

PRE – QUALIFICATION DOCUMENT

Upholding quality assurance is our priority



www.ahamgeo.com, email: info@ahamgeo.com

Over 40 years of excellence

COMITTED TO QUALITY

OUR MESSAGE

M/s. Al Hai and Al Mukaddam for Geotechnical Works (L.L.C.) is pleased to submit this pre-

qualification enclosed with our projects and engineering expertise associated with quality

control, site investigation and soil-structure interaction problem solving. We have been

rendering services to clients including property owners, public authorities, developers,

consultants, contractors and specialized sub-contractors.

AHAM has partaken prestigious jobs across the U.A.E as follows: Sheikh Zayed Mosque in Abu

Dhabi, Conference Palace in Abu Dhabi, Abu Dhabi International Airport, Abu Dhabi Fairmont

Hotel, Abu Dhabi International Marine Sports Club Expansion (Off-shore Works), Dubai

International Airport, Dubai Festival City Development (Off-shore Works), Dubai Metro, King

Abdel Aziz Road in Sharjah & Gas Pipe Lines from Musaffah to Jabal Ali. We likewise

accommodated major projects not only within U.A.E. jurisdiction but as well as in State of

Qatar, Kingdom of Saudi Arabia, Bahrain, Pakistan and other regions.

All our equipments are regularly calibrated and are in accordance with international standards

as well as local authorities.

We assure you of our dedicated service at all times with strict adherence to our Quality

Management System in compliance to the requirements stipulated in the standards of ISO

9001:2008 and ISO 17025:2005 as well as the guidelines set by the Local authorities.

Looking ahead to serving you in future projects and we will be grateful for receiving your

comments and suggestions.

Mohammad Mukaddam, Ph.D.

Managing Partner

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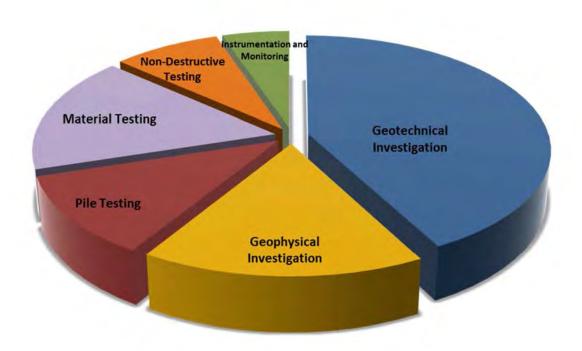
WHO we ARE

Al Hai and Al Mukaddam for Geotechnical Works (AHAM) was established in 1976 in UAE. Noted as one of the pioneers in the field of Civil Engineering specializing in Geotechnical Services, Geophysical Studies, Material Testing, Testing of Piles, Non Destructive Testing and Assessment of Concrete Structures in addition to Quality Control of Construction Sites. AHAM founded by Professor Mohammad Mukaddam in 1976 and currently operates with offices in Abu Dhabi, Dubai & Sharjah.



WHAT we DO

The scope of services offered by AHAM include geotechnical site investigation both onshore and nearshore, geophysical studies, material testing (soil, aggregates, concrete, steel, cement & water), testing of piles, assessment, monitoring & testing of concrete structures and providing third party supervision and quality control assessment on construction sites.



QUALITY POLICY

- It is the policy of Al Hai & Al Mukaddam for Geotechnical Works that in all
 of its activities, we identify and understand the Customer's needs,
 expectations and requirements and provide quality and timely services
 without any compromise.
- We achieve our aim through continuous improvement, leadership, cooperation and full involvement of our personnel.
- Laboratory management will regularly and systematically review the Quality Policy and Objectives for continuing suitability and development needs.
- 4. Laboratory Personnel are committed to continuous improvement through education, training and communication. Personnel are committed to familiarize themselves with quality documentation and implement policies and procedures in their work.
- The Laboratory Management is committed to comply with requirements of ISO 17025, ISO 9001, DM, DAC / DCLD Accreditation rules and regulations and Customer's requirements.

regulations and Customer's requirements.

HEALTH & SAFETY POLICY

Al Hai & Al Mukaddam for Geotechnical Works, abbreviated as AHAM, is committed to safeguard the Health and Safety of its employees and of all those who may be affected by our works. It also recognizes the vital importance of discharging its statutory obligations and placing Health & Safety matters as an over riding priority. Across the AHAM organization the minimum acceptable H&S standards are those required by relevant national and international legalizations.

All staff, workforce and others employed by AHAM and their subcontractors shall comply with this policy, aiming constantly for "Zero Accident Tolerance".

It is meant to be used by our management, supervisory staff workforce, subcontractors and all other interested parties for improving and maintaining the health and safety of our employees and the general public, who might be affected by our work.

We are fully dedicated to continue and improving our Quality Management System and Health and Safety procedures in order to ensure the best and safest work possible. Continous Improvment

Customer Satisfaction

Monitor & Measure

Staff Training



WHY AHAM

Local Resources & Local Knowledge

With our +40 years of remarkable experiences in conducting geotechnical & geophysical investigations we have come across all the possible problems and unexpected situations that have resulted from this region. When it comes to prestigious large projects, we also called to set the geotechnical & geophysical specifications of contracts before the tendering stages. In addition, our extensive large database of investigations in the region gives us great advantages in promptly recognizing reoccurring problematic situations, which can therefore benefit clients in taking the necessary actions in order to save time and costs.

Our Drilling Rigs

Working with a fleet of 33 drilling rigs that are of different origins, we can perform many different types of drilling techniques and complete large soil investigation jobs in the time required by our clients. We are also very proud to mention that our drilling techniques always produce core recovery not less than 95% at all times. On many previous jobs we have been called in because other local contractors were not able to achieve the required core recovery. Most of our machines are of the newest models that are designed to address the most up to date environmental and safety issues.

Our Capabilities

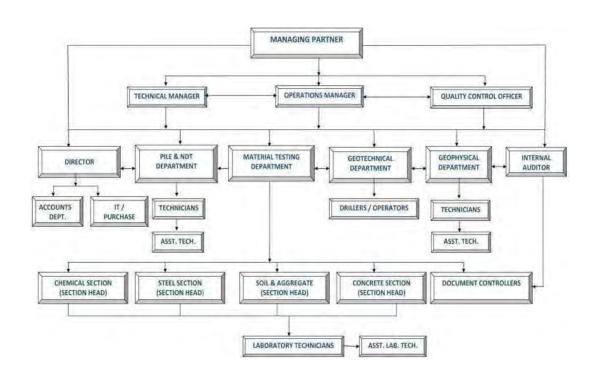
Working through our three offices in the main sectors of the United Arab Emirates (Abu Dhabi, Dubai & Sharjah), we are in an efficient position to move around easily and take on several projects simultaneously.

In order to make the best of utilizing resources in the U.A.E. we operate our own manufacturing workshop where we can fabricate our own drilling tools. This advantage makes us very responsive in analyzing problems that occur on site with equipment breakdowns. We also store excessive amounts of spare equipment that do not need to be imported and therefore save a lot of time and delays during operations.



CORE RECOVERY 100%

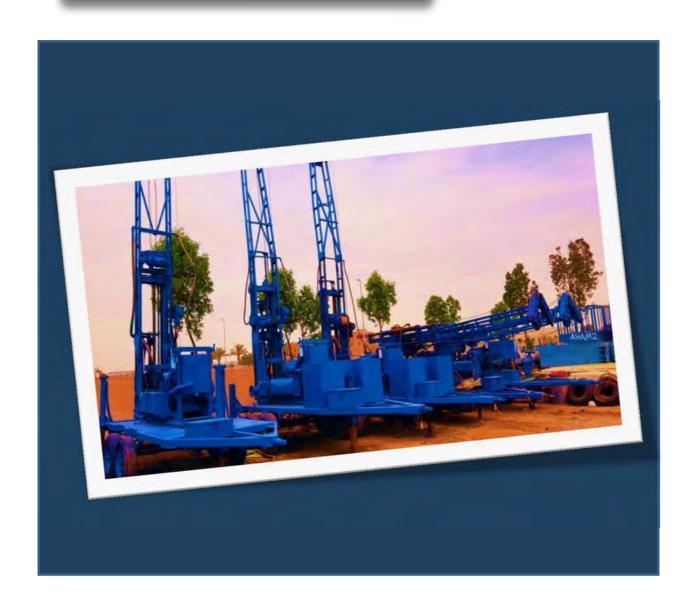
AHAM Organization CHART



GET in TOUCH

Abu Dhabi: Musaffah Industrial Area P.O. Box # 132634 Tel: +971 (2) 5508042 Fax: +971 (2) 5508046 Off. Tel: +971 (4) 8854854 Off. Fax: +971 (4) 8854853 Dubai Investment Park P.O. Box # 60462 Dubai: Lab Tel: +971 (4) 8854771 Lab Fax: +971 (4) 8854772 Sharjah Industrial Area – 17 P. O. Box # 5116 Tel: +971 (6) 5350357 Fax: +971 (6) 5350358 Sharjah:

Geotechnical Investigation



GEOTECHNICAL INVESTIGATION

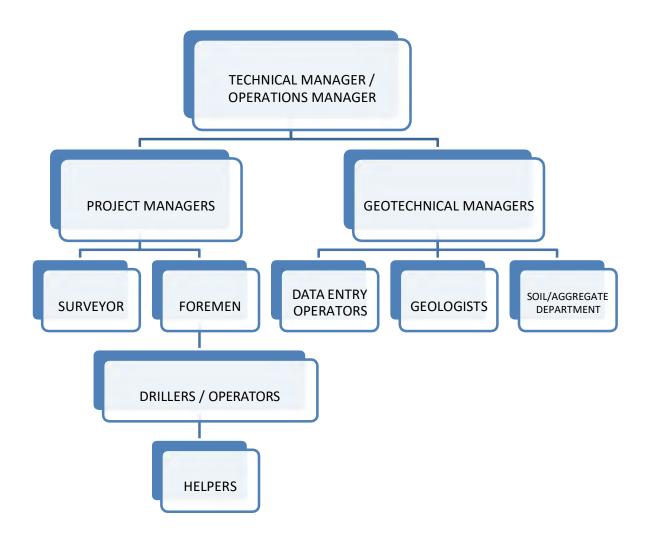
LIST OF ACTIVITIES

- Soil Investigation, Boring and Sampling, SPT, CPT
- PS Suspension Logging Test (Shear Wave Velocity)
- Acoustic Televiewer Borehole Logging Test
- Pressuremeter Testing
- Packer (Lugeon) Test
- Falling Head Permeability
- Constant Head Permeability
- Pumping Test
- Plate Load Test
- Automated Beklin Beam Plate Load Test
- Supervision of Zone Load Test
- Infiltration & Percolation Testing
- Diagraphy Drilling (Real Time Monitoring)
- Soil Resistivity
- In-Situ CBR
- Gas Monitoring
- Thermal Resistivity/Conductivity
- Installation of Piezometers (Water Table Monitoring Wells)
- Environmental Sampling & Testing
- Topographic Survey

SOFTWARES

- gINT (Geotechnical / AGS Software)
- AutoCAD
- GonSite / GO4
- CPeT-IT, Liq-IT and C-Liq
- Geovision

DEPARTMENT CHART – GEOTECHNICAL INVESTIGATION



MACHINERY & EQUIPMENT - GEOTECHNICAL INVESTIGATION

> PERCUSSIONS DRILLING RIGS

The purpose of this method / type of drilling is to advance the borehole and explore the in-situ conditions of the subsurface in superficial deposits, soil and weak rock, conduct in-situ tests like SPT, to record the Ground water table, and collect small disturbed and bulk samples of soil, weak cemented sand and soft rock.

AHAM has a total of 12 percussion drilling rigs supplied by international well known manufactures, which are properly maintained and capable of achieving drilling depths of up to 30 meters.



PILCON WAYFARER

ROTARY DRILLING RIGS

The purpose of this method / type of drilling is to advance the borehole and explore the in-situ conditions of the subsurface in rock and retrieve rock core samples from the sub-strata. Due to its vast experience in the region, AHAM is capable of obtaining almost complete core recovery with the use of state of the art drilling bits and experience based drilling fluid.

AHAM has a total of 20 rotary drilling rigs supplied by international well known manufactures, which are properly maintained and capable of achieving drilling depths exceeding 120 meters. These rigs can also be equipped to undertake percussion drilling.



NORDMEYER DSB 1/3.5



ACKER



MOBILE TRUCK MOUNTED



JACK-UP BARGE



CPT MACHINE

> IN-SITU TEST EQUIPMENT

The following table summarizes the list of major In-Situ test equipment in geotechnical investigation works:-

Table 1. <u>IN-SITU GEOTECHNICAL TEST EQUIPMENT</u>

| S.No. | Description | Model / Make |
|-------|--|------------------------------|
| 1 | High resolution acoustic televiewer | Robertson Geologging - U.K. |
| 2 | Diagraphy drilling | Apageo - France |
| 3 | Static cone penetration test equipment | AP van den Berg - Netherland |
| 4 | P.S.Suspension logging | Robertson Geologging - U.K. |
| 5 | Pressure meter test | OYO - Japan |
| 6 | In-Situ CBR | Local |
| 7 | Packer permeability test | Local |
| 8 | Gas monitoring | Landtec Gem 2000 - U.S.A. |
| 9 | Plate load test (conventional) | Local |
| 10 | Plate load test (Benkelman Beam) | Anix GmbH - Germany |
| 11 | Thermal Resistivity | - |
| 12 | Level Loggers (up to 200m) | Solinst - Canada |



ACOUSTIC TELEVIEWER



GEOBOX EQUIPMENT



PRESSUREMETER TEST EQUIPMENT



SURVEYING EQUIPMENT



THERMAL RESISTIVITY



GAS MONITORING

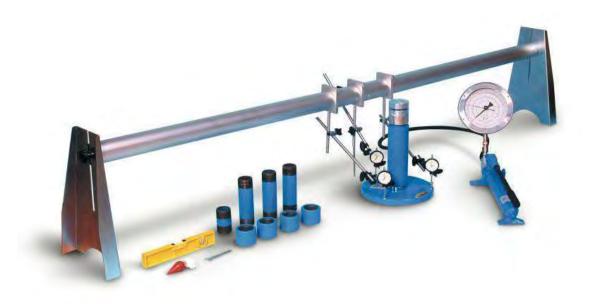


PLATE BEARING TEST

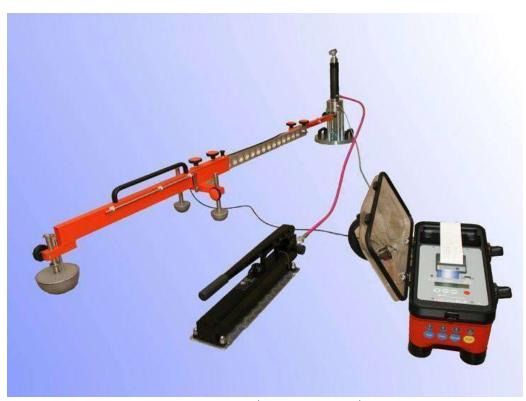
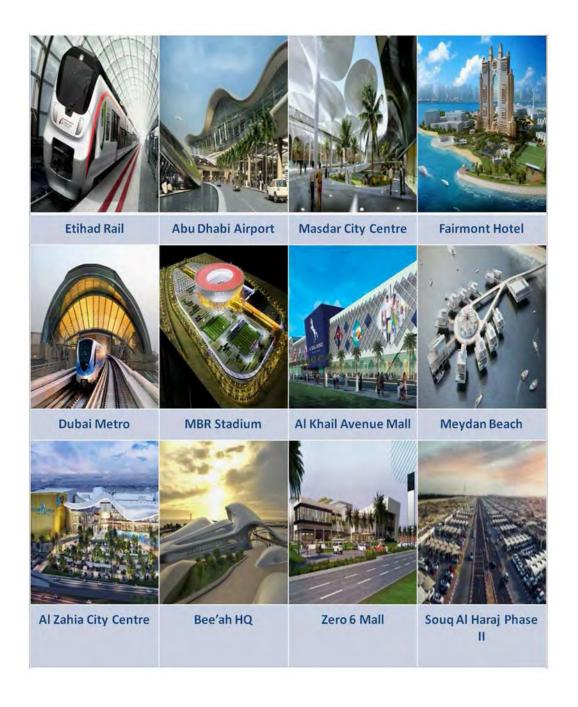


PLATE BEARING TEST (BENKELMAN BEAM)

SELECTED PROJECTS – GEOTECHNICAL INVESTIGATION



Geophysical Investigation



GEOPHYSICAL INVESTIGATION

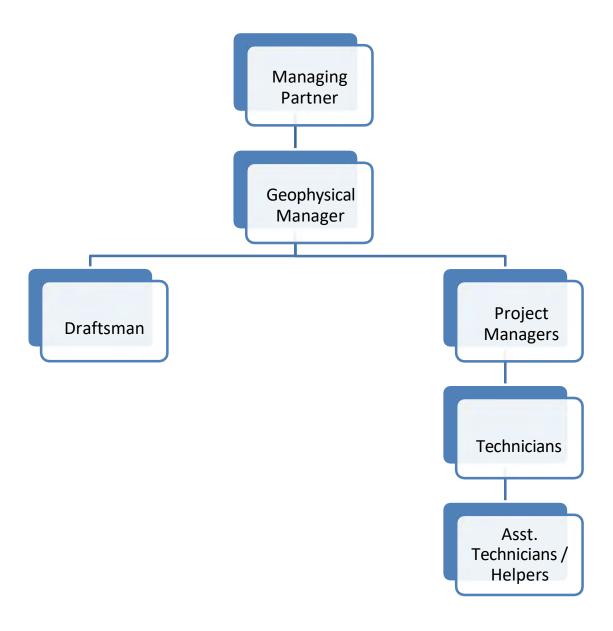
LIST OF ACTIVITIES

- MASW (Multi-channel Analysis of Surface Waves)
- Electrical Resistivity Tomography
- Microgravity Surveys
- Electromagnetism: EM34
- Ground Penetrating Radar
- Radio Detection
- Vertical Electric Sounding
- Cross-hole seismic and electrical (direct and tomography)
- Down-hole seismic
- Refraction seismic
- Reflection seismic
- Parallel seismic
- Magnetic survey
- Gravity exploration (Macro)
- Suspension logging
- Vertical Electrical Tomography (VET)
- Cavity volume estimation-3D
- Resistivity, temperature logging
- Magnetic survey
- High definition 2D and 3D resistivity imaging
- Gravity exploration (Macro)
- Borehole Radar

SOFTWARES

- RES2D/3D (Processing software)
- Electre Pro (Sequence management)
- PROSYS II (Data transfer, process, display)
- COMSYS PRO (control of syscal by PC)
- Surfseis 3 (Processing software)
- RADAN 6
- FGWINAD-7 MAIN-RADAN Radar Data.
- FGWINRAD7-3D MODULE FGWINRAD7-I3 Interactive 3D.

DEPARTMENT CHART – GEOPHYSICAL INVESTIGATION



MACHINERY & EQUIPMENT - GEOPHYSICAL INVESTIGATION



ELECTRIC LOGGING TEST



MICRO GRAVITY SURVEY



ELECTRICAL RESISTIVITY TOMOGRAPHY (ERT)



GROUND PENETRATING RADAR (GPR)

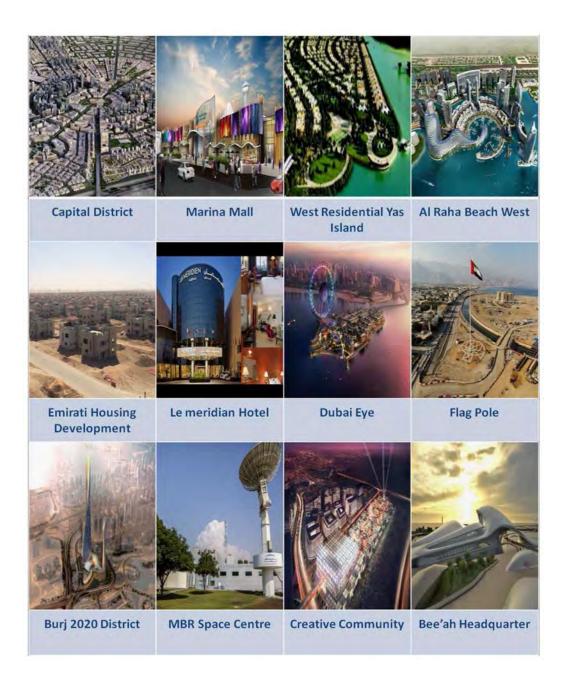


MULTI CHANNEL ANALYSIS OF SURFACE WAVES (MASW)

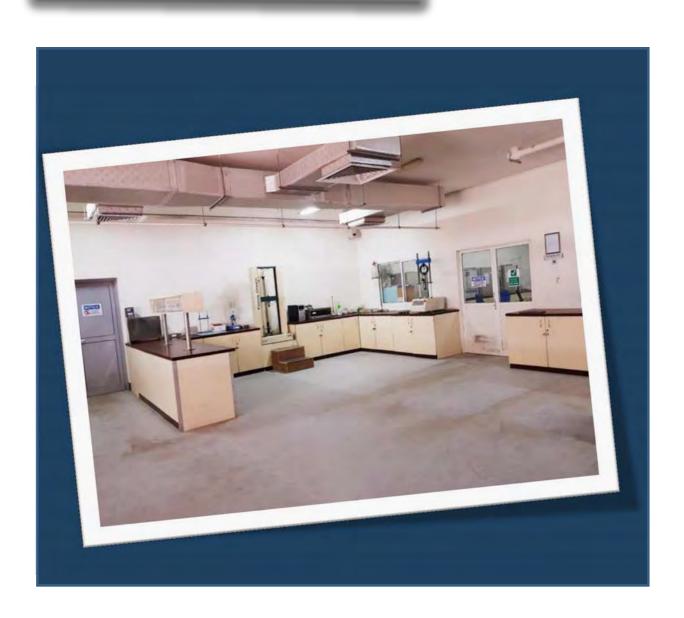


DOWN HOLE TEST

SELECTED PROJECTS – GEOPHYSICAL INVESTIGATION



Construction Material Testing



CONSTRUCTION MATERIAL TESTING

LIST OF ACTIVITIES

| SAMPLING OF SOIL, CONCRETE AND AGGREGATE | |
|--|--|
| Item No. | Test Name |
| 1 | Sampling of Fresh Concrete |
| 2 | Sampling of Soil and Aggregate |
| 3 | Sampling of Aggregate |
| 4 | Preparing and Testing Specimens from Shotcrete Test Panels |

| MECHANICAL AND PHYSICAL TESTS ON SOIL | |
|---------------------------------------|---|
| Item No. | Test Name |
| 1 | Moisture Content |
| 2 | Liquid Limit |
| 3 | Plastic Limit |
| 4 | Plasticity Index |
| 5 | Wet Sieve Analysis |
| 6 | Dry Sieve Analysis |
| 7 | Particle Density |
| 8 | Determination of Linear Shrinkage |
| 9 | Hydrometer Testing for Particle Size Distribution |
| 10 | Dry Density/Moisture Content Relationship |
| 11 | Dry Density/Moisture Content Relationship |
| 12 | In-situ Density Test by Sand Replacement Method |
| 13 | In-situ Density Test by Sand Replacement Method |
| 14 | California Bearing Ratio (Soaked) |
| 15 | California Bearing Ration (Un-soaked) |
| 16 | Determination of Shear Strength by direct Shear (Small Shear Box apparatus) |

| MECHANICAL AND PHYSICAL TESTS ON SOIL | |
|---------------------------------------|----------------------------|
| Item No. | Test Name |
| 17 | Loose bulk density of soil |
| 18 | Bulk density of soil |
| 19 | Maximum density of soil |
| 20 | Minimum Density of soil |
| 21 | Laboratory compaction |

| MECHANICAL AND PHYSICAL TESTS ON CONCRETE AGGREGATE | |
|---|--|
| Item No. | Test Name |
| 1 | Sieve Analysis (Wet) |
| 2 | Sieve Analysis (Dry) |
| 3 | Clay Silt and Dust in Fine and Coarse Aggregate by Decantation Method |
| 4 | Flakiness Index of Coarse Aggregate |
| 5 | Elongation Index of Coarse Aggregate |
| 6 | Aggregate Crushing Value |
| 7 | Sand equivalent Test for Soil and Fine Aggregate |
| 8 | Relative Density and Water Absorption of Coarse Aggregate |
| 9 | Relative Density and Water Absorption of Fine Aggregate |
| 10 | Ten Percent Fines Value of Aggregate (Dry) |
| 11 | Ten Percent Fines Value of Aggregate (Soaked) |
| 12 | Soundness Test of Aggregate by use of Magnesium Sulfate |
| 13 | Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine |
| 14 | Resistance to Degradation of Large Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine |
| 15 | Clay Lumps and Friable Particles in Aggregate |
| 16 | Materials Finer than 75m (no 200) Sieve in Aggregate by Washing |
| 17 | Shell Content in Coarse Aggregate |

| MECHANICAL AND PHYSICAL TESTS ON CONCRETE AGGREGATE | |
|---|---|
| Item No. | Test Name |
| 18 | Specific Gravity & Absorption of Coarse Aggregate |
| 19 | Specific Gravity & Absorption of Fine Aggregate |
| 20 | Mass Loss on Ignition of Light-Weight Aggregate |
| 21 | Bulk Density of Light Weight Aggregate |
| 22 | Bulk Density of Aggregate |
| 23 | Determination of Moisture Content in Aggregate |
| 24 | Unit Weight and Voids in Aggregate |
| 25 | Light Weight pieces in Aggregate |
| 26 | Drying Shrinkage of Aggregate |
| 27 | Compaction Factor Value |
| 28 | Partially Crushed faces of Aggregate |
| 29 | Fully Crushed faces of Aggregate |
| 30 | Particle size distribution (Wet) |
| 31 | Loose Bulk Density |
| 32 | Aggregate Impact Value |
| 33 | Moisture content of aggregate by drying |

| MECHANICAL AND PHYSICAL TESTS ON CONCRETE | |
|---|---|
| Item No. | Test Name |
| 1 | Compressive Strength of Molded Cubes (Site) |
| 2 | Compressive Strength of Molded Cubes (Lab) |
| 3 | Compressive Strength of Concrete Cores |
| 4 | Compressive Strength of Concrete Masonry Blocks (Normal Size) |
| 5 | Compressive Strength of Concrete Masonry Blocks (Large Size) |
| 6 | Dimensions of Concrete Masonry Blocks |
| 7 | Density Determination of Concrete Masonry Blocks |
| 8 | Compressive Strength of Paving Blocks |

| MECHANICAL AND PHYSICAL TESTS ON CONCRETE | | |
|---|---|--|
| Item No. | Test Name | |
| 9 | Dimensions of Paving Blocks | |
| 10 | Water Absorption & Moisture Content of Blocks | |
| 11 | Mix Design | |
| 12 | Density of Concrete | |
| 13 | Water Absorption of Concrete Kerbs, Channels, Edgings & Flags | |
| 14 | Compressive Strength of Hydraulic cement Mortars | |
| 15 | Obtaining & Testing Drilled Cores and Sawed Beams of Concrete | |
| 16 | Compressive Strength of Cylindrical Concrete | |
| 17 | Dimensions of Concrete Kerbs | |
| 18 | Bleeding of Concrete | |
| 19 | Standard Test Method For Time Of Setting of Concrete mixtures by Penetration resistance | |
| 20 | Tensile Splitting Strength of Concrete Cylinders | |
| 21 | Flexural Strength of concrete beam | |
| 22 | Air content of Concrete | |
| 23 | Unit Weight of Concrete | |
| 24 | Temperature of Freshly mixed Concrete | |
| 25 | Determination of Slump | |
| 26 | Compressive Strength of Grout cube | |
| 27 | Fluidity of grout | |
| 28 | Bleeding of grout | |
| 29 | Volume change of grout | |
| 30 | Unit weight of grout | |
| 31 | Compressive strength of Autoclaved Aerated concrete blocks | |
| 32 | Dimensions of Autoclaved Aerated concrete blocks | |
| 33 | Gross density of Autoclaved Aerated concrete blocks | |
| 34 | Compressive strength of grout prism | |
| 35 | Water absorption & density of concrete masonry unit | |

| MECHANICAL AND PHYSICAL TESTS ON CONCRETE | |
|---|--|
| Item No. | Test Name |
| 36 | Flexural strength of grout prism |
| 37 | Post tension grout testing |
| 38 | Drying shrinkage of concrete |
| 39 | Flow test for Self compaction concrete |
| 40 | V Funnel test for Self compaction concrete |
| 41 | L Box test for Self compaction concrete |
| 42 | J Ring test for Self compaction concrete |

| DURABILITY TESTING ON CONCRETE | |
|--------------------------------|---|
| Item No. | Test Name |
| 1 | Water Absorption Test on Concrete Cores |
| 2 | Rapid Chloride Permeability |
| 3 | Water Permeability |
| 4 | Initial Surface Absorption of Concrete. |

| MECHANICAL AND PHYSICAL TESTS ON STEEL | | |
|--|---|--|
| Item No. | Test Name | |
| 1 | Tensile Test on Steel Reinforcement Bars | |
| 2 | Bend Test on Steel Reinforcement Bars | |
| 3 | Re-bend Test on Steel Reinforcement Bars | |
| 4 | Testing of Coupled bars | |
| 5 | Epoxy –Coated Reinforcing Steel Bars | |
| 6 | Steel Strand, Uncoated Seven-Wire for Pre-stressed Concrete | |

| TEST METHODS FOR UTM (UNIVERSAL TESTING MACHINE)(H50kT) | |
|---|-----------|
| Item No. | Test Name |

| TEST METHODS FOR UTM (UNIVERSAL TESTING MACHINE)(H50kT) | | |
|---|---------------------|--|
| Item No. | Test Name | |
| 1 | Flexural Strength | |
| 2 | Tear Resistance | |
| 3 | Tensile Strength | |
| 4 | Puncture Resistance | |

| CHEMICAL TESTS ON SOIL, GROUND WATER, AGGREGATE, CONCRETE, STEEL, CEMENT | | |
|--|---|--|
| Item No. | Test Name | |
| 1 | Water Soluble Sulphate Content of Soil | |
| 2 | Water Soluble Chloride Content of Soil | |
| 3 | Acid soluble Sulphate Content of Soil | |
| 4 | Acid Soluble Chloride Content of Soil | |
| 5 | Organic Matter Content of Soil | |
| 6 | Mass Loss on Ignition of Soil | |
| 7 | Carbonate Content of Soil | |
| 8 | Determination of pH Value of Soil | |
| 9 | Sulphate Content of Ground Water | |
| 10 | Chloride Content of Groundwater | |
| 11 | Total Dissolved Solids of Ground Water | |
| 12 | Determination of pH Value of Ground Water | |
| 13 | Testing of Water for Making Concrete | |
| 14 | Sulfate Content of Hardened Concrete | |
| 15 | Chloride Content of Hardened Concrete | |
| 16 | Cement content of concrete | |
| 17 | Acid soluble sulphate Content of Aggregates | |
| 18 | Acid soluble Chloride Content of Aggregate | |

| | CHEMICAL TESTS ON SOIL, GROUND WATER, AGGREGATE, CONCRETE, STEEL, CEMENT | | |
|----------|--|--|--|
| Item No. | Test Name | | |
| 19 | Determination of Alkali Carbonates & Bicarbonates in Water | | |
| 20 | Organic Impurities in Fine Aggregate | | |
| 21 | Water Soluble Sulfate Content of Aggregate | | |
| 22 | Water Soluble Chloride Salts in Aggregate | | |
| 23 | Acid-Soluble Material in Fine Aggregate | | |
| 24 | Determining the Cement content of freshly mixed Concrete | | |
| 25 | Determining the Water content of freshly mixed Concrete | | |
| 26 | Chemical Analysis of Steel Bars | | |
| 27 | Chemical analysis of Cement | | |
| 28 | Chemical Analysis of Admixtures | | |
| 29 | Potential Alkali-Silica Reactivity of Aggregates | | |
| 30 | Organic Content of Soil by Loss on Ignition | | |
| 31 | Calcium hardness of Water | | |
| 32 | Physical Analysis of Cement | | |
| 33 | Chloride content of Water | | |
| 34 | Biochemical Oxygen Demand (BOD) | | |
| 35 | Total Nitrogen (T-N) | | |
| 36 | Total Phosphorous | | |
| 37 | Total Dissolved Solids (TDS) | | |
| 38 | Ca Content | | |
| 39 | Mg Content | | |
| 40 | Silica Content | | |
| 41 | Fe Content | | |
| 42 | Mn Content | | |
| 43 | Na Content | | |
| 44 | K Content | | |
| 45 | Nitrate Nitrogen (NO3-N) | | |

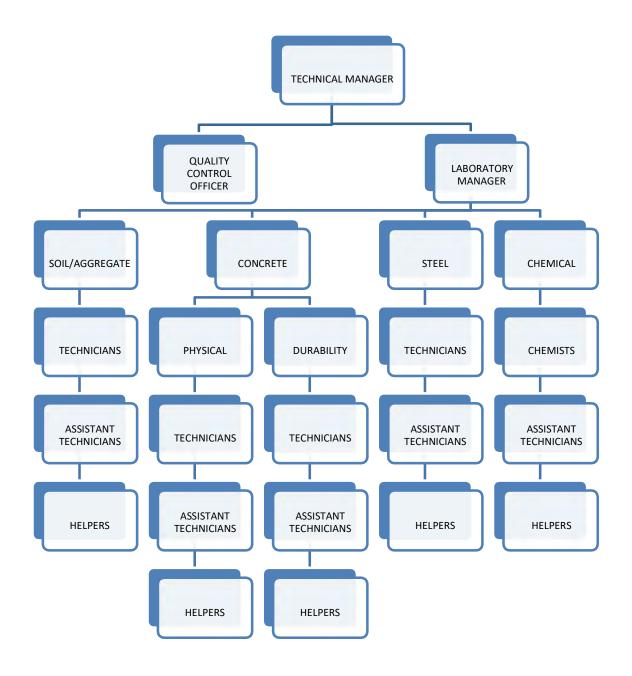
| CHEMICAL TESTS ON SOIL, GROUND WATER, AGGREGATE, CONCRETE, STEEL, CEMENT | |
|--|----------------------------------|
| Item No. | Test Name |
| 46 | Nitrite Nitrogen (NO2-N) |
| 47 | Ammonnia Nitrogen (NH4-N) |
| 48 | Phosphate Phosphorous (PO4-P) |
| 49 | Carbonate (CO3) |
| 50 | Bicarbonate (H-CO3) |
| 51 | Sulphate |
| 52 | Total Suspended solids (TSS) |
| 53 | Volatile Suspended Solids (VSS) |
| 54 | Cd Content |
| 55 | Pb Content |
| 56 | Dissolved Oxygen (DO) |
| 57 | Chemical analysis of microsilica |
| 58 | Carbon Equivalent value |
| 59 | Water absorption of plastics |
| 60 | Water analysis |
| 61 | Total solids |
| 62 | Chemical Oxygen Demand (COD) |
| 63 | Cr Content |
| 64 | Cu Content |
| 65 | Zn Content |
| 66 | Total Hardness of water |
| 67 | Residual Chlorine |
| 68 | Conductivity of water |
| 69 | Oil & Grease |
| 70 | Nickel |
| 71 | Mercury |
| 72 | Selenium |

| CHEMICAL TESTS ON SOIL, GROUND WATER, AGGREGATE, CONCRETE, STEEL, CEMENT | | |
|--|----------------------------|--|
| Item No. | Test Name | |
| 73 | Silver | |
| 74 | Alkali Content of concrete | |
| 75 | Suitability of water | |

SOFTWARE

- Proove IT
- QMat (UTM Machine)
- Lotus Reports (In-House Reporting and Sample ManagementSoftware)

DEPARTMENT CHART – CONSTRUCTION MATERIAL TESTING



MACHINERY & EQUIPMENT – CONSTRUCTION MATERIAL TESTING



SAND EQUIVALENT TEST



UNCONFINED COMPRESSIVE STRENGTH TEST



CURING TANKS



COMPRESSION MACHINE (CONCRETE)



CONCRETE DURABILITY SECTION (WATER PENETRATION)



CONCRETE DURABILITY SECTION (RAPID CHLORIDE PENETRATION)



UNIVERSAL TESTING MACHINE (MATERIAL)



STEEL MACHINE

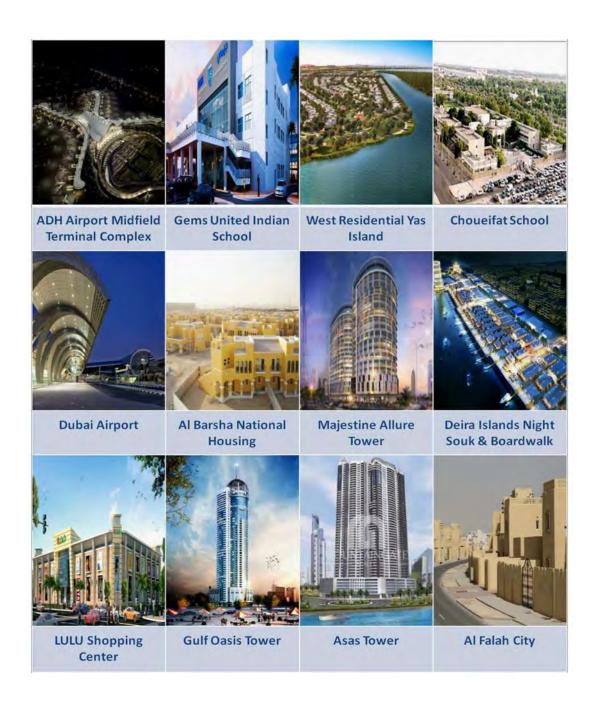


ATOMIC ABSORPTION SPECTROPHOTOMETER (CHEMICAL)



NITROGEN ESTIMATION APPARATUS (CHEMICAL)

SELECTED PROJECTS – CONSTRUCTION MATERIAL TESTING



PILE TESTING



PILE TESTING

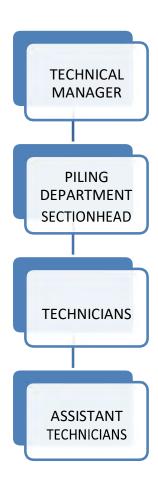
LIST OF ACTIVITIES

- High Strain (PDA) Test for Cast In-Situ and Driven Piles
- Cross Hole Sonic Logging Analyzer (CHA)
- Mechanical Caliper Logging (MCL)
- Low Strain (PIT) Test for Cast In-Situ Concrete Piles
- Pile Instrumentation
- Supervision of Static Load Test (SLT)

SOFTWARES

- CAPWAP
- GRLWEAP
- CHA
- Winlogger
- PitW
- Data logger

DEPARTMENT CHART - PILE TESTING



MACHINERY & EQUIPMENT - PILE TESTING



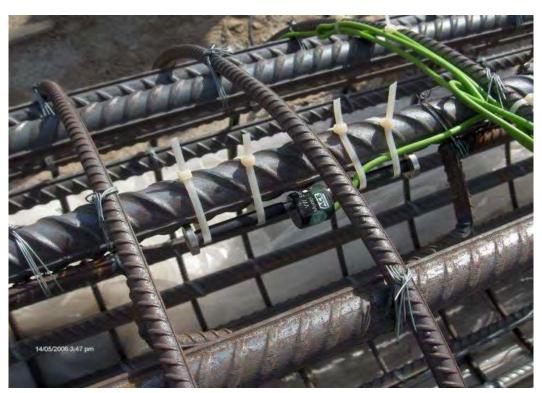
PILE DYNAMIC TESTING (PDA)



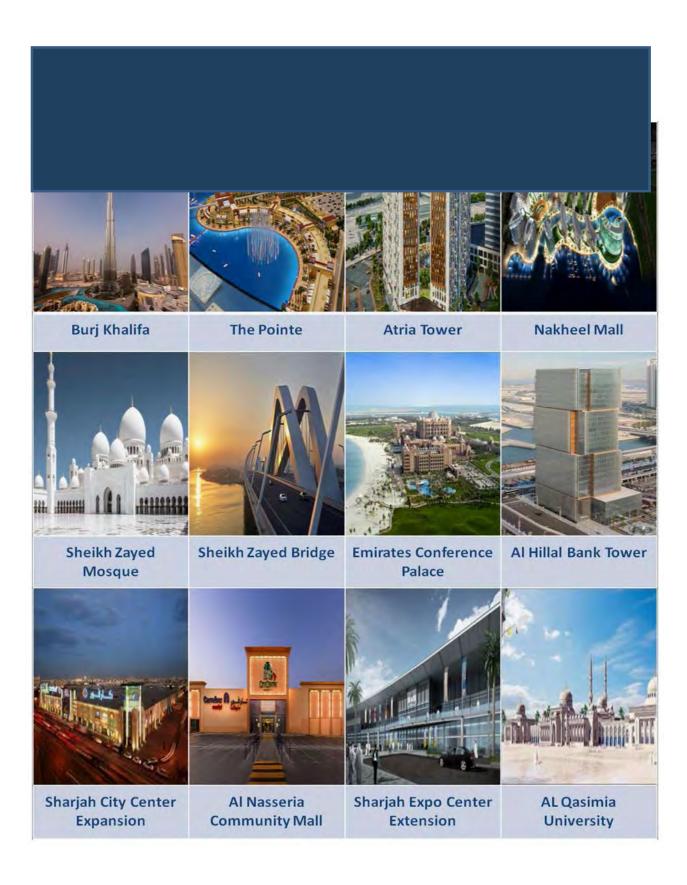
CROSS-HOLE SONIC LOGGING (CSL)



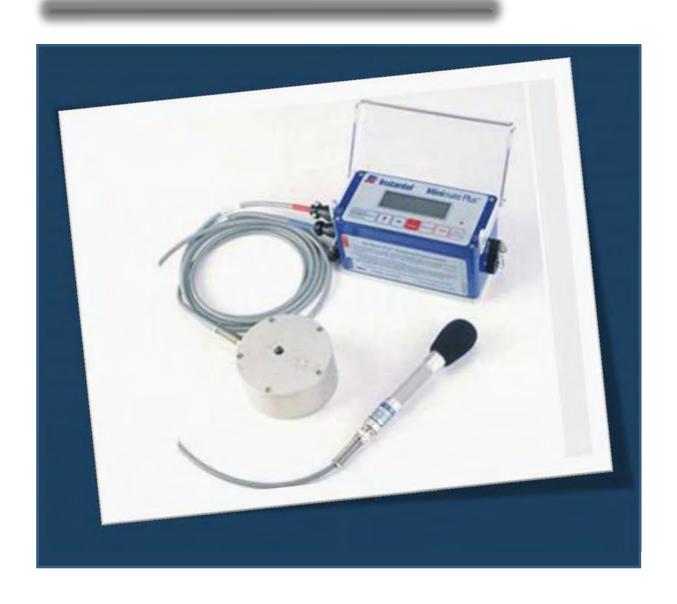
PILE INTEGRITY TESTING (PIT)



PILE INSTRUMENTATION



Assessment, Monitoring & Testing of Concrete Structures



ASSESSMENT, MONITORING & TESTING OF CONCRETE STRUCTURES

LIST OF ACTIVITIES

- Conditional Survey of Existing Structures (Photographic & Video Recording)
- Structural Monitoring, but not limited to:
 - o Crack Monitoring
 - Tilt Monitoring
 - o Settlement Monitoring
 - o Column Shortening using Tape Extensometer
 - Vibration & Noise Monitoring
 - o Temperature Monitoring

Destructive Tests

- Slab Load Test
- Near to surface tests (Pull-off / Pull-out)
- o Concrete Coring
- o Drop Hammer Test
- Carbonation Test

Non-Destructive Tests

- o Localization of reinforcement steel bars inside concrete using HILTIFerroscanPS200
- o Measurement of Ultrasonic pulse velocity inside concrete
- o Surface Hardness Testing by Rebound Hammer

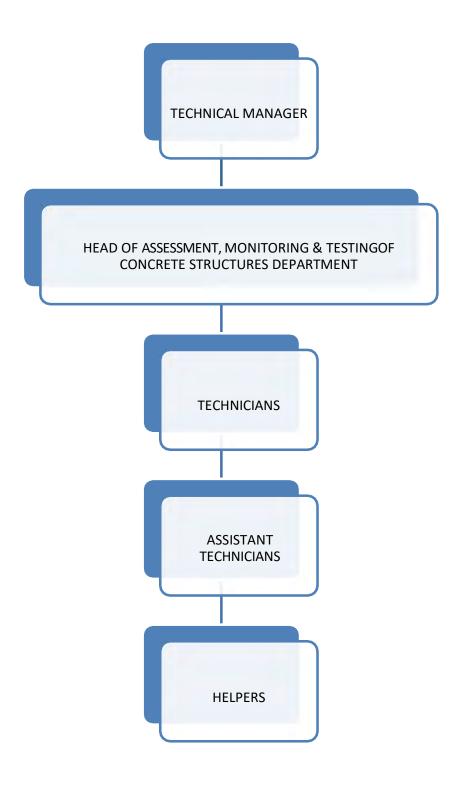
• Ground Instrumentation

- Inclinometers
- o Settlement Monitoring

SOFTWARE

- HILTI FerroScan
- Blastware (Vibration Monitoring)
- Data Taker

DEPARTMENT CHART – ASSESSMENT, MONITORING & TESTING OF CONCRETE STRUCTURES



MACHINERY & EQUIPMENT - ASSESSMENT, MONITORING & TESTING OF CONCRETE STRUCTURES



PULL OFF TEST



FERRO SCAN



CRACK MONITORING



CORING

ANNEX - A

(CV's of Key Personnel)

PERSONAL DETAILS:

Name : Mohammad Mukaddam
Nationality : Lebanese (UAE Resident)

Position : Managing Partner

EDUCATIONAL QUALIFICATIONS:

Post Doctoral Fellowship University of California - Berkeley, California - Summer 1973.

University of California - Berkeley, California - Fall 1983.

Ph.D University of California - Berkeley, California - 1969.

Major: Structural Engineering and Structural Mechanics.

Minor: Soil Mechanics and Foundations, Applied Mechanics.

M.Sc. University of California - Berkeley, California - 1966.

Major: Structural Engineering and Structural Mechanics.

Minor: Soil Mechanics and Foundations.

B.E. American University of Beirut (A.U.B.) - 1965.

Major: Civil Engineering (with distinction).

> Teaching experience & extracurricular activities at the American University of Beirut

- Joined the Faculty of Engineering and Architecture in July 1970 as Assistant Professor of Civil Engineering.
- Promoted to the rank of Associate Professor in July 1974.
- Promoted to the rank of Full Professor in July 1986.
- Served as Chairman of the Civil Engineering Department from 1980 to 1986
- Served as Associate Dean of Faculty of Engineering & Architecture from 1985 to 1987.
- Has taught the following undergraduate courses: statics, structures, concrete, strength of materials, soil mechanics and foundations and science of material.

Has introduced and taught the following graduate courses: finite element method, advanced structural analysis, advanced mechanics of solids and engineering analysis

Since 1976 to date

Established a Geo-technical Consulting Firm for Testing of Soils and Building Materials called "I&M Engineering" in Sharjah. Then in 1986 established "Mohammad Mukaddam Est. for Soil

Investigation" in Dubai. In 1999, partnered with Mr. Jamal Al Hai to create "Al Hai & Al Mukaddam for Geotechnical Works" which operates in Dubai and Abu Dhabi. The main activities of the firm include: (copy of Company Profile is included)

- Soil investigation Analysis and Recommendations.
- Material Testing Quality Control.
- Low Strain and High Strain Dynamic Testing of Piles.
- Testing of concrete in existing structures.

Assessed hundreds of existing structures in the Middle East in terms of testing the quality and durability of the reinforced concrete (destructive and non-destructive) and checking the durability and safety of the related structures etc... Has designed several important structures and acted as structural consultant to leading design offices in the Gulf.

PUBLICATIONS:

- "Use of Expansive Cement for Pre-stressing tendons in Concrete Beams" SESM report, University of California, Berkeley 1966.
- "Behaviour of Concrete under Variable Temperature and Loading" SESM report, University of California, Berkeley, September 1969. Sponsored by UNION CARBIDE, Atomic Energy Commission, U.S.A.
- Presented a paper in Madrid, Spain, 1970 in the Symposium of International Association for Bridge and Structural Engineering on "Design of Concrete Structures for Creep, Shrinkage and Temperature Changes" which was published in the final report (pp. 301 - 310).
- A paper was presented by Mukaddam and Bresler on the "Behaviour of Concrete and Concrete
 Structures under Long Term Thermal Effects ACI International Seminar on Concrete for Nuclear
 Reactors" held in Berlin, West Germany, October 1970 (pp. 771 779).
- "Effects of Fire on Reinforced Concrete Structures" SESM report, University of California, Berkeley 1973.
- "Creep Analysis of Concrete at Elevated Temperatures" ACI Journal, February 1974.
- "Concrete in Lebanon" Lebanese Council for Scientific Research 1975.
- "Behaviour of Reinforcing Bars in Reinforced Concrete Joints Under Cyclic Loading" American
 Society of Civil Engineers, Structural Division By Mukaddam and Kasti 1986.
- "Compaction of Concrete by High Frequency Vibration" Research and Construction Journal, Iraq
 1987 By Mukaddam.

- "Inversion of the Compliance Functions by the Laplace Transformations" American Society of Civil Engineers, Journal of Engineering Mechanics, vol. 113 No 10, October 1987 - By Mukaddam and Zaim.
- "Behaviour of Reinforced Concrete Joints subjected to Earthquake Loading" American Society of Civil Engineers, Structural Division, vol. 114 No 9, September 1988 - By Mukaddam and Harajli.
- "High Strain Dynamic Testing of Cast in-situ Piles in U.A.E." This paper was presented at the 5th International Conference on the Application of Stress-Wave Theory to piles in Orlando, September 96. (Published in the final report pp. 805 - 822).
- "Hammer System Design Using Wave Equation Analysis for Testing Cast-in-Situ Concrete Piles". This paper was presented at the 6^{th} International Conference on the Application of Stress Wave Theory to Piles in Sao Paolo, September 2000 and published in the final report (pp. 91 97)

ADEEB ELIAS SAWAYA

Operations Manager

QUALIFICATIONS

2001- University of Kentucky Faculty of Civil Engineering – U.S.A. B.Sc. Civil Engineering

PROFESSIONAL TRAINING

March 2002: Training in the use of PDA, CHA, PIT, CAPWAP, and PITWAP by M/s. Pile Dynamics. September 2002: Attended PDA/CAPWAP Workshop course conducted by M/s. Pile Dynamics Inc Cleveland/Pile Dynamics Europe and GSP in Germany.

PROFESSIONAL EXPERIENCE

June 2009 - Till Date

Working as a Acting General Manager / Operations Manager reporting directly to the Managing Partner.

Duties: Include and not limited to

- Planning and implementing different internal laboratory auditing programs.
- Reviewing the effectiveness of the quality system in all aspects of the company.
- Performing laboratory and on site quality control tests for construction material according to relevant standards (AASHTO, ASTM and BS).
- Interacting with Dubai Municipality for external auditing and other quality system related issues (Amendments, equipment calibrations, etc...).
- Supervising the execution of deep foundations in some of themajor projects.
- Supervised main soil investigation projects (on land and off-shore) on different sites and prepared factual as well as final interpretative reports.
- Supervising the execution of deep foundations and soil improvement and implementing quality assurance measurement according to international standards and projects specifications.
- Involved in many geo-technical and quality control activities on construction projects as well as
 existing structures, material quality control and assessment of concrete quality in existing
 structures (destructive and non-destructive).
- Planned and implemented the quality system for insuring the first accreditation certification of soil investigation from M/s Dubai Municipality in the Emirate of Dubai.

June 2005 - Till June 2009

Working as a Operations Manager reporting directly to the Managing Partner/Technical Manager

Duties: Include and not limited to

- Interacting with clients (consultants, contractors & local government authorities) and coordinating field works.
- Planning and supervising geotechnical site investigation programs including field and laboratory
 works and responsible for assuring and maintaining high level of quality in all aspects of the field
 testing system.
- Preparing a comprehensive soil investigation report including foundation recommendations and soil improvement methods.

February 2002 till June 2005

Worked as a Geotechnical Engineer (Al Hai & Al Mukaddam for Geotechnical Works)

Duties:

- Supervising main soil investigation projects (on land and off-shore) on different sites and prepared factual as well as final interpretative reports.
- Expert on using different drilling techniques to ensure more than 90% recovery during geotechnical investigations.
- Responsible for designing and manufacturing our own in-house drilling rig.
- Performed Integrity and Dynamic Testing on Piles as well as analysis and interpretation of measurements by means of sophisticated software (PITWAP, WEAP and CAPWAP).
- Supervising static pile load testing in major projects.
- Acting as a Geotechnical Engineer consultant on major project.
- Supervising the execution of deep foundations and soil improvement and implementing quality assurance measurement according to international standards and projects specifications.
- Performing Sonic Core Tests for pile foundations.
- Performing Caliper logging Tests for pile foundations.
- Pile instrumentation by means of vibrating wire gauges and submitting the final interpretive report.

Computer Skills

MS office, Windows 95-98, C++, Q Basic, Visual Basic, AutoCAD, Kenpave, KY Frame, HCS Transt 7F and Maple

BASSEL MUKADDAM

Director

EDUCATIONAL BACKGROUND

1998 – 2001 American University of Beirut Business Dept. Graduated in 2001 from the

American University of Beirut with a Bachelor in Business Administration.

1996–1998 A.U.B Faculty of Engineering & Architecture

Took courses in sciences and engineering.

Graduated in 1996 with a High School Diploma from the

International School of Chouifat- Sharjah.

PROFESSIONAL EXPERIENCES

December 2004 - Till Date

Worked as an Administrative Manager (Al Hai & Al Mukaddam for Geotechnical Works) reporting directly to the Managing Partner

Duties and responsibilities:

- Day to day Administration of the establishment.
- Verification and approving of day-to-day accounts, expenses etc.
- Make sure of proper implementation of purchasing Procedures.
- Responsible for all Personal matters such as Visas, Contracts etc. of the employees.
- Responsible for all IT matters including maintenance and back up of Systems.
- Monitoring of Quotations submittals of reports, collection of Invoices etc.
- Responsible for the insurance of workers, Vehicles, Equipment and Machineries.
- Monitor the overall performance of the establishment to ensure Customer satisfaction.

> 2001 − 2004

Assistant Manager, Accounting Department, BLOM Bank.

Duties and responsibilities:

- Preparation of all financial statements, such as balance sheets and income statements.
- In charge of shareholder management, including dividend distribution.
- Monthly tax returns.
- Played a part in implementing the new Continuous Settlement System (CLS) for forward operations at the bank.

• Attended two seminars regarding IAS 39 & IAS 42, and one seminar regarding the Lebanese Tax System.

Training Attended

- Uncertainty Measurements in Calibration and Testing (LMQ)
- Lead Assessor Training Course of ISO 17025 (ICS)
- Environmental Auditing (AFAQ-ETA)
- Occupational Health and Safety (NEBOSH)
- Seminars regarding IAS 39 & IAS 42, Lebanese tax system.

Computer Skills

Have good command in Microsoft Excel, Word, and Visual Basic.

ALI ABDEL AZIZ ALI

Technical Manager

EDUCATION

College: -

Graduated from Faculty of Engineering – Civil Engineering Department (Geotechnical) - 2007 Benha University – Shoubra Overall Grade – Very Good

ENGINEERING SOCIETIES

- Egyptian Engineering Syndicate Cairo Egypt
- Society of Engineers UAE
- Authorized Engineering Card Civil (Geotechnical) Sharjah Municipality & Director of Public Works

PROFESSIONAL EXPERIENCE

Since June 2009 till present working as a Technical Manager reporting directly to the General Manager

Duties: Include and not limited to

- Interacting with clients (consultants, contractors & local government authorities) and coordinating field works.
- Planning and supervising geotechnical site investigation programs including field and laboratory
 works and responsible for assuring and maintaining high level of quality in all aspects of the fieldtesting system.
- Preparing a comprehensive soil investigation report including foundation recommendations and soil improvement methods.

From October 2007 till June 2009 Geotechnical Engineer in Al Hai & Al Mukaddam for Geo-Technical Works

- In charge of preparing and finalizing the Soil Investigation Reports including the compilation of the report and preparing recommendations to suite both the current soil conditions and structural requirements.
- In charge of the preparation of tender documents as well as technical proposals for prestigious project.

- Acting as a document controller on prestigious project and ensuring the delivery of the correspondence to the concerned personnel as well as responding to technical requirements based on the contract details.
- Developing In-house data processing programs to suite the requirements of the works.
- Handle all laboratory tests related to Soil Investigation activities as well as processing the test results to obtain reports.
- Conduct all in-situ tests related to Soil Investigation.
- Monitor of Gas Imitations from within the boreholes.
- Capable of conducting and carrying out Survey works.
- Co-ordination of site works.
- Site supervision of drilling works on site as well as real-time monitoring of the drilling parameters (DPM) (Diagraphy Drilling)
- Health & Safety Supervision on site
- Handle Material Testing related to Universal Testing machine.
- Introduce new Testing Routines for the Automated Universal Testing Machine.
- Conduct Non-Destructive Testing including Ultra Sonic Testing, Crack Monitoring, Schmidt Hammer, etc. Including the generation of reports.
- Capable of programming Data Taker to undertake any data processing required and produce the output in the desired Engineering Units, using in built Programming of the Data Processing Unit.
- Simple modeling of sub-surface conditions and soil-structure interaction on Plaxis.
- gINT Software Data Entry from October 2007 and promoted to gINT Software Manager since November 2008.

COMPUTER SKILLS

- Advanced User of Microsoft Office 2000, 2003, XP and 2007 (Word (including in-housed XML and VBA), Excel (including in-housed VBA), PowerPoint, Front page)
- gINT Software (Geotechnical Works)
- Global Mapper v11& v12 (GIS and Mapping Software)
- SAP v9.2
- SAFE
- AutoCAD 2007 & AutoCAD 2009 (2D)
- Geostudio 2004 (GeoSlope 5.0 Slope Stability Analysis)
- GonSite (CPT Software)
- Go4 (CPT Analysis)
- CPeT iT (CPTInterpretation)

- Geovision (Diagraphy Drilling Software)
- Datalogger (Data Processing and Analysis)
- QMat (Universal Testing Machine)
- TGOffice (Survey Works)
- Web Page Design (HTML, CSS, Java 1.2, Flash 5.0)
- Basic knowledge of VBA and SQLScripting.

AZIZ ZERAIDI

Geophysical Area Manager

ACADEMIC QUALIFICATIONS

- 1990 1991 Pierre et Marie Curie PARIS VI University DESS of geophysical
- 1989 1990 Faculty of Science PARIS University SUD-XI Modules of Geophysics applied to the Civil Engineering
- 1984 1987 University Mohammed Ben Abdellah MOROCCO Geological diploma

INSTITUTION

- Member of USG Union Syndical Geotechnics
- Member of board of AGAP (Association for quality in Applied Geophysics)

TEACHING

• Teaching assistant - University Mohammed Ben Abdullah - 1987 - 1988 - Geophysics

PUBLICATIONS

- Cavity detection 2005 Flavigny-Le Grand, France Franceff: Search tunnel under a church by geophysical methods (Microgravity, GPR and Electric Cylinder).
- EG10, Conference on Engineering Geophysics. 11 14 December 2011. Al Ain, United Arab Emirates: Site Investigation Methodology (Microgravity, GPR and Electric Cylinder) exemple of Ministry of interior project in Doha Qatar.

PROFESSIONAL EXPERIENCE

Since March 2013 Working as Geophysical Area Manager of Al Hai & Al Mukaddam for Geotechnical Works (LLC)

In charge of.

• Business Development and Marketing

2010- 2013 Working as a Manager of SOLDATA Geophysical Department, Abu Dhabi branch and Middle East

In charge of

- Technical Manager of Soldata Abu Dhabi branch and Middle East
- Business Development and Marketing for Soldata Middle East
- Geophysical Department Manager for Soldata Qatar

2006–2010 - Européenne de Géophysique – Nanterre 92 North and West Branch

• Business Development and Marketing - all Geophysical methods

2001–2006 - Européenne de Géophysique – Nanterre 92 North as Branch Manager

- Business Development and Marketing
- Non Destructive specialist (Microgravity)

1996–2001 - Europeenne de Geophysique - Nanterre 92 North and West Brunch

• Business engineer in charge of operation Organization and technical development

1991-1996 - Techsol - Nanterre 92 North and West Branch

- Business engineer Marketing
- Site engineer operation all Geophysical methods

SOME OF MAJORS PROJECTS EXECUTED AS PROJECT MANAGER AND GEOPHYSICAL DEPARTMENT MANAGER

Cavity Detection Projects

- Project of near surface cavity detection, utility detection, shallow stratigraphy, gravity and EM modeling underground water exploration and bed rock profiling in UAE, Qatar.
- Worked for geophysical survey including data acquisition, processing, interpretation, borehole allocation and Final Reporting for Ministry of interior project, Qatar, 2011. Techniques include Microgravity (1500 points), GPR and Electric Cylinder.
- Worked for geophysical survey at jebel Hafeet (180 000 points of ERT), AL AIN, UAE.
 Techniques include MASW, ERT and GPR.
- Worked for geophysical survey for BLOOM, AL AIN, UAE. Techniques includes ERT and EM34.
- Worked for geophysical survey at GHAREBA EMIRATI HOUSSING Project, AL AIN, UAE for KEO and SOROUH.Techniques include MASW, ERT and EM34.
- Worked for geophysical survey at GHAREBA EAST EMIRATI HOUSSING Project Phase 2, AL AIN, UAE for WSP, EWAN and SOROUH. Techniques include MASW, EM34 and Electric Cylinder for volume estimation of cavities.
- Cavity detection, Techniques includes Microgravity (4500 points), Electric Cylinder, city of SANTANDER in Spain.
- Project of the Souks of BEYROUTH (1997 (Microgravity 2000 points) and Junieh in LEBANON 1998 (Microgravity 1200 points)
- Escapes of dam SYMVOULOS in CYPRUS
- Towns of PARIS, CAEN, ARRAS in FRANCE (microgravity and GPR)

- Railway lines of SNCF in FRANCE, 2001: Northern TGV (more than 10,000 stations of microgravity), 6 month duration, Total amount: 0.7 millions €).
- Railway lines of SNCF in FRANCE, 2003: Northern TGV (more than 19,000 stations of microgravity, one year duration, 16 Engineers, 32 technicians and 16 helpers, Total amount : 1.5 millions€).
- Projects of Motorways, works of civil engineering

AHMED MOHAMMED EL HOSARY

Laboratory Manager

QUALIFICATION

Bachelor of Science from the University of Tanta - Egypt

Major:-

Geology

Minor:-

Chemistry

(General chemistry, Physical chemistry, Organic chemistry, Geochemistry, Non-organic chemistry)

PROFESSIONAL EXPERIENCE

2007 to present: Working with M/s. Al Hai & Al Mukaddam for Geotechnical Works as Lab Manager

- Conducts regular monitoring on the productivity of the laboratory sections in terms of the work
 load and ensure that the specific time frame set by the client is being satisfied while maintaining
 a quality service.
- Held responsible for checking the needs of senior technicians (i.e. equipment, purchase requests, labour, stock and other facilities).
- Guarantees the required stability considering the volume of work on hand relative to the capacity of the laboratory.
- Performs periodic spot-checking of the technicians working on particular sites.
- Follow up calibration schedule based on necessity and requirements.
- Recommends purchase of new equipment depending on the needs of each section. Checking safety measures of all employees and take suitable corrective actions, if needed.
- Responsible for the proper handling and maintenance of all laboratory equipment.
- Report immediately to the Technical Manager and/or Operations Manager the break down or malfunctioning of any equipment in addition to the occurrence of unforeseen incidents.
- Propose to the Technical Manager and/or Operations Manager amendments/modification of an adopted procedure in the day-to-day functioning of the Sections.

2004 to 2007: Working with M/s. Al Hai & Al Mukaddam for Geotechnical Works L.L.C.

- Receiving and Visual Identification of Samples retrieved from within the boreholes for Engineering Purposes.
- Sample Description for Soil & Rock as per the relevant British Standard for Engineering Purposes.

- Selecting samples for conducting all necessary laboratory testing to suite the project requirements and meet the demands required for the design.
- Geologic mapping, sampling, testing, with high level of quality
- Supervision of in-situ testing including field testing as well as Site Supervision
- In charge of conducting all in-situ tests related to Soil Investigation (CPT, P.S. Logging, Pressure meter Testing, Packer Testing, Gas Monitoring, etc.).
- Wide range of coordination with the Operation Manager, Project Managers, concerned authorities as well as to the site people throughout the duration of the job.
- Conducting regular visits and spot-checking on site to ensure that the drilling works and other relative testing are being carried out in accordance with the standard operating procedures in addition to the agreed guidelines set by the Client/Owner/Contractor of the project.
- Head of Non-Destructive Testing Department.
- In charge of conducting and reporting All Non-Destructive Testing conducted on site.
- Assessing of existing structures.
- Localization of steel reinforcement of steel in concrete using Ferro SCAN(HILTI/PS200)
- Temperature monitoring of Concrete during and after casting using Digital Data Takers and Manual Readings
- Conducting Non-Destructive Testing including:-
- Ultrasonic Measurement of velocity in concrete.
- Pull-off Strength of Concrete
- Schmidt (Rebound) Hammer
- Slab & Crack Monitoring of existing concrete structures

PROFESSIONAL TRAINING

- Use and Maintenance of Pressure Meter Equipment conducted by M/s. OYO & M/s. ROBERTSON GEOLOGGING LIMITED
- Applications of Data Takers conducted by M/s. AL BAYAN EQUIPMENTS under direct supervision of M/s. Dubai Municipality

COMPUTER SKILLS

- Microsoft Office (Word, Excel, PowerPoint, Front page)
- AutoCAD 2007
- Data logger (Data Analysis)
- QMat (Universal Testing Machine)
- Internet

- Digital Suspension PS Logger (Version 3.00 Robertson Geologging Limited)
- GLOG-SUS. Version 1.12 (OYO Corporations Suspension P.S. Logging Data Analysis and Reporting)

ISLAM ABDEL FATEH MOHAMMED

Geotechnical Manager

QUALIFICATION

Bachelor of Science from Al-Azhar University in Cairo, Egypt, 2006

Major: - Geology

Overall Grade: - Very Good

PROFESSIONAL EXPERIENCES

2010- Till date Geotechnical Engineer Al Hai & Al Mukaddam for Geotechnical Works.

Duties & Responsibilities: -

- In charge of preparing and finalizing the soil investigation reports including the compilation of the report and preparing recommendations.
- Shallow and deep foundation assessment.
- Earthwork assessment and preparation of sitework specifications.
- Geohazard analysis (liquefaction, landslide and etc.).
- Perform geotechnical analysis and study to assess construction site condition.
- Develop proposals and determine cost and schedule forgeotechnical investigations.
- Prepare specifications, boring logs and cross sections.
- Handle all laboratory tests related to soil investigation activities as well as processing the test results to obtain reports.
- Conducting regular visits and spot-checking on site to ensure that the drilling works and other relative testing are being carried out in accordance with the standard operating procedures in addition to the agreed guidelines set by the client/owner/contractor of the project.
- Attending in meetings with clients and authorities who are partaking into the soil investigation activity.
- Supervising main soil investigation projects (on land and off-shore) on different sites.
- Providing a wide range of geological support and geotechnical guidance.
- Improving production by implementing latest methods & techniques in data acquisition and mathematical processing.
- Evaluate team performance and determine training needs to meet performance objectives.

Manage geotechnical and geological analyses, manage staff and supporting subconsultants and studies, conduct research, perform preliminary geological reconnaissance, geotechnical and geological studies, review testing results, and develop design recommendations.

 $2006-2010\ Engineering\ Geologists$ at Al Hai & Al Mukaddam for Geotechnical Works.

Duties & Responsibilities: -

- Receiving and visual identification of samples as per the relevant British standard for engineering purposes.
- Describing soil retrieved from boreholes and trial pits based on visual classification and on evaluation of laboratory tests.
- Describing rock obtained from rotary core drilling in boreholes and from ground excavation.
- Selecting samples for conducting all necessary laboratory testing to suite the project requirements and meet the demands required for the design.
- Conduct all in-situ tests related to Soil Investigation, including:
 - o CPT.
 - o P.S. Logging.
 - o Pressure Meter Testing
 - o Falling Head Permeability Test.
 - o Packer testing.
 - o Plate load test.

PROFESSIONAL TRAINING

- August 2015: "General Requirements for the Competence of Testing & Calibration (ISO/IEC 17025:2005" conducted by M/s. Abu Dhabi Quality and Conformity Council.
- March 2012: "Mini MPA Course" conducted by M/s. international academy for training and consulting.
- February 2012: "Self-Management and Life Planning Course" conducted by M/s. Canada Global Center.
- October 2006: General & conversational English course.

COMPUTER SKILLS

- Advanced user of Microsoft Office
- Adobe Photoshop
- gINT Software (Geotechnical works)

- Qmat (Universal Testing Machine)
- ☐ Global Mapper V11& V12 (GIS and Mapping Software)
- GonSite (CPT Software)
- ☐ Go4 (CPT Analysis)
- Page 2 CPeT iT (CPT Interpretation)
- Geovision (Diagraphy Drilling Software)

FARID KIAME, PROJECT MANAGER

PERSONAL DETAILS:

Name : **Farid Kiame** Nationality : **Lebanese**

Position : **Project Manager**

EDUCATIONAL QUALIFICATIONS:

2016 – 2017 International Diploma in Project Management

Brentwood College UK

2001 – 2004 Bachelor degree of Information Technology 2001–2004

CET University, Zahle, Lebanon

CERTIFICATIONS:

2008 - Construction Site-General safety

2017 - Advanced Applications of CAPWAP Software

2017 - Wave Mechanics & Proper Practices

2018 - Project management Program (PMP) Cambridge

2020 - AutoCAD 2D

PROFESSIONAL EXPERIENCE:

2007 - Till date working as Project Manager

Duties: Include and not limited to

- Facilitate proper coordination with Operation Managers, Project Managers, concerned authorities, site crew and other concerned individuals involved in field works in order to ensure smooth site activities and operations during the soil investigation works.
- Conducting regular visits and spot-checks on site to ensure that the drilling works and other
 relative testing are being carried out in accordance with the standard operating procedures in
 addition to the agreed guidelines set by the Client/Owner/Contractor of the project.

- Updating the Operation Managers about the development of site works and evaluating concerns arising from the same.
- Make sure that the needs of the site crew are taken into priority. It does not only comprise of
 their personal necessities such as the first aid kits but as well as taking immediate action in cases
 of equipment breakdown, shortage of facilities and other vital aspects that could hinder the site
 operations.
- Attending meetings with clients and authorities who are partaking into the soil investigation activity.
- Liaising with other departments during preparation of legal and technical documents needed to obtain the necessary statutory approvals.
- Responsible for supervising subcontractors, suppliers and vendors who are working on the site.
- Responsible for appraisal, recommendation and give support to change request and onsite change orders.

COMPUTER SKILLS:

- Advanced User of Microsoft office
- AutoCAD 2D
- Go4! CPT data
- CPeT-IT CPT data

MANEKSHA P.S

Quality Control Officer

EDUCATIONAL QUALIFICATIONS

B. Tech

Sree Buddha College of Engineering, Kerala University, India (2007-2011) Major- Mechanical Engineering

PROFESSIONAL EXPERIENCES

Since May 2019 till present working as a **Quality Control Officer** reporting directly to the General Manager/Director

Duties and Responsibilities:

- Responsible for Documentation, implementation and Maintenance of Quality Management System
 in accordance with ISO: 9001:2015 and ISO/IEC 17025: 2005 & 2017 requirements at all branches
 in GCC.
- Monitor the effectiveness of the Quality System by conducting audits in accordance with the Corporate or Project Quality System Audit Schedule as appropriate.
- Track quality problems and expedite their resolution.
- Interact with Dubai Municipality, Emirates International Accreditation Centre-EIAC (Previously
 Dubai Accreditation Centre- DAC), DM-DCLD (Dubai Central Lab- Calibration & Metrology Division),
 ENAS (Emirates National Accreditation System, Abu Dhabi), ESMA (Emirates Authority for
 Standardization & Metrology) and QRS (ISO 9001) for external auditing and other quality system
 related issues (Amendments, Equipment calibrations, etc.)
- Prepare and Review Project Quality Plans in accordance with Company Policy and Contractual requirements.
- Monitoring laboratory quality control test for construction material according to relevant standards (BS, ASTM, AASHTO, APHA).
- Perform Internal Calibration of apparatuses and equipment such as Thermometers, Test sieves, Go
 not go gauges, Vicat apparatus, Blaine permeability apparatus, stopwatch, large pouring cylinder,
 Sand Equivalent Shaker, Los Angeles Machine, Vibrating Hammer, CBR mould, surcharge disc and
 many more.
- Develop New Testing Activities and its implementation.
- Investigate customer complaints and find out discrepancies.
- Revising the quality manual if needed.
- Maintenance of equipment records, IQC system, staff training as well as authorization records, calibration records and other documents.

- Prepare audit checklists, undertake audits and issue audit reports in accordance with the audit schedule.
- Responsible for reviewing and approving test worksheets and reports, and providing technical support to operation staff when needed.
- Responsible for maintaining the preventive maintenance plan and calibration of equipment.
- Providing training for new laboratory analyst.
- Interacting with various clients with regards to the testing that needs to be done.

From September 2017 till May 2019 as Asst. Quality Control Officer in Al Hai & Al Mukaddam for Geo-Technical Works LLC

Duties and Responsibilities:

- Responsible for Documentation, implementation and Maintenance of Quality Management System
 in accordance with ISO: 9001:2015 and ISO/IEC 17025: 2005 & 2017 requirements at all branches
 in GCC.
- Prepare, review and conduct internal audits, internal quality control.
- Investigation of customer complaints, customer feedbacks, and other Nonconformities if any.
- Internal calibration of Equipment.
- Act as Management representative during External audits (DAC, ENAS, and QRS).
- Liaison with customers, regulatory authorities and accreditation bodies.

From July 2015 till September 2017 as Quality Control Officer in Al Hai & Al Mukaddam Qatar for Geo-Technical Works WLL

Duties and Responsibilities:

- Responsible for implementation and maintenance of ISO 9001: 2015 Certification, ISO/IEC 17025:2005 accreditation and Qatar Construction Specifications (QCS) 2014requirements.
- Develop, recommend and carry out Quality Assurance programs,
- Monitor Quality Assurance activities to determine conformance with policy, procedures and sound practices,
- Ensure that all the requirements of the Quality Manual and its related documentation are met,
- Coordinates and/or conduct the internal technical auditing in all aspects of the Quality
 Management System in accordance with ISO/IEC 17025:2005, ISO 9001:2008, Ministry of
 Environment in Qatar, ASHGHAL Quality and Safety Department regulations.
- Preparation of audit and calibration schedule.

- Coordinate and/or conduct the investigations of customer complaints.
- Recommend to the Office General Manager for his approval, any proposal for modification in the quality assurance system of the Establishment,
- Wherever necessary, identifies, develops, and implements improvement of the Laboratory measurement capability to meet the requirements of Client, Accreditation, Certification and regulatory authorities.
- Maintains, analyzes and updates statistical data and/or controlcharts.
- Maintains quality manual and related Quality documents.
- Implements good laboratory practices by providing instruction and training as needed, develops
 work plans and procedures, and requires that these be followed to improve the quality of day-today operations.
- Organize the annual Management review meeting and documentation of the proceedings.
- Act as Management representative during External audits (DAC, ASHGHAL (Public Works Authority), and MOE Qatar) and MR Meetings.

From August 2013 till July 2015 as Internal Auditor in Al Hai & Al Mukaddam for Geo-Technical Works LLC

Duties and Responsibilities:

- Documentation, Implementation and Maintenance of Management System ISO/IEC 17025: 2005 and ISO 9001:2008.
- Internal auditing as per ISO/IEC 17025:2005 and ISO 9001:2008requirements.
- Conducts internal calibration. Organize MR meeting. Investigation of Customer complaints and non-conformities and follow up actions.

PROFESSIONAL TRAININGS

- Internal Audit & Awareness Training Course in accordance with ISO 17025: 2005, Dubai Accreditation Department (DAC).
- ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories, Emirates National Accreditation System (ENAS).

<u>ANNEX - B</u> (AHAM CERTIFICATES & LICENSES)







خصة اقتصادية

رخصــة مهنية

Economic License

Professional License

رقم الرخصة : CN-1064993 : تا الرخصة : CN-1064993

عضوية الغرفة : 188579 : عصوية الغرفة : عصوية العرفة العرف

Establishment Card : : الهيئة الاتحادية للهوية :

والجنسية- بطاقة المنشأة

الشكل القانوني : فرع اماراتية - دبي : فرع اماراتية - دبي الحاى والمقدم لاعمال فحص التربة - ذمم - فرع ابوظبي : الحاى والمقدم لاعمال فحص التربة - ذمم - فرع ابوظبي

Trade Name : AL HAI & AL MUKADDAM GEOTECHNICAL WORKS - L L C - ABU DHABI BRANC

تاريخ تأسيس المنشأة : 27/11/2004 : قالية تأسيس المنشأة الله عند المنشأة عند المنشأة عند المنشأة المناسكة المنا

ال العدار : 16/05/2023 : 16/05/2023 : 18/05/2024 : 18/05/2024 : 18/05/2024

| الصلة | الجنسية | الملاك / الشركاء | الرمز |
|---------|--------------------------|------------------------------------|----------|
| Role | Nationality | Owners / Partners | No. |
| شريك | الإمارات العربية المتحدة | جمال محمد مطر مصبح الحاى | 20095078 |
| Partner | United Arab Emirates | JAMAL MOHAMMED MATAR MUSABAH ALHAI | |
| شريك | لبنان | محمد احمد المقدم | 20095080 |
| Partner | Lebanon | MOHAMAD AHMAD MUKADDAM | |

- Mechanical and Physical Tests Lab

- Soil Testing Services - خدمات فحص التربة

- Geological and geophysical consultancy and studies and researches - الاستشارات والدراسات والبحوث الجيولوجية والجيوفيزيائية

- Chemical and Biological Analysis Lab

العنوان : مصفح, م 26 ق 89-88, المستودع رقم 5, : مصفح عند العنوان العنوان العنوان : العنوان ال

Official Email : accounts@ahamgeo.com : البريد الإلكتروني الرسمي

رقم التواصل الرسمي : +971522525675 +971522525675 : رقم التواصل الرسمي









- مختبر الفحوص الميكانيكية والفيزيائية

شهادة تسجيل | Certificate of Registration

| Certification Number | Certification Number R-L-17-00067 | |
|-----------------------------|---|------------------------|
| Name of CAB | Al Hai & Al Mukaddam for Geotechnical Works (LLC) | اسم جهة تقييم المطابقة |
| Address | Abu Dhabi - MUSSAFAH-M26 - Musaffah- M26 workshop #5,plot no.88 & 89 | العنوان |
| Issue Date | 26/07/2017 | تاريخ الإصدار |
| Expiry Date | 25/07/2024 | تاريخ الانتهاء |

| Scope | الأنشطة | |
|--------------------|---------------|--|
| Testing Laboratory | مختبرات الفحص | |

This certificate was issued based on the request of the conformity assessment body without any responsibility to be bared by Ministry of Industry and Advanced Technology toward others.

This is an electronic certificate and does not require stamp and signature. Certificate will be invalid in case of any modification



أصدرت هذه الشهادة بناء على طلب حهة تقييم المطابقة دون تحمل وزارة الصناعة والتكنولوجيا المتقدمة اى مسؤولية تجاه

هذه الشهادة صدرت إلكترونياً ولاتحتاج لختم أو توقيع، أي كشط أو تغيير في هذه الشهادة













تاريخ منح الإعتماد

تاربخ الإنشهاء

Certificate of Accreditation

الحاى و المقدم لأعمال فحص التربة ذ.م.م (NAL 101)

مصفح - أبوظيى. الإمارات العربية المتحدة

حاصل على الإعتماد في الفحوصات المذكورة في وثيقة المجال المرفقة وفقاً للمواصفة الدولية 17025 ISO/IEC

Al Hai & Al Mukaddam for Geotechnical Works L.L.C (NAL 101)

Mussafah - Abu Dhabi, UAE

Accredited according to the ISO/IEC 170251 Standard to undertake tests as specified in the attached Accreditation Scope

Accredited on

Expires on



1 Accreditation in accordance to the ISO/IEC 17025:2017 Standard "General requirements for the competence of testing and calibration laboratories" and the relevant ENAS and ILAC

This certificate is invalid without the attached scope of accreditation, which subjected to annual surveillances as per ENAS procedure. Certificate can be updated or re-issued until the expiry date defined above. The validity of the certificate is subjected to continuous compliance with the requirements of the accreditation system. The lab is responsible for the results of its testing.

Initial Accreditation Date: 09/07/2015

 وقط المتطلبات المواصقة الدولية ISO/IEC 17025:2017 "المتطلبات العامة لكفاءة مختبرات الفخص والمعايرة" والمتطلبات ذات العلاقة الخاصة بنظام الإعتماد الوطني الإماراتي ENAS والمنظمة الدولية لاعتماد

2021/11/03

2024/11/02

- مجال الاعتماد جزء أساسي من هذه الشهادة حيث تخضع مجالات الاعتماد المذكورة في الوثيقة المرفقة لعطيات متابعة لاحقة من قبل نظام الاعتماد الوطني الإماراتي ENAS. وتعتبر هذه الشهادة صالحة وقابلة للتحديث واعادة الاصدار حتى تاريخ الاتهاء المدور الملاة شريطة استعرار المختبر المذكور اعلاه في تطبيق متطلبات نظام الاعتماد سالفة الذكر يتحمل المختبر مسؤولية نتائج المحمد الصادرة عنه

تاريخ منع الإعتماد لأول مرة: 2015/07/09

ACF 11-21; Rev.4

Abu Dhabi, Dubai, United Arab Emirates مربتيه TEL 600565554 اليوظيي، دي، الإمارات العربية المتحدة TEL 600565554 صربتيه TEL 600565554





Al Hai & Al Mukkadam for Geotechnical Works L.L.C, NAL 101 Testing Laboratory, (ISO/IEC 17025:2017)

Al Mussafah, Abu Dhabi, UAE

Issue Date: 12-04-2022 Expiry Date: 02-11-2024

Issue No: 06

| Testing Field | Materials/ Products tested | Type of test/ Test parameter/ Properties measured/Range of measurement | Test Method (Standard, Internal Procedure, Technique) | Permanent lab (P) / Client- site (S) |
|---------------|--|---|---|---|
| | Soil In - Situ Testing | Methods of test for soils for civil engineering purposes Part 9: In-situ tests Determination of the penetration resistance using the split-barrel sampler (Standard penetration test - SPT) | BS EN ISO 22476- 3:2005+A1:2011 * BS 1377 Part 9:1990- AMD 8264-1995 Cl. 3.3 | s |
| | | Code of practice for Ground Investigations Obtaining disturbed samples from boring tools & excavating equipment | BS 5930:2015; Section 4 Cl. 25.3 | S |
| | Soil Sampling & Description Rock Sampling & Description | Soil Sampling Open-tube sampling techniques | BS 5930:2015; Section 4 Cl. 25.4 | S |
| Geotechnical | | Description of Soils | BS 5930:2015; Section 6 Cl. 33 | P/S |
| | | Code of practice for Ground Investigations Rock Sampling Rotary core samples | BS 5930:2015; Section 4 Cl. 25.7 | S |
| | | Description and Classification of Rocks Rock Core Recovery | BS 5930:2015; Section 6 Cl. 36 Clarks & Walker | P/S |
| | Ground Water Management | Code of practice for ground investigations Ground water monitoring Ground Water sampling | BS 5930:2015; Section 4 Cl. 26 | S |
| | | Groundwater measurements | BS 5930:2015 Section 8 Cl. 52, Section 4 Cl. 26.2 & 26.3 (Cl. 52.5 standpipe piezometer) | S |





Al Hai & Al Mukkadam for Geotechnical Works L.L.C, NAL 101 Testing Laboratory, (ISO/IEC 17025:2017)

Al Mussafah, Abu Dhabi, UAE

Issue Date: 12-04-2022 Expiry Date: 02-11-2024

Issue No: 06

| Testing Field | Materials/ Products tested | Type of test/ Test parameter/ Properties measured/Range of measurement | Test Method (Standard, Internal Procedure, Technique) | Permanent lab (P) / Client- site (S) | |
|---------------|----------------------------------|---|---|---|--|
| | | Particle size distribution Wet & Dry sieving | BS EN ISO 17892-4:2016, Cl. 5.2 | | |
| | | Determination of Water (Moisture) | BS EN ISO 17892-1:2014 | | |
| | Soil | Sedimentation by the hydrometer method | BS EN ISO 17892-4:2016, Cl. 5.3 | Р | |
| | | Liquid limit, plastic limit and plasticity index of soil | BS EN ISO 17892-12:2018, Cl. 5.3, 5.5, 6.5 | | |
| Geotechnical | Rock | Preparation of rock core (Preparing Rock Core as Cylindrical Test Specimens and Verifying Conformance to Dimensional and Shape Tolerances | ASTM D4543-19 | - P | |
| | | Unconfined Compressive Strength of Rock Core Specimen | ASTM D7012-2014e1, Method C | | |
| | | Determination of Water (Moisture) Content of Soil and Rock by Mass | ASTM D2216-2019 | | |
| | Soil | Acid Soluble Sulphate Content of Soil | BS 1377-3:2018, Cl. 7.9 /7.6 | | |
| | | Water Soluble Sulphate Content of Soil | BS 1377-3:2018, Cl. 7.3 /7.6 | | |
| | | Acid Soluble Chloride Content of Soil | BS 1377-3:2018, Cl. 9.3 | Р | |
| Chemical | | Water Soluble Chloride Content of Soil | | BS 1377-3:2018, Cl. 9.2 | |
| | | pH of Soil, (0 to14) pH Units | BS 1377-3:2018, Cl. 12 | | |
| | Cround | pH of Ground Water, (0 to14) pH Units | BS 1377-3:2018, Cl. 12 | | |
| | Ground Water | Sulphate Content of Ground Water | BS 1377-3:2018, Cl. 7.8, 7.3.4.4 & 7.6 | Р | |
| | | Chloride Content of Ground Water | BS 1377-3:2018, Cl. 9.2 | | |





Al Hai & Al Mukkadam for Geotechnical Works L.L.C, NAL 101 Testing Laboratory, (ISO/IEC 17025:2017)

Al Mussafah, Abu Dhabi, UAE

Issue Date: 12-04-2022 Expiry Date: 02-11-2024

Issue No: 06

| Testing Field | Materials/ Products tested | Type of test/ Test parameter/ Properties measured/Range of measurement | Test Method (Standard, Internal Procedure, Technique) | Permanent lab (P) / Client- site (S) | |
|---------------|--|--|--|---|--------|
| Reporting | Ground Investigation | Code of practice for ground investigations Reporting | BS 5930:2015; Section 10 Cl. 63 | Р | |
| | Soil | In Situ Density (Sand Replacement Method Suitable for Fine, Medium and Coarse-Grained Soils, Large And Small Pouring Cylinder), | BS 1377-9:1990; AMD 13925- 2002, Cl. 2.2 AMD 8264-1995 | S/P | |
| | | Determination of dry density/ moisture content relationship using 4.5Kg rammer for coarse and medium gravel size particles) | BS 1377-4:1990; AMD 13925- 2002, Cl. 3.5 & 3.6 | Р | |
| | Concrete Testing Part 11 test specified Concrete Concrete Testing Part 11 Concrete Conc | Testing hardened concrete. Shape, dimensions and other requirements for specimens and molds | BS EN 12390-1: 2021 | | |
| | | Testing hardened concrete. Making and curing specimens for strength tests | BS EN 12390-2:2019 | | |
| Physical | | Compressive Strength of Concrete Cube | BS EN 12390-3: 2019 | | |
| | | Concrete | Testing hardened concrete. Density of hardened concrete | BS EN 12390-7:2019 |] P |
| | | | Testing concrete Part 111: Method of normal curing of test specimens (20°C method) | *BS 1881-111:1983; AMD. 9387:1997 | |
| | | Testing concrete Part 114: Methods for determination of density of hardened concrete | *BS 1881-114:1983; AMD 6721:1991 | | |
| | | Testing concrete Part 116: Method for determination of compressive strength of concrete cubes | *BS 1881-116:1983; AMD. 6720 :1991 | | |
| END | | | | | |

^{*} Standards are superseded / withdrawn







رخصة تجاربة **Commercial License**

تفاصيل الرخصة / License Details

License No. رقم الرخصة 120127

اسم الشراكة اي والمق دم لعمال فحص التربة)شركة ذات مسئولية محدودة (

Company Name AL HAI & AL MUKADDAM FOR GEOTECHNICAL WORKS)L.L.C.(

الإسم التجارى الحاي والمقدم لعمال فحص التربة)ش . ذ. م. م(

AL HAI & AL MUKADDAM FOR GEOTECHNICAL WORKS)L.L.C.(**Trade Name**

Legal Type ذات مسئولىة محدودة الشكل القانوني Limited Liability Company)LLC(

Expiry Date Issue Date 18/08/2024 تاريخ الإنتهاء 19/08/1989 تاريخ الإصدار

الرقم العالمي رقم الرخصة الام D&B D-U-N-S® 534465398 Main License No. 120127

Register No. رقم السجل التجارى DCCI No. عضوية الغرفة 53410 56245

الاطراف / License Members

الصفة / Role Name / الإسم رقم الشخص/.No الحصص / Share الجنسية / Nationality

> لبنان / Lebanon محمد احمد المقدم مدير / Manager 20227

> > MOHAMAD AHMAD MUKADDAM

نشاط الرخصة التجارية / License Activities

Soil Analysis Services

Chemical & Biological Laboratory

Physical & Mechanical Testing Laboratory

Geophysical & Geological Studies & Services

Scientific & Laboratory Equipment Trading

Phone No 971-4-8854854 تليفون

971-4-8854772 فاكس Mobile No 971-50-7758294 هاتف متحرك

اليل كيماوية وبيولوجية

ت فحص التربة

س الميكانيكية والفيزيائية

بخدمات الجيوفيزيائية والجيولوجية

المعدات والجهزة العلمية والمعملية

Address / العنوان

60462 P.O. Box صندوق بريد

Parcel ID 598-1102 رقم القطعة

البريد الإلكتروني / INFO@AHAMGEO.COM Email

لك الحاى والمقدم لعمال فحص التربه - مجمع دبي للستشمار الولى

الملاحظات / Remarks

12/09/2023 15192970 **Print Date** 14:18 تاريخ الطباعة Receipt No. رقم الإيصال

THE EMIRATES

Fax No

بتك التجارية من خلل البرسائل البنصية القصيرة، أرسل رقم البرخصة إلى 6969)دو/ائتصالت (للحصول على اذن الدفع Now you can renew your trade license by sending a text message)SMS(. Send your trade

license number to 6969)Du/ Etisalat(to receive payment voucher.

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ACCREDITATION CERTIFICATE

LB-TEST-005

Emirates International **A**ccreditation **C**entre

has accredited

AL HAI & AL MUKADDAM FOR GEOTECHNICAL WORKS

Dubai Investment Park, Dubai- United Arab Emirates

In accordance with the requirements of

ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories to undertake the tests in the attached accreditation scope

This Accreditation is invalid without the attached accreditation scope and shall remain in force within the validity period printed below, subject to continuing compliance with the requirements of the accreditation criteria.

Validity: 28/09/2023 to 15/10/2026

Initial Accreditation Date: 16/10/2005





Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Test Materials/Products | Test Name | Test Method |
|----------------------------|------------------------------|---|
| Concrete | Testing concrete | BS 1881 Part 124 Clause |
| | Methods for analysis of | 10.2 |
| | hardened concrete | |
| | Determination of | |
| | Chloride content in | |
| | hardened concrete | |
| Concrete | Testing concrete | BS 1881 Part 124 Clause |
| | Methods for analysis of | 10.3 |
| | hardened concrete | |
| | Determination of | |
| | Sulphate content in | |
| | hardened concrete | |
| | Materials/Products Concrete | Materials/Products Test Name Testing concrete Methods for analysis of hardened concrete Determination of Chloride content in hardened concrete Methods for analysis of hardened concrete Determination of Sulphate content in |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

Issue no.: 14 Date: 28-09-2023 Valid to: 15-10-2026

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|------------------|----------------------------|---------------------------|-----------------------|
| Chemistry | Soil | Methods of test for soils | BS 1377 Part 3 Clause |
| | | for civil engineering | 5.3 |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the | |
| | | sulphate content of soil | |
| | | and ground water- | |
| | | Preparation of soil and | |
| | | its water extract | |

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Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|------------------|----------------------------|---------------------------|-------------------------|
| Chemistry | Soil | Methods of test for soils | BS 1377 Part 3 Clause |
| | | for civil engineering | 5.2 & 5.5 |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the | |
| | | sulphate content of soil | |
| | | and ground water: | |
| | | - Preparation of soil and | |
| | | its acid extract | |
| | | - Gravimetric method for | |
| | | analysis of acid or water | |
| | | extract or ground water | |
| Chemistry | Soil | Methods of test for soils | BS 1377 Part 3 Clause 9 |
| | | for civil engineering | |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the PH | |
| | | Value | |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|------------------|----------------------------|---|------------------------------|
| Chemistry | Soil | Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests Determination of the chloride content- Determination of water-soluble chloride content | BS 1377 Part 3 Clause 7.2 |
| Chemistry | Soil | Methods of test for soils for civil engineering purposes. Part 3: Chemical and electro-chemical tests Determination of the chloride content - Determination of acid-soluble chloride content | BS 1377 Part 3 Clause 7.3 |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|---------------------------|-------------------------|
| Chemistry | Soil | Methods of test for soils | BS 1377 Part 3 Clause 9 |
| | | for civil engineering | |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the PH | |
| | | Value | |
| Mechanical / Physical | Soil | Methods of test for soils | BS 1377 Part 2 Clauses |
| | | for civil engineering | 9.2 & 9.3 |
| | | purposes. | |
| | | Part 2: Classification | |
| | | tests | |
| | | Determination of particle | |
| | | size distribution: | |
| | | Wet and Dry sieving | |
| | | method | |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|-----------------------------|---------------------|
| Mechanical / Physical | Soil | BS 1377-2 — Methods | BS 1377-2 Clause 15 |
| | | of test for soils for civil | |
| | | engineering purposes | |
| | | Part 2: Classification | |
| | | tests and determination | |
| | | of geotechnical | |
| | | properties | |
| | | Determination of | |
| | | California Bearing Ratio | |
| | | (CBR) | |
| | | | |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

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Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|--------------------------|-----------------------|
| Mechanical / Physical | Soil | Determination of | BS 1377 Part 9 Clause |
| | | California Bearing Ratio | 2.2 |
| | | (CBR) | |
| | | | |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|---------------------------|----------------|
| Mechanical / Physical | Soil | Methods of test for Soils | BS 1377 Part 2 |
| | | for civil engineering | Clause 9.5 |
| | | purposes | Amd 9027(96) |
| | | Part 2- Classification | |
| | | Tests | |
| | | clause 9: Determination | |
| | | of particle size | |
| | | distribution | |
| | | 9.5: Sedimentation by the | |
| | | hydrometer method | |
| | | | |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|---------------------------|-------------------------|
| Mechanical / Physical | Soil | Methods of test for Soils | BS 1377 Part 2 |
| | | for civil engineering | Clause 4.3; Clause 4.4; |
| | | purposes | Clause 5.3 & Clause 5.4 |
| | | Part 2- Classification | Amd 9027(96) |
| | | Tests | |
| | | Clause 4: Determination | |
| | | of the liquid limit: | |
| | | • 4.3: Cone penetrometer | |
| | | method (definitive | |
| | | method) | |
| | | • 4.4: One-point cone | |
| | | penetrometer method | |
| | | Clause 5: Determination | |
| | | of the plastic limit and | |
| Mechanical / Physical | Hardened Concrete | Testing hardened | BS EN 12390 Part 1 |
| | | concrete. | |
| | | Part 1: Shape, | |
| | | dimensions and other | |
| | | requirements for | |
| | | specimens and moulds | |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

Issue no.: 14 Date: 28-09-2023 Valid to: 15-10-2026

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|---|--------------------|
| Mechanical / Physical | Hardened Concrete | Testing hardened concrete. Part 2: Making and curing specimens for strength tests | BS EN 12390 Part 2 |
| Mechanical / Physical | Hardened Concrete | Testing hardened concrete. Part 3: Compressive strength of test specimens | BS EN 12390 Part 3 |
| Mechanical / Physical | Hardened Concrete | Testing hardened concrete. Part 7: Density of hardened concrete | BS EN 12390 Part 7 |

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Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|---|---------------------------|
| Mechanical / Physical | Hardened Concrete | Testing hardened concrete. Part 8: Depth of penetration of water under pressure | BS EN ISO 12390 Part 8 |
| Mechanical / Physical | Hardened Concrete | Testing concrete. Method for determination of compressive strength of concrete cubes | BS 1881 Part 116 |
| Mechanical / Physical | Hardened Concrete | Determination of water absorption on hardened concrete | BS 1881 Part 122 +A1 |
| Mechanical / Physical | Hardened Concrete | Determination of Water Permeability | DIN 1048 Part 5 |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|----------------------------|-----------------------|
| Mechanical/Physical | Hardened Concrete | Testing concrete. | BS 1881 Part 114, AMD |
| | | Methods for | 6098, AMD 6721 |
| | | determination of | |
| | | density of hardened | |
| Mechanical/Physical | Hardened Concrete | Testing concrete | BS 1881 Part 111, AMD |
| | | Part 111: Method of | 6102, AMD 9387 |
| | | normal curing of test | |
| | | specimens (20°C | |
| | | method) | |
| Mechanical / Physical | Steel | Steel for the | BS 4449 Appendix C, |
| | | reinforcement of | Clause C.1.6.1 |
| | | concrete - Weldable | BS EN 15630 Part 1 |
| | | reinforcing steel - Bar, | |
| | | coil and decoiled product- | |
| | | Specification | |
| | | Steel bend tests | |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|----------------------------|--------------------|
| Mechanical / Physical | Steel | Steel for the | BS 4449 + A3 |
| | | reinforcement of | BS EN 15630 Part 1 |
| | | concrete - Weldable | ISO 6892 Part 1 |
| | | reinforcing steel - Bar, | |
| | | coil and decoiled product- | |
| | | Specification | |
| | | Steel tensile strength | |
| | | test | |
| Mechanical / Physical | Steel | Steel for the | BS 4449 +A3 |
| | | reinforcement of | BS EN 15630 Part 1 |
| | | concrete - Weldable | |
| | | reinforcing steel - Bar, | |
| | | coil and decoiled product- | |
| | | Specification | |
| | | Steel re bend tests | |



Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

Issue no.: 14 Date: 28-09-2023 Valid to: 15-10-2026

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|---------------------------|-------------------------|
| Mechanical / Physical | Blocks | Precast concrete | BS 6073 Part 1 |
| | | masonry units | Appendix A |
| | | Part 1: Specification for | |
| | | precast concrete | |
| | | masonry units | |
| | | Measurement of | |
| | | dimension | |
| Mechanical / Physical | Blocks | Precast concrete | BS 6073 Part 2 Appendix |
| | | masonry units | В |
| | | Part 2: Method for | |
| | | specifying precast | |
| | | concrete masonry units | |
| | | Routine rapid control | |
| | | test of compressive | |
| | | strength of blocks by | |
| | | manufacturer (fibre | |
| | | board test) | |
| | | | |

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Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

Issue no.: 14 Date: 28-09-2023 Valid to: 15-10-2026

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|-------------------------|---|--------------------------|
| Mechanical / Physical | Blocks | Precast concrete paving blocks | BS 6717 Part 1 Annex A-B |
| | | Part 1: Specification for paving blocks Determination of compressive strength | |

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Construction Materials Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|---------------------------|-------------------------|
| Mechanical / Physical | Blocks | Precast concrete paving | BS 6717 Part 1 Annex A- |
| | | blocks | В |
| | | Part 1: Specification for | |
| | | paving blocks | |
| | | Measurement of | |
| | | dimensions and plan area | |
| | | | |
| | | | |

| Accreditation History | | | |
|-----------------------|--|------------|--|
| Issue no. | Details | Date | |
| 14 | Renewal accreditation and addition of scope as part of cube test | 28-09-2023 | |
| 13 | Renewal accreditation and comply with the new accreditation number format | 01-03-2021 | |
| 12 | Comply with ISO/ IEC 17025:2017 | 28-04-2020 | |
| 11 | Updating the test method and first issuance under the name of EIAC (which was formerly known as DAC) | 18-04-2019 | |



Geotechnical Investigation

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|----------------------|-------------------------|----------------------------|-------------------------|
| Physical/ Mechanical | Ground Water | Code of practice for Site | BS 5930 Section 4 |
| | | Investigation | Clause 4.26 & Section 8 |
| | | Ground water level | Clause 52 |
| | | measurement | |
| Physical/ Mechanical | Ground Water | Code of practice for Site | BS 5930 Section 4 |
| | | Investigation | Clause 26.4 |
| | | Ground water sampling | |
| | | | |
| Physical/ Mechanical | Soil | Methods of test for soils | BS 1377 Part 9 Section |
| | | for civil engineering | 3.3 |
| | | purposes. | |
| | | Part 9: In-situ tests | |
| | | In-situ penetration tests- | |
| | | Determination of the | |
| | | penetration resistance | |
| | | using the split-barrel | |
| | | sampler (the standard | |
| | | penetration test SPT) | |
| | | | |



Geotechnical Investigation

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|----------------------|----------------------------|--|----------------------------------|
| Physical/ Mechanical | Soil | Code of practice for Site Investigation | BS 5930 Section 4 Clause 25.6 |
| | | Soil sampling | |
| Physical/ Mechanical | Soil | Code of practice for Site Investigation Soil description | BS 5930 Section 6 |
| Physical/ Mechanical | Rock | Code of practice for Site Investigation Rock quality designation | BS 5930 Section 6 |
| Physical/ Mechanical | Rock | Code of practice for Site Investigation Core recovery | BS 5930 Section 6 |
| Physical/ Mechanical | Rock | Code of Practice for Site Investigations Geotechnical Reporting | BS 5930 Section 10 |



Geotechnical Investigation

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|----------------------|----------------------------|---|-------------|
| Physical/ Mechanical | Rock | Standard Test Methods for Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress and Temperatures | ASTM D7012 |
| Physical/ Mechanical | Rock | Standard Practices for Preparing Rock Core as Cylindrical Test Specimens and Verifying Conformance to Dimensional and Shape Tolerances | ASTM D4543 |



Geotechnical Investigation

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|------------------|----------------------------|---------------------------|-----------------------|
| Chemistry | Soil | Methods of test for soils | BS 1377 Part3 Clause |
| | | for civil engineering | 9 |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of pH | |
| | | value of Ground Water | |
| | | | |
| Chemistry | Soil | Methods of test for soils | BS 1377 Part 3 Clause |
| | | for civil engineering | 7.3 |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the | |
| | | chloride content- | |
| | | Determination of acid- | |
| | | soluble chloride content | |



Geotechnical Investigation

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Tes | t Meth | od |
|------------------|----------------------------|---------------------------|-----------|--------|--------|
| Chemistry | Soil | Methods of test for soils | BS 1377 | Part 3 | Clause |
| | | for civil engineering | 5.2 & 5.5 | | |
| | | purposes. | | | |
| | | Part 3: Chemical and | | | |
| | | electro-chemical tests | | | |
| | | Determination of the | | | |
| | | sulphate content of soil | | | |
| | | and ground water: | | | |
| | | - Preparation of soil and | | | |
| | | its acid extract | | | |
| | | - Gravimetric method for | | | |
| | | analysis of acid or water | | | |
| | | extract or ground water | | | |
| | | | | | |



Geotechnical Investigation

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

Issue no.: 12 Date: 28-09-2023 Valid to: 15-10-2026

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|------------------|----------------------------|---------------------------|-----------------------|
| Chemistry | Soil | Methods of test for soils | BS 1377 Part 3 Clause |
| | | for civil engineering | 7.2 |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the | |
| | | chloride content- | |
| | | Determination of water- | |
| | | soluble chloride content | |
| Chemistry | Soil | Methods of test for soils | BS 1377 Part 3 Clause |
| | | for civil engineering | 5.3 |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the | |
| | | sulphate content of soil | |
| | | and ground water- | |
| | | Preparation of soil and | |
| | | its water extract | |
| | | | |



Geotechnical Investigation

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

Issue no.: 12 Date: 28-09-2023 Valid to: 15-10-2026

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|------------------|----------------------------|---------------------------|-----------------------|
| Chemistry | Ground Water | Methods of test for soils | BS 1377 Part 3 Clause |
| | | for civil engineering | 7.2 |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the | |
| | | chloride content- | |
| | | Determination of water- | |
| | | soluble chloride content | |
| | | | |



Geotechnical Investigation

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

Issue no.: 12 Date: 28-09-2023 Valid to: 15-10-2026

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|------------------|----------------------------|---------------------------|-----------------------|
| Chemistry | Ground Water | Methods of test for soils | BS 1377 Part 3 Clause |
| | | for civil engineering | 5.4 |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the | |
| | | sulphate content of soil | |
| | | and ground water- | |
| | | Preparation of ground | |
| | | water for testing | |
| | | | |



Geotechnical Investigation

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|------------------|----------------------------|---------------------------|-------------------------|
| Chemistry | Ground Water | Methods of test for soils | BS 1377 Part 3 Clause 9 |
| | | for civil engineering | |
| | | purposes. | |
| | | Part 3: Chemical and | |
| | | electro-chemical tests | |
| | | Determination of the PH | |
| | | Value | |
| | | | |

| Accreditation History | | | |
|-----------------------|--|------------|--|
| Issue no. | Details | Date | |
| 12 | Renewal accreditation | 28-09-2023 | |
| 11 | Renewal accreditation and comply with the new accreditation number format | 01-03-2021 | |
| 10 | Comply with ISO/ IEC 17025:2017 | 28-04-2020 | |
| 09 | Updating the test method and first issuance under the name of EIAC (which was formerly known as DAC) | 18-04-2019 | |



Pile Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|----------------------------|--------------------------|-----------------------|
| Mechanical / Physical | Pile | Standard Test Method | ASTM D4945 and |
| | | for High-Strain Dynamic | Mukaddam Internal |
| | | Testing of Deep | Method Statement MIMS |
| | | Foundations | 03 |
| Mechanical / Physical | Pile | Standard Guide for | ASTM D6167 |
| | | Conducting Borehole | |
| | | Geophysical Logging: | |
| | | Mechanical Caliper | |
| Mechanical / Physical | Pile | Standard Test method | ASTM D6760 |
| | | for Integrity Testing of | |
| | | Concrete Deep | |
| | | Foundation by Ultrasonic | |
| | | Cross hole Testing | |
| | | | |



Pile Testing

LB-TEST-005

Al Hai & Al Mukaddam for Geotechnical Works

Dubai Investment Park, Dubai- United Arab Emirates

Issue no.: 04 Date: 28-09-2023 Valid to: 15-10-2026

| Type of Activity | Test Materials/Products | Test Name | Test Method |
|-----------------------|-------------------------|---------------------------|-----------------------|
| Mechanical / Physical | Pile | Standard Test Method | ASTM D5882 and |
| | | for Low Strain Impact | Mukaddam Internal |
| | | Integrity Testing of Deep | Method Statement MIMS |
| | | Foundations | 05 |
| | | | |

| Accreditation History | | | |
|-----------------------|--|------------|--|
| Issue no. | Details | Date | |
| 4 | Renewal Accreditation | 28-09-2023 | |
| | Renewal accreditation and comply with the new accreditation number format | 01-03-2021 | |
| 2 | Comply with ISO/ IEC 17025:2017 | 28-04-2020 | |
| | Segregate it from Construction Materials Testing scope as a separate scope named Pile Tersting and first issuance under the name of EIAC (which was formerly known as DAC) | 18-04-2019 | |

28 of 28

Professional License



تفاصيل الرخصة License Details

295 1976/07/17 License No. تاريخ الإصدار رقم الرخصة **Issue Date** تاريخ الإنتهاء Registration No. 65740 **Expiry Date** 2024/07/30

الاسم التجارى مؤسسة اى اندام الهندسية **Trade Name** I & M ENG. EST. Legal status Services Agency

الشكل القانوني وكيل خدمات

أطراف الرخصة License Members

| الحصص | الصفة | رقم الهوية / الجواز | الجنسية | إسم المستثمر | رقم المستثمر |
|--------|------------|---------------------|-------------|---------------------------------|--------------|
| Shares | Туре | ID/Passport No. | Nationality | Investor Name | Investor No. |
| %100 | المالك | 784194293584366 | لبنان | محمد احمد المقدم | 73311 |
| %0 | وكيل خدمات | 784195254386170 | الإمارات | محمد حميد عبدالله دلموك النعيمى | 26871 |

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رقم الهاتف المتحرك: 0504591377 صندوق البريد: 5116 الشار قة البريد الالكترونى: info@ahamgeo.com



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Membership Certificate

United Arab Emirates المتحددة

2023

إِن غرفة تجارة وصناعة الشارقة بناءً على قانونها رقم (٩) لعام ٢٠١٨م Sharjah Chamber of Commerce and Industry according to the law no. (9) 2018

مؤسسة اى اندام الهندسية

قد سحلت

I & M ENG. EST.

:Company Name

295

رقم الترخيص: License NO:

002592

رقم العضوية:

:Membership Number

65740

رقم السجل التجاري:

THE STATE OF

الجنسية:

65740

: Commercial Registration NO

الامارات

:Nationality

الممتازه

: Category

الفنة:

مؤسسة فردية / وكيل

الشكل القانوني : Legal Form :

جنسية الشركاء:

لبنان, الامارات,

: Partners Nationality

العنوان:

SHARJAH INDSTRIAL AREA_17 AI Khan Street

: Address

, استشارات هندسية فئة أولى إختصاص , ميكانيكي تربة ومواد بناء

لممارسة نشاط:

, First Category Engineering Consultancy , ميكانيكي تربة ومواد بناء

الشارقة-صناعية رقم17/الشارقة-- خلف شارع الخان -شبرة رقم9ملك عبدالمجيد احمد اميري

ملاحظات:

: Activity

: Remarks

de

SEDD

تاريخ الإنتهاء 30/7/2024



تاريخ الإصدار 2/8/1992

ق ق الله ق الله

M 254183



التاريخ: <2023/09/20 م

المرجع: 108/1241/2023

شهادة تجديد

Renewal Certificate

| Certificate Number: | 22/2023 | رقم الشهادة: | |
|---------------------|-----------|-----------------|--|
| Issue date: | 18/9/2023 | تاريخ الإصدار: | |
| Expiry date: | 17/9/2024 | تاريخ الانتهاء: | |

| Sharjah City Municipality Certifies That | تشهد بلدية مدينة الشارقة بأن |
|--|------------------------------|
| I&M ENG. EST. | مؤسسة اى اند ام الهندسية |

| License No: | 295 | رقم الرخصة: | |
|-------------|------------|---------------|--|
| Tel: | 06-5350357 | هاتف: | |
| P.O. Box: | 5116 | صندوق البريد: | |

| Is | registered | under | the | Sharjah | Laboratories | مُسجّل ضمن برنامج الشارقة لتسجيل المختبرات. |
|----|----------------|-------|-----|---------|--------------|---|
| Re | gistration Pro | gram. | | | | سعبل طمل بردس المعارف للسعبيل المعتبرات |

| Scope: | المجال: |
|---|-------------------|
| Construction Material Testing | • فحص مواد البناء |
| Soil Testing | • فحص التربة |



SCM-DGS-PHL-F-05-01

شهادة تسجيل | Certificate of Registration

| Certification Number | RT 0078 | رقم الشهادة |
|-----------------------------|---|------------------------|
| Name of CAB | I & M ENG. EST. | اسم جهة تقييم المطابقة |
| Address | Sharjah - Industrial Area - Industrial Area -17, Sharjah UAE P.O. Box 5116 | العنوان |
| Issue Date | 07/06/2021 | تاريخ الإصدار |
| Expiry Date | 12/03/2025 | تاريخ الانتهاء |

| Scope | الأنشطة | | |
|--------------------|---------------|--|--|
| Testing Laboratory | مختبرات الفحص | | |

This certificate was issued based on the request of the conformity assessment body without any responsibility to be bared by Ministry of Industry and Advanced Technology toward others.

This is an electronic certificate and does not require stamp and signature. Certificate will be invalid in case of any modification



أصدرت هذه الشهادة بناء على طلب حهة تقييم المطابقة دون تحمل وزارة الصناعة والتكنولوجيا المتقدمة اى مسؤولية تجاه

هذه الشهادة صدرت إلكترونياً ولاتحتاج لختم أو توقيع، أي كشط أو تغيير في هذه الشهادة















شـهادة الاعـتمـاد Accreditation Certificate

Conformity Assessment Body's ID: NAL 204

I & M ENG. EST. Industrial Area – 17 Sharjah, UAE P.O. Box. 5116 , Sharjah, United Arab Emirates

Accredited according to the International Standard ISO/IEC 17025₁ to undertake tests as specified in the attached Accreditation Scope.

Accredited on: 29/01/2024

Expires on: 28/01/2027

1 Accreditation in accordance with the International Standard ISO/IEC 17025:2017 "General requirements for the competence of testing and calibration laboratories" and the relevant ENAS and ILAC requirements.

This certificate is invalid without the attached scope of accreditation, which subjected to annual surveillances as per ENAS procedure. Certificate can be updated or re-issued until the expiry date defined above. The validity of the certificate is subjected to continuous compliance with the requirements of the accreditation system. The lab is responsible for the results of its testing.

This is an electronic certificate and does not require stamp and signature. Certificate will be invalid in case of any modification.

ot require stamp and signature.

الرمز التعريفي لجهة تقييم المطابقة: NAL 204

مؤسسة آى أند إم الهندسية المنطقة الصناعية 17- الشارقة صندوق بريد رقم 5116 ، الشارقة، الإمارات العربية المتحدة

حاصل على الإعتماد لطرق الفحص الواردة في وثيقة المجال المرفقة وفقاً للمواصفة الدولية ISO/IEC 17025₁

تاريخ منح الاعتماد: 29/01/2024

تاريخ الانتهاء: 2027/01/28

1 وفقاً لمتطلبات المواصفة الدولية ISO/IEC 17025:2017 "المتطلبات العامة لكفاءة مختبرات الفحص والمعايرة" والمتطلبات ذات العلاقة الخاصة بنظام الإعتماد الوطني الإمارايENAS والمنظمة الدولية لاعتماد المختبرات ILAC.

مجال الاعتماد جزء أساسي من هذه الشهادة حيث تخضع مجالات الاعتماد المذكورة في الوثيقة المرفقة لعمليات متابعة لاحقة من قبل نظام الإعتماد الوطني الإماراتي ENAS، وتعتبر هذه الشهادة صالحة وقابلة للتحديث واعادة الاصدار حتى تاريخ الانتهاء المدون اعلاه شريطة استمرار المختبر المذكور اعلاه في تطبيق متطلبات نظام الاعتماد سالفة الذكر. يتحمل المختبر مسؤولية نتائج الفحص الصادرة عنه.

هذه الشهادة صدرت إلكترونياً ولا تحتاج لختم أو توقيع، أي كشط أو تغيير في هذه الشهادة يلغيها.

تاريخ منح الإعتماد لأول مرة: 2024/01/29

هاتف TEL 600565554 ص.ب. P.O.BOX 48666 أبوظبي، دبي، الإمارات العربية المتحدة P.O.BOX 48666 ص.ب



Initial Accreditation Date: 29/01/2024



www.moiat.gov.ae













I & M ENG. EST., NAL 204 Testing Laboratory, (ISO/IEC 17025:2017)

Industrial Area - 17 Sharjah, UAE P.O. Box. 5116, Sharjah, United Arab Emirates

Issue Date: 29/01/2024 Expiry Date: 28/01/2027

Issue No: 1

| Testing Field | Materials/ Products Tested | Type of test/ Test parameter/ Properties measured/Range of measurement | Test Method (Standard, Internal Procedure, Technique) | Permanent lab (P) / Client-site (S) |
|---------------|----------------------------------|---|--|---|
| Physical | SOIL | Determination of insitu density by sand replacement method | BS 1377-9:1990, CI. 2.2, AMD. 8264/95 | P/S |
| Physical | SOIL | Determination of Water Content of Soil | BS 1377 Part 2:1990 AMD 9027- 1996 Clause 3.2, | Р |
| Physical | SOIL | Determination of dry density/water content relationship Compaction method using 4.5kg rammer with 1L mold | BS 1377-2:2022 Clause 11.5 | Р |
| Physical | Soil | Determination of dry density/water content relationship Compaction method using 4.5kg rammer with CBR mold | BS 1377-2:2022 Clause 11.6 | Р |
| Physical | Soil | Determination of Water (Moisture) Content of soil sample | BS EN ISO 17892- 1:2014+ A1:2022. | Р |

This is an electronic certificate and does not require stamp and signature. Certificate will be invalid in case of any modification.



هذه الشهادة صدرت إلكترونياً ولا تحتاج لختم أو توقيع، أي كشط أو تغيير في هذه الشهادة يلغيها.

ACF 11-22; Rev.4; Page 1 of 2

ENAS Program Manager:

هاتف TEL 600565554 ص.ب. P.O.BOX 48666 أبوظي، دبي، الإمارات العربية المتحدة P.O.BOX 48666 وأبوظي، دبي، الإمارات العربية المتحدة

















I & M ENG. EST.. NAL 204 Testing Laboratory, (ISO/IEC 17025:2017)

Industrial Area – 17 Sharjah, UAE P.O. Box. 5116, Sharjah, United Arab Emirates

Issue Date: 29/01/2024 Expiry Date: 28/01/2027

Issue No: 1

| Physical | Concrete | Testing hardened concrete- Compressive Strength of test specimens | BS EN 12390- 3:2019 | Р | |
|----------|----------|--|------------------------|---|--|
| Physical | Concrete | Shape, dimensions and other requirements for specimens and molds | BS EN 12390- 1:2021 | Р | |
| Physical | Concrete | Material Testing hardened concrete making and curing specimens for strength tests. | BS EN 12390- 2:2019 | Р | |
| Physical | Concrete | Density of hardened concrete | BS EN 12390- 7:2019 | Р | |
| END | | | | | |

This is an electronic certificate and does not require stamp and signature. Certificate will be invalid in case of any modification.



هذه الشهادة صدرت إلكترونياً ولا تحتاج لختم أو توقيع، أي كشط أو تغيير في هذه الشهادة بلغيها.

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تاريخ الإصدار/Issue Date: 2013-03-26

Registration Certificate

شهادة تسجيل

مورد/مقاول/استشاري

Registration Number: 34043

File Number: A- 123

رقم التسجيل: 34043

رقم العلف: 123 - ٨

Trade Name: AL HAI & AL MUKADDAM الأسم التواري: الحاق والمقدم لاعسال قحص التولية - EEOTECHNICAL WORKS LLC

لَـ م م - أرع ابوظيي

وقد أعطيت هذه الشهادة بناء على رغبة الشركة دون أدنى مسولية أو التزام على الدائرة تجاه الغير والشكول البسندي

ق بحب على الترق العدل سبوية لعليت بيناتها في هذا إد النهاد الرخص / نعير ابن معومات هجه ينشر كه
 ب بحرج في الشعب همس فيستشاء حييه تعنى

CM-TC-CF-43 1.0 88th July 2012

