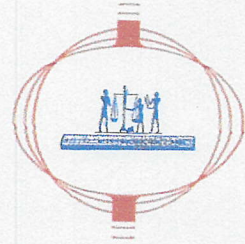
Proving Ring , Dial Gauge SN: DLD082

Table 2: Relative repeatability errors ( $b$ ), Average forces of series 1,2&3 ( $F$ ).

| $F_i$<br>in Division | $b$<br>% | $F$<br>in kN |
|----------------------|----------|--------------|
| 50                   | 0.32     | 2.069        |
| 100                  | 0.57     | 4.097        |
| 150                  | 0.76     | 6.179        |
| 200                  | 0.61     | 8.139        |
| 250                  | 0.33     | 10.144       |
| 300                  | 0.03     | 12.166       |
| 350                  | 0.05     | 14.164       |
| 400                  | 0.82     | 16.167       |
| 450                  | 0.51     | 18.194       |
| 500                  | 0.53     | 20.206       |
| 550                  | 0.54     | 22.218       |
| 600                  | 0.56     | 24.230       |
| 650                  | 0.57     | 26.242       |
| 700                  | 0.58     | 28.254       |
| 750                  | 0.59     | 30.266       |
| 800                  | 0.60     | 32.278       |
| 850                  | 0.60     | 34.290       |
| 900                  | 0.61     | 36.302       |
| 950                  | 0.62     | 38.314       |
| 1000                 | 0.62     | 40.326       |
| 1050                 | 0.62     | 42.338       |
| 1100                 | 0.63     | 44.350       |
| 1150                 | 0.63     | 46.361       |
| 1200                 | 0.64     | 48.373       |







## CALIBRATION CERTIFICATE FOR STATIC UNIAXIAL TESTING MACHINE

Certificate Number : 27/2026/Force  
Calibrated by : Khaled El-Dorry

Date of Calibration : 25 Feb 2026

50 kN CBR Tester  
Proving Ring , Dial Gauge SN: DLD082

**Table 3: Relative zero error,  $f_o$  , After measurement series**

| Measurement series  | Series 1 | Series 2   | Series 3   |
|---------------------|----------|------------|------------|
| Mounting position   | 0 degree | 120 degree | 240 degree |
| Relative zero error | 0.008    | 0.015      | 0.008      |

**Table 4: Classification of the machine scale according to the calibration results.**

| Force                     | Class |
|---------------------------|-------|
| From 0 to 1200 Division   | 1     |
| From 150 to 1200 Division | 1     |
| From 300 to 1200 Division | 1     |
| From 450 to 1200 Division | 1     |
| From 600 to 1200 Division | 1     |

### Conclusion :

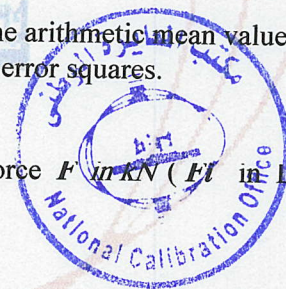
The error was found within the limits mentioned in the ISO-7500-1

### Coefficients of interpolation curve

The following first order polynomial was calculated from the arithmetic mean values of force applications at series 1, 2 & 3 according to the method of least error squares.

$$F = 0.040345 \times F_i$$

Where  $F_i$  = Machine nominal reading (Response) at applied force  $F$  in kN (  $F_i$  in Division )





## CALIBRATION CERTIFICATE

Certificate Number : 36/2026/Dimension

Calibrated by : **Khaled El-Dorry**

Date of Calibration : 25 Feb 2026

Client Name : **Q Lab**

Date of request : 25 Feb 2026

### Calibrated Instrument Identification :

Instrument : Dial Gauge Indicator  
Manufacturer : None  
Origin : ACCUD  
Serial number : 602114  
Measuring range : 0 - 50 mm  
Resolution/Scale : 0.01 mm

### Calibration Procedure

The calibration was carried out in accordance with ISO 463-06

### Traceability

Equipment used in this calibration is traceable to the length standard of the National Institute for Standards (NIS) of Egypt

### Used Instrument

Manufacturer : Mitutoyo  
Type : UDT-2 Dial Gage Tester  
Serial number(s) : 120367  
Accuracy :  $\pm 1 \mu\text{m}$

**THIS TESTING INSTRUMENT IS DUE FOR CALIBRATION ON : 25 Feb 2027**

**Total Error = + 05  $\mu\text{m}$**

**Total Permissible Error =  $\pm 30 \mu\text{m}$**

**Conclusion** The error was found within the limits mentioned in the ISO Standard

For the director  
National Calibration Office

Eng. K. M. El-Dorry

Date : 25 Feb 2026



## CALIBRATION CERTIFICATE

Certificate Number : 35/2026/Dimension

Calibrated by : Khaled El-Dorry

Date of Calibration : 25 Feb 2026

Client Name : Q Lab

Date of request : 25 Feb 2026

### Calibrated Instrument Identification :

Instrument : Dial Gauge Indicator  
Manufacturer : None  
Origin : ACCUD  
Serial number : 110029  
Measuring range : 0 - 50 mm  
Resolution/Scale : 0.01 mm

### Calibration Procedure

The calibration was carried out in accordance with ISO 463-06

### Traceability

Equipment used in this calibration is traceable to the length standard of the National Institute for Standards (NIS) of Egypt

### Used Instrument

Manufacturer : Mitutoyo  
Type : UDT-2 Dial Gage Tester  
Serial number(s) : 120367  
Accuracy :  $\pm 1 \mu\text{m}$

**THIS TESTING INSTRUMENT IS DUE FOR CALIBRATION ON : 25 Feb 2027**

**Total Error = + 05  $\mu\text{m}$**

**Total Permissible Error =  $\pm 30 \mu\text{m}$**

**Conclusion** The error was found within the limits mentioned in the ISO Standard

For the director  
National Calibration Office

Eng. K. M. El-Dorry

Date : 25 Feb 2026



## CALIBRATION CERTIFICATE

Certificate Number : 34/2026/Dimension

Calibrated by : **Khaled El-Dorry**

Date of Calibration : 25 Feb 2026

Client Name : **Q Lab**

Date of request : 25 Feb 2026

### Calibrated Instrument Identification :

Instrument : Dial Gauge Indicator  
Manufacturer : None  
Origin : ACCUD  
Serial number : 9B06398  
Measuring range : 0 - 50 mm  
Resolution/Scale : 0.01 mm

### Calibration Procedure

The calibration was carried out in accordance with ISO 463-06

### Traceability

Equipment used in this calibration is traceable to the length standard of the National Institute for Standards (NIS) of Egypt

### Used Instrument

Manufacturer : Mitutoyo  
Type : UDT-2 Dial Gage Tester  
Serial number(s) : 120367  
Accuracy :  $\pm 1 \mu\text{m}$

**THIS TESTING INSTRUMENT IS DUE FOR CALIBRATION ON : 25 Feb 2027**

**Total Error = - 05  $\mu\text{m}$**

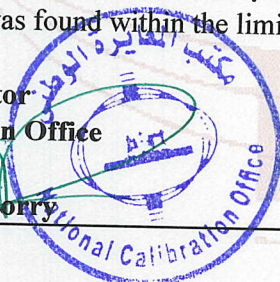
**Total Permissible Error =  $\pm 30 \mu\text{m}$**

**Conclusion** The error was found within the limits mentioned in the ISO Standard

For the director  
National Calibration Office

Eng. K. M. El-Dorry

Date : 25 Feb 2026





## ACCEPTANCE TEST FOR A SLUMP MOULD

Certificate Number : 37/2026/Dimension  
Calibrated by : Khaled El-Dorry  
Date of Calibration : 25 Feb 2026  
Client Name : Q Lab

### Tested Object

Object : Mould for Slump Test

### Test Procedure

The test was carried out in accordance with ASTM : C 143/C 143/M - 00  
"Standard Test Method for Slump of Hydraulic-Cement Concrete"

### Mold Dimensions

|               | Measured Dimension<br>in mm | Standard Dimension<br>in mm |
|---------------|-----------------------------|-----------------------------|
| Base Diameter | 199.5                       | 200                         |
| Top Diameter  | 9.98                        | 100                         |
| Height        | 299.5                       | 300                         |

### Tolerance

Individual diameters and heights shall be within  $\pm 3$  mm of the Standard Dimensions

### Tamping Rod

|              |       |                   |
|--------------|-------|-------------------|
| Rod Diameter | 16.1  | 16 $\pm 2$        |
| Rod Length   | 600.0 | approximately 600 |

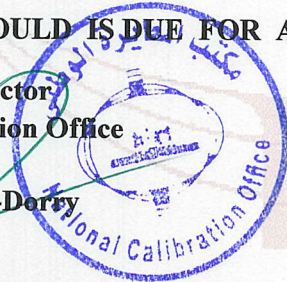
### Conclusion :

The error in dimensions was found within the limits mentioned in the ASTM Standard

**THIS MOULD IS DUE FOR ACCEPTANCE TEST ON 25 Feb 2027**

For the director  
National Calibration Office

Eng. K. M. El-Dorry





## ACCEPTANCE TEST FOR A COMPACTION MOULD

Certificate Number : 38/2026/Dimension  
Calibrated by : Khaled El-Dorry  
Date of Calibration : 25 Feb 2026  
Client Name : Q Lab

### Tested Object

Object : 4 inch Mould for Laboratory Compaction Test

### Test Procedure

The test was carried out in accordance with ASTM : D 1557 - 00  
"Standard Test Method for Laboratory Compaction Characteristics of Soil  
Using Modified Effort (56,000 ft-lb/ft<sup>3</sup> (2,700 kN-m/m<sup>3</sup>))"

### Mold Results

|                         | Measured Dimension<br>in mm | Standard Dimension<br>in mm |
|-------------------------|-----------------------------|-----------------------------|
| Average Inside Diameter | 101.5                       | 101.6 ± 0.4 mm              |
| Height                  | 116.5                       | 116.4 ± 0.5 mm              |
| Volume                  | 949.4 cm <sup>3</sup>       | 944 ± 14 cm <sup>3</sup>    |

### Rammer Results

Manually operated rammer

Rammer Mass = 2.48 kg (Standard mass = 2.49 ± 0.01 kg)

### Conclusion :

The error in dimensions was found within the limits mentioned in the ASTM Standard

**THIS MOULD IS DUE FOR ACCEPTANCE TEST ON : 25 Feb 2027**

For the director  
National Calibration Office

Eng. K. M. EL-Dorry

Date : 25 Feb 2026



## ACCEPTANCE TEST FOR A COMPACTION MOULD

Certificate Number : 39/2026/Dimension  
Calibrated by : Khaled El-Dorry  
Date of Calibration : 25 Feb 2026  
Client Name : Q Lab

### Tested Object

Object : 6 inch Mold for Laboratory Compaction Test

### Test Procedure

The test was carried out in accordance with ASTM : D 1557 - 00  
"Standard Test Method for Laboratory Compaction Characteristics of Soil  
Using Modified Effort (56,000 ft-lb/ft<sup>3</sup> (2,700 kN-m/m<sup>3</sup>))"

### Mold Results

|                         | Measured Dimension<br>in mm | Standard Dimension<br>in mm |
|-------------------------|-----------------------------|-----------------------------|
| Average Inside Diameter | 152.4                       | 152.4 ± 0.7 mm              |
| Height                  | 116.4                       | 116.4 ± 0.5 mm              |
| Volume                  | 2124 cm <sup>3</sup>        | 2124 ± 25 cm <sup>3</sup>   |

### Rammer Results

Manually operated rammer  
Rammer Mass = 4.537 kg (Standard mass = 4.54 ± 0.01 kg)

### Conclusion :

The error in dimensions was found within the limits mentioned in the ASTM Standard

**THIS MOULD IS DUE FOR ACCEPTANCE TEST ON : 25 Feb 2027**

For the director  
National Calibration Office

Eng. K. M. El-Dorry





## CALIBRATION CERTIFICATE FOR A DIGITAL THERMOMETER

Certificate Number : 31/2026/Heat  
Calibrated by : Khaled El-Dorry  
Date of Calibration : 25 Feb 2026  
Client Name : Q Lab

### Calibrated Instrument Identification :

Instrument : Digital Probe Thermometer  
Manufacturer : china  
Model : TP101  
S. No. : None  
Measuring range : - 50 - 300 C°  
Resolution/Scale : 0.1 C°

### Calibration Procedure

The calibration was carried out in accordance with Egypt Standard ES 297

### Traceability

Equipment used in this calibration is traceable to the standard of the National Institute for Standards (NIS) of Egypt

### Results

| Indicated<br>C° | Actual<br>C° |
|-----------------|--------------|
| 0               | 0            |
| 50              | 49.9         |
| 100             | 99.9         |
| 150             | 149.9        |

**THIS THERMOMETER IS DUE FOR CALIBRATION ON : 25 Feb 2027**

**Conclusion** The error was found within the limits mentioned in the ES Standard

For the director  
National Calibration Office

Eng. K. M. EL-Dorry

Date : 25 Feb 2026





## CALIBRATION CERTIFICATE

Certificate Number : 179/2026/force  
Calibrated by : Khaled El-Dorry  
Date of Calibration : 11 July 2026  
Client Name : Q Lab

### Calibrated Instrument Identification :

Instrument : Ultrasonic  
Type : Controls  
Model : 58-E4800  
Serial number : 13008211

### Calibration Procedure

The calibration was carried out in accordance to EN 12504-2

### Traceability

Equipment used in this calibration is traceable to the length standard of the National Institute for Standards (NIS) of Egypt

### Used Instrument

Manufacturer : Controls  
Type : Transit time  
Serial number(s) : None  
Accuracy :  $\mu\text{sec}$

**THIS ULTRASONIC IS DUE FOR CALIBRATION ON : 11 July 2027**

**Actual Reading = 56.7  $\mu\text{sec}$**

**Acceptable Rang = 56.7  $\mu\text{sec}$**

**Conclusion** The error was found within the limits mentioned in the EN Standard

For the director  
National Calibration Office

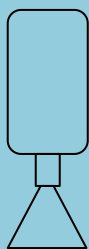
Eng. K. M. EL-Dorry

Date : 11 July 2026

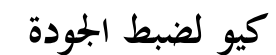


✓ISO 9001 Certified

# FORMS







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[illegible]



كيو لضبط الجودة

Tel.: 01025808673

Website: www qlabeg.com

e-mail: info@qlabeg.com

## CONCRETE QUALITY CONTROL - DAILY REPORT

Project  
Client  
Pouring Date  
Concrete Class  
Batch Plant  
Location  
Level  
Pouring No  
Sampled by

| Serial No. | Truck No. | Time of Mix | Slump mm | Temp. °C | No. Of Cubes | Cube Ser. No | Remarks |
|------------|-----------|-------------|----------|----------|--------------|--------------|---------|
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
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|            |           |             |          |          |              |              |         |
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|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |
|            |           |             |          |          |              |              |         |

For Q Lab :

Signature:

Stamp:

Date of Report :

Form Number: QLab/Co/01/ver.01





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**COMPRESSIVE STRENGTH OF  
TEST CUBE CONCRETE SPECIMENS  
BS 1881 : PART 4 : 1983**

|                                                                                                                     |  |  |
|---------------------------------------------------------------------------------------------------------------------|--|--|
| Project<br>Client<br>Pouring Date<br>Concrete Class<br>Batch Plant<br>Location<br>Level<br>Pouring No<br>Sampled by |  |  |
|---------------------------------------------------------------------------------------------------------------------|--|--|

| Cube Ser. No. | SSD Unit Weight (gm/cm <sup>3</sup> ) | Date of Testing | Age | Area Loading (cm <sup>2</sup> ) | Crushing Load (Kg) | Compressive Strength (Kg/cm <sup>2</sup> ) | Remarks |
|---------------|---------------------------------------|-----------------|-----|---------------------------------|--------------------|--------------------------------------------|---------|
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |
|               |                                       |                 |     |                                 |                    |                                            |         |

For Q Lab :

Signature:

Stamp:

Date of Report :

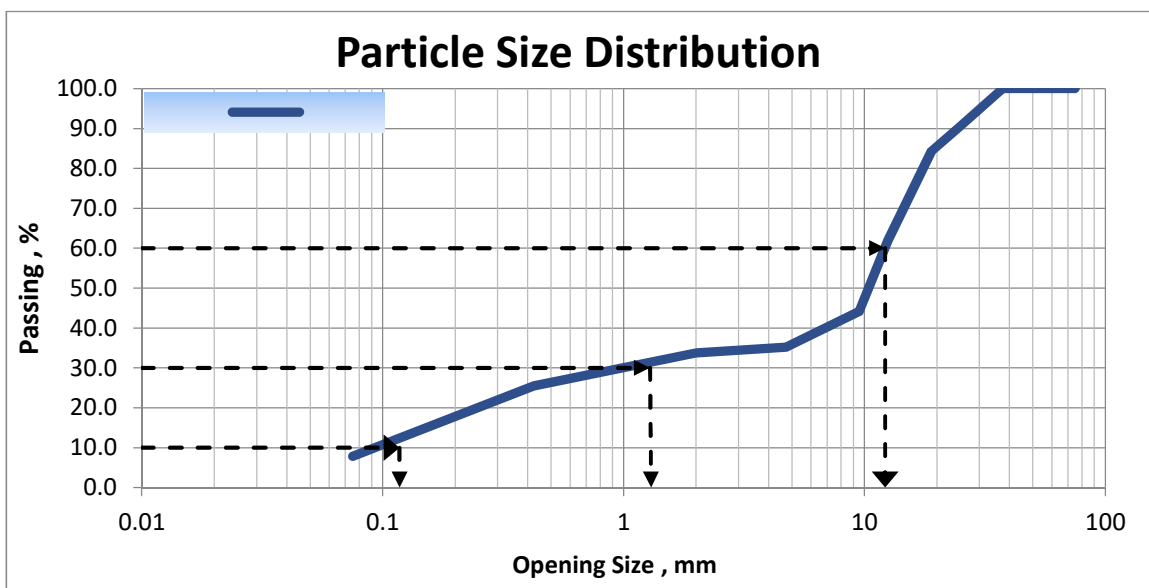
Form Number: QLab/Co/02/ver.01

## Particle-Size Distribution of Soils Using Sieve Analysis - ASTM D6913

|                    |  |  |
|--------------------|--|--|
| Project            |  |  |
| Client             |  |  |
| Sampling Date      |  |  |
| Sample Description |  |  |
| Source             |  |  |
| Location           |  |  |
| Level              |  |  |
| Sample No          |  |  |
| Sampled by         |  |  |



| Sieve   | Opening (mm) | % Retained | % Passing |
|---------|--------------|------------|-----------|
| 3 in    | 75           | 0.0        | 100.0     |
| 2 in.   | 50           | 0.0        | 100.0     |
| 1.5 in. | 37.5         | 0.0        | 100.0     |
| 1 in.   | 25           | 9.4        | 90.6      |
| 3/4 in. | 19           | 15.7       | 84.3      |
| 1/2 in. | 12.5         | 38.1       | 61.9      |
| 3/8 in. | 9.5          | 55.9       | 44.1      |
| No.4    | 4.75         | 64.8       | 35.2      |
| No.10   | 2            | 66.2       | 33.8      |
| No.40   | 0.425        | 74.5       | 25.5      |
| No.200  | 0.075        | 92.1       | 7.9       |



For QLab :

Signature:

Date of Report :

Form Number:

QLab/Soil/01/ver.01



## Liquid Limit, Plastic Limit, and Plasticity Index of Soils - ASTM D4318

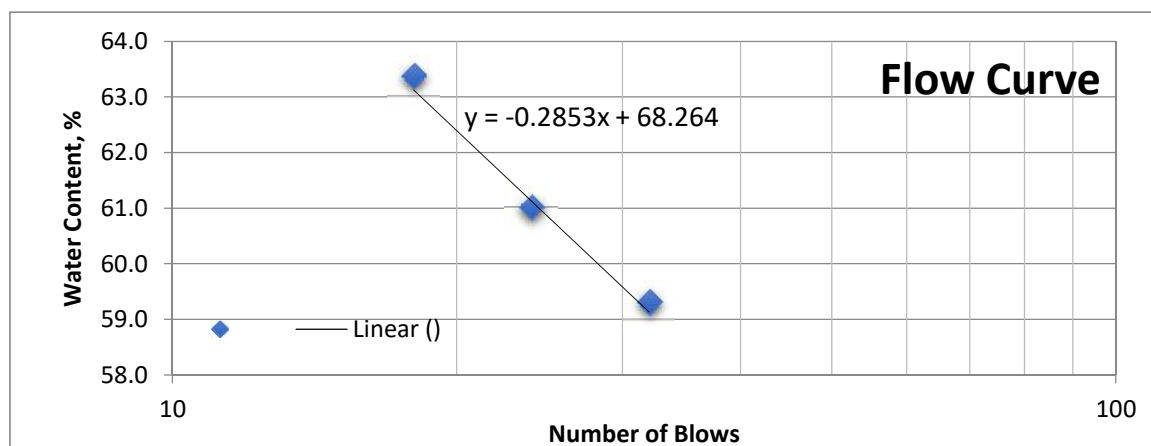
|                                                                                                                    |  |                         |                                                                                     |
|--------------------------------------------------------------------------------------------------------------------|--|-------------------------|-------------------------------------------------------------------------------------|
| Project<br>Client<br>Sampling Date<br>Sample Description<br>Source<br>Location<br>Level<br>Sample No<br>Sampled by |  | Sample fraction: No. 40 |  |
|--------------------------------------------------------------------------------------------------------------------|--|-------------------------|-------------------------------------------------------------------------------------|

### Plastic Limit :

| Container No.                           | QL-PL/01 | QL-PL/02 | QL-PL/03 | Average     |
|-----------------------------------------|----------|----------|----------|-------------|
| Mass Moist Soil + Container , $M_1$ (g) | 24.44    | 23.75    | 25.01    |             |
| Mass Dry Soil + Container , $M_2$ (g)   | 22.96    | 22.13    | 23.50    |             |
| Mass of Container , $M_3$ (g)           | 16.76    | 15.32    | 16.20    |             |
| Water Content, w. (%)                   | 23.9     | 23.8     | 20.7     | <b>22.8</b> |

### Liquid Limit :

| Container No.                           | QL-LL/01 | QL-LL/02 | QL-LL/03 | LL          |
|-----------------------------------------|----------|----------|----------|-------------|
| Mass Moist Soil + Container , $M_1$ (g) | 35.24    | 37.79    | 35.88    |             |
| Mass Dry Soil + Container , $M_2$ (g)   | 28.52    | 30.50    | 28.46    |             |
| Mass of Container , $M_3$ (g)           | 17.19    | 18.55    | 16.75    |             |
| Water Content, w. (%)                   | 59.3     | 61.0     | 63.4     | <b>61.1</b> |
| Number of Blows, N                      | 32       | 24       | 18       | 25.0        |



Plasticity Index = L.L - P.L = **38.4** %

For QLab :

Signature:

Date of Report :

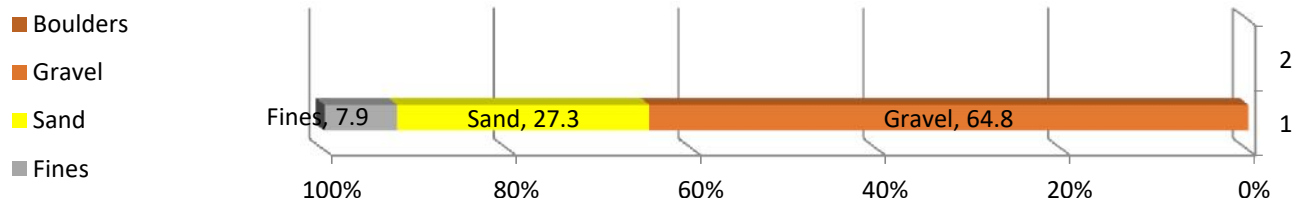
Form Number: QLab/Soil/02/ver.01

## Unified Soil Classification - ASTM D2487

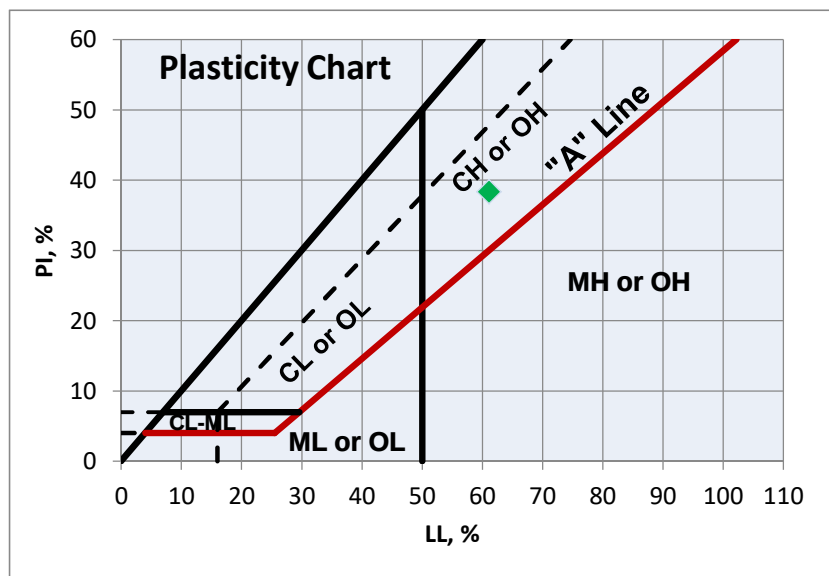
|                    |  |  |
|--------------------|--|--|
| Project            |  |  |
| Client             |  |  |
| Sampling Date      |  |  |
| Sample Description |  |  |
| Source             |  |  |
| Location           |  |  |
| Level              |  |  |
| Sample No          |  |  |
| Sampled by         |  |  |

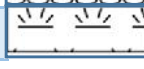
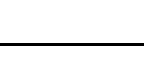


| Soil Analysis | Boulders | Gravel | Sand | Fines |
|---------------|----------|--------|------|-------|
|               | 0.0      | 64.8   | 27.3 | 7.9   |



LL= 61.1 Cu= 103.9  
PI= 38.4 Cc= 11.0



| Symbol | Description          | Legend                                                                                |
|--------|----------------------|---------------------------------------------------------------------------------------|
| GW     | Well-Graded Gravel   |  |
| >GP    | Poorly-Graded Gravel |  |
| GM     | Silty Gravel         |  |
| >GC    | Clayey Gravel        |  |
| SW     | Well-Graded Sand     |  |
| SP     | Poorly-Graded Sand   |  |
| SM     | Silty Sand           |  |
| SC     | Clayey Sand          |  |
| CL     | Lean Clay            |  |
| ML     | Silt                 |  |
| OL     | Organic Clay or Silt |  |
| CH     | Fat Clay             |  |
| MH     | Elastic Silt         |  |
| OH     | Organic Clay or Silt |  |
| PT     | Peat                 |  |

Soil Classification According to ASTM D2487:

Group: **GP-GC**

Description: **Poorly graded gravel with clay and sand**

For QLab :

Signature:

Date of Report :

Form Number: QLab/Soil/03/ver.01



## Chemical Analysis for Soil Sample - ECP 202

|                                                                                                                    |  |                                                                                     |
|--------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|
| Project<br>Client<br>Sampling Date<br>Sample Description<br>Source<br>Location<br>Level<br>Sample No<br>Sampled by |  |  |
|--------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|

| Element                                    | Result | ECP Limit |
|--------------------------------------------|--------|-----------|
| Chlorides ( $\text{Cl}^-$ ), Water Soluble | 0.039  | ---       |
| Chlorides ( $\text{Cl}^-$ ), Acid Soluble  | 0.062  | ---       |
| Chlorides ( $\text{SO}_3$ ), Water Soluble | 0.372  | ---       |
| Chlorides ( $\text{SO}_3$ ), Acid Soluble  | 0.372  | 0.5       |
| PH                                         | 6.9    | ---       |

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QLab/Soil/04/ver.01

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## Free Swelling for Soil Sample - ECP 202

|                                                                                                                    |  |                                                                                     |
|--------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|
| Project<br>Client<br>Sampling Date<br>Sample Description<br>Source<br>Location<br>Level<br>Sample No<br>Sampled by |  |  |
|--------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|

| Test              | Result | ECP Limit |
|-------------------|--------|-----------|
| Free Swelling (%) | 12.0   | 50% Max.  |

For QLab :

Date of Report :

Form Number:

QLab/Soil/05/ver.01

Signature:





Date:

Project:

Contractor:

## PLATE LOADING TEST / STRAIN MODULUS (EV1&EV2) DIN 18134

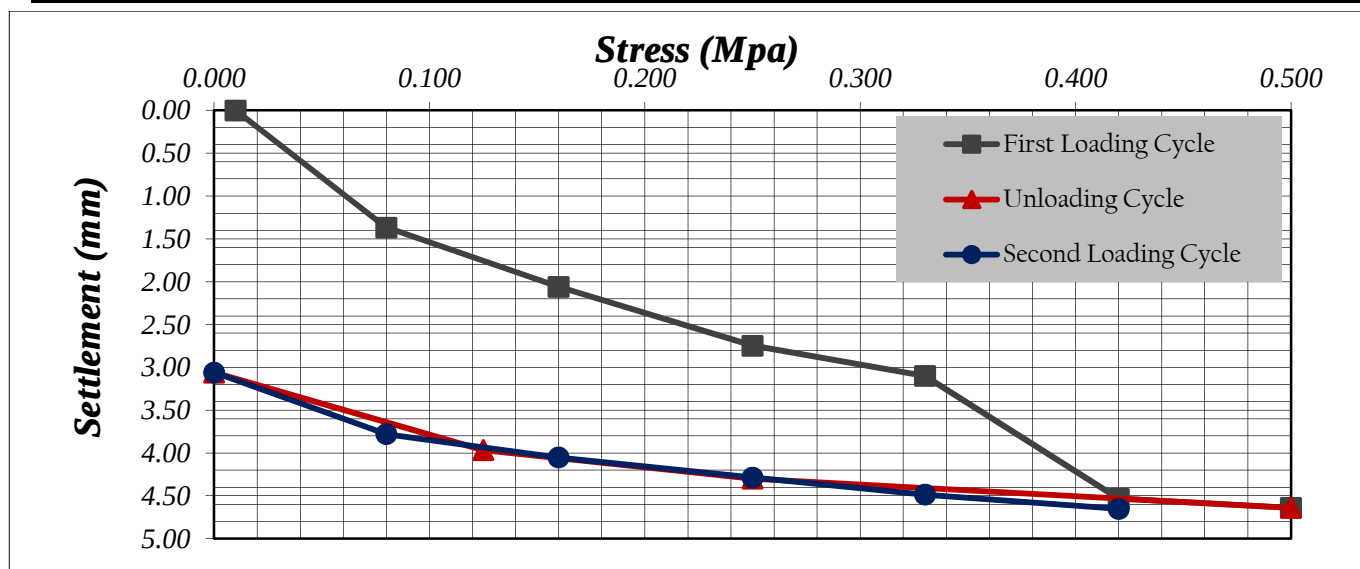
Location:

Level:

Test Date:

| Strain Modulus |      |     |
|----------------|------|-----|
| Ev1            | 27.7 | Mpa |
| Ev2            | 79.3 | Mpa |
| Ev2 / Ev1      | 2.9  |     |

| Enerpack Reading, bar | Applied Load, kN | Stress, Mpa | Gauge No. (1) | Gauge No. (2) | Gauge No. (3) | S1, mm | S2, mm | S3, mm | Average Settlement, mm |
|-----------------------|------------------|-------------|---------------|---------------|---------------|--------|--------|--------|------------------------|
| 5                     | 0.71             | 0.010       | 4000          | 5000          | 5000          | 0.00   | 0.00   | 0.00   | 0.00                   |
| 35                    | 5.65             | 0.080       | 3820          | 4885          | 4885          | 1.80   | 1.15   | 1.15   | 1.37                   |
| 80                    | 11.31            | 0.160       | 3800          | 4791          | 4791          | 2.00   | 2.09   | 2.09   | 2.06                   |
| 130                   | 17.67            | 0.250       | 3750          | 4713          | 4713          | 2.50   | 2.87   | 2.87   | 2.75                   |
| 170                   | 23.33            | 0.330       | 3720          | 4675          | 4675          | 2.80   | 3.25   | 3.25   | 3.10                   |
| 220                   | 29.69            | 0.420       | 3400          | 4620          | 4620          | 6.00   | 3.80   | 3.80   | 4.53                   |
| 260                   | 35.34            | 0.500       | 3450          | 4579          | 4579          | 5.50   | 4.21   | 4.21   | 4.64                   |
| 130                   | 17.67            | 0.250       | 3500          | 4605          | 4605          | 5.00   | 3.95   | 3.95   | 4.30                   |
| 60                    | 8.84             | 0.125       | 3550          | 4630          | 4630          | 4.50   | 3.70   | 3.70   | 3.97                   |
| 0                     | 0.00             | 0.000       | 3600          | 4741          | 4741          | 4.00   | 2.59   | 2.59   | 3.06                   |
| 35                    | 5.65             | 0.080       | 3510          | 4678          | 4678          | 4.90   | 3.22   | 3.22   | 3.78                   |
| 80                    | 11.31            | 0.160       | 3490          | 4647          | 4647          | 5.10   | 3.53   | 3.53   | 4.05                   |
| 130                   | 17.67            | 0.250       | 3470          | 4622          | 4622          | 5.30   | 3.78   | 3.78   | 4.29                   |
| 170                   | 23.33            | 0.330       | 3450          | 4602          | 4602          | 5.50   | 3.98   | 3.98   | 4.49                   |
| 220                   | 29.69            | 0.420       | 3430          | 4587          | 4587          | 5.70   | 4.13   | 4.13   | 4.65                   |



Engineer :

QLab/Soil/07/ver.01

## Moisture Density Relationship Of Soil ASTM D 1557

|                    |  |                                       |        |
|--------------------|--|---------------------------------------|--------|
| Project            |  | Type of Rammer                        | A      |
| Client             |  | Method Type                           | Manual |
| Sampling Date      |  | As-Received Water Content %           | 3.6    |
| Sample Description |  | Specific gravity of Soil Sample       | NA     |
| Source             |  | Soil Classification According to ASTM | GW-GC  |
| Location           |  | D2487                                 |        |
| Level              |  |                                       |        |
| Sample No          |  |                                       |        |
| Sampled by         |  |                                       |        |



|                                     |       |       |       |       |       |
|-------------------------------------|-------|-------|-------|-------|-------|
| Wet Unit Weight, gm/cm <sup>3</sup> | 1.896 | 1.948 | 2.010 | 1.995 | 1.991 |
| Water Content, %                    | 6.0   | 8.0   | 10.0  | 12.0  | 14.0  |
| Dry Unit Weight, gm/cm <sup>3</sup> | 1.789 | 1.804 | 1.827 | 1.781 | 1.746 |

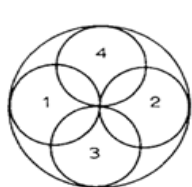
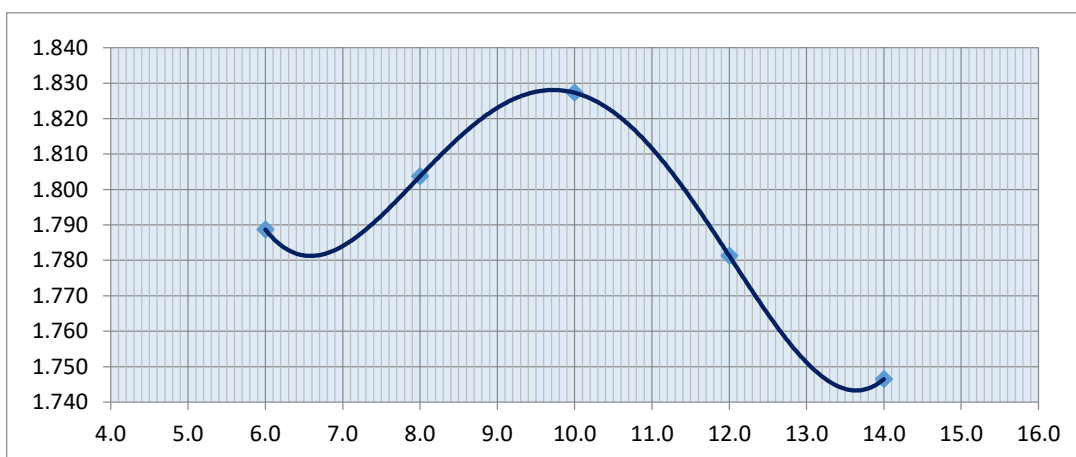


FIG. 3 Rammer Pattern for Compaction in 4-in. (101.6-mm) Mold

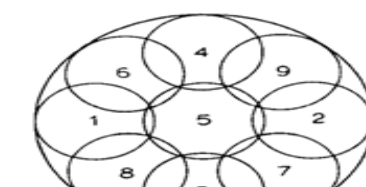
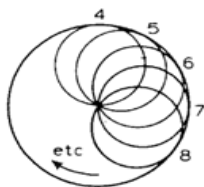


FIG. 4 Rammer Pattern for Compaction in 6-in. (152.4-mm) Mold

|                                                                |       |
|----------------------------------------------------------------|-------|
| Optimum Water Content ( $w_{opt}$ ) %                          | 9.7   |
| Optimum Dry Unit Weight ( $\gamma_{dmax}$ ) gm/cm <sup>3</sup> | 1.828 |

For Qlap :

Date of Report :

Form Number: QLab/Soil/08/ver.01

Signature:



## Field Density Test AASHTO T-191 - ASTM D-1556

|                                                                                                                    |  |                                                                                     |
|--------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|
| Project<br>Client<br>Sampling Date<br>Sample Description<br>Source<br>Location<br>Level<br>Sample No<br>Sampled by |  |  |
|--------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|

|                  | Can Ref.                                  | 1 | 2 | 3 | 4 | 5 |
|------------------|-------------------------------------------|---|---|---|---|---|
| Moisture Content | Weight of Container (g)                   |   |   |   |   |   |
|                  | Weight of Container + Wet Soil (g)        |   |   |   |   |   |
|                  | Weight of Container + Dry Soil (g)        |   |   |   |   |   |
|                  | Weight of Water (g)                       |   |   |   |   |   |
|                  | Weight of Dry Soil (g)                    |   |   |   |   |   |
|                  | In-Place Water Content                    |   |   |   |   |   |
| Field Density    | Weight of Wet Soil + Plastic Bag (g)      |   |   |   |   |   |
|                  | Weight of Plastic Bag (g)                 |   |   |   |   |   |
|                  | Weight of Wet Soil (g)                    |   |   |   |   |   |
|                  | Weight of Used Sand + Bottle + Cone (g)   |   |   |   |   |   |
|                  | Weight of Residual Sand + Bottle + Cc (g) |   |   |   |   |   |
|                  | Weight of Sand to Fill Cone (g)           |   |   |   |   |   |
|                  | Weight of Sand to Fill Hole (g)           |   |   |   |   |   |
|                  | Bulk Density of Sand (g/cc)               |   |   |   |   |   |
|                  | Gross Volume of Hole (cc)                 |   |   |   |   |   |
|                  | In-Place Wet density (g/cc)               |   |   |   |   |   |
|                  | In-Place Dry density (g/cc)               |   |   |   |   |   |
|                  | Max. Dry Density (g/cc)                   |   |   |   |   |   |
|                  | Optimum Moisture Content (%)              |   |   |   |   |   |
|                  | Correction Factor Method                  |   |   |   |   |   |
|                  | Oversize Materials (Retained on           |   |   |   |   |   |
|                  | Corrected Field Dry Density (g/cc)        |   |   |   |   |   |
|                  | Corrected Field Moisture Content (%)      |   |   |   |   |   |
|                  | Degree of Compaction at Field* (%)        |   |   |   |   |   |

ASTM D 4718-Sec 1.3 :ASTM D 4718-Sec 1.3 : Correction practice is applicable to soils and soil-rock mixtures in which up to 40 % of the material is retained on the No. 4 sieve (4.75 mm) and up to 30 % of the material is retained on the 3/4-in. sieve (19.00 mm).

ASTM D 4718-Sec 4.2 : Correction factor were applied as per ASTM D 4718-Sec 4.2 "For Finer Fraction of The Soil Sample"

For QLab :

Date of Report :

Form Number:

QLab/Soil/09/ver.01

Signature: