

# **CERTIFICATE OF ACCREDITATION**

This is to attest that

#### **QATAR ENGINEERING LABORATORIES (QEL)-FOREIGN BRANCH**

SHOP-9, BUILDING-2189, ROAD-1529 HIDD, KINGDOM OF BAHRAIN

**Testing Laboratory TL-454** 

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date October 7, 2024



International Accreditation Service

Issued under the authority of IAS management

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#### QATAR ENGINEERING LABORATORIES (QEL)-FOREIGN BRANCH

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Chemical	
ASTM C40/C40M	Standard test method for organic impurities in fine aggregates for concrete
ASTM C114	Standard test method for chemical analysis of hydraulic cement
ASTM C1152/C1152M	Standard test method for acid-soluble chloride in mortar and concrete
ASTM C1218/C1218M	Standard test method for water-soluble chloride in mortar and concrete
ASTM G57–06(2012)	Standard test method for field measurement of soil resistivity using the Wenner four-electrode method
BS 812-117	Testing aggregates - method for determination of water soluble chloride salts (appendix C only)
BS 812-118	Testing aggregates - methods for determination of sulphate content (test 8 only)
BS 1377-3	Methods of test for soils civil engineering purposes-chemical and electro- chemical tests
BS 1881-124	Testing concrete- methods for analysis of hardened concrete (tests 10.2 and 10.3)
BS EN 196-2	Method of testing cement- chemical analysis of cement
BS EN 1744-1	Tests for chemical properties of aggregates – chemical analysis
BS EN 14630	Determination of carbonation depth in hardened concrete
HACH 8039	Nitrate (cadmium reduction method)
HACH 8131	Sulfide (USEPA methylene blue method)
HACH 8153	Nitrite (ferrous sulfate method)
HACH 8167	Total Chlorine (USEPA DPD method)
HACH 8185	Silica, high range (0 to 75.0 mg/L) (silicomolybdate method)
HACH 8507	Nitrite (USEPA diazotization method)



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IWPT-97	Based on BS EN 1008
SMEWW 2320	Alkalinity (method B)
SMEWW 2340	Hardness (method C)
SMEWW 2510	Conductivity (method B)
SMEWW 2540	Solids (methods B, C and D)
SMEWW 3500-Ca	Calcium (method B)
SMEWW 3500-Fe	Iron (method B)
SMEWW 3500-Mg	Magnesium (method B)
SMEWW 4500-CI	Chlorine (residual) (method B and G)
SMEWW 4500-H+	pH value (method B)
SMEWW 4500-NH3	Nitrogen (ammonia) (method B and C)
SMEWW 4500-P	Phosphorus (method E)
SMEWW 4500-S2	Sulfide (method D)
SMEWW 4500-SO42	Sulfate (method E)
SMEWW 5210	Biochemical oxygen demand (BOD) (method B)
SMEWW 5220	Chemical oxygen demand (COD) (method D)
СМТ	
ASTM A370	Standard Test Methods and Definitions of Mechanical Testing of Steel Products (Tension, sections 7 to 14 and Bend section 15)
ASTM C39/C39M	Standard test method for compressive strength of cylindrical concrete specimens
ASTM C78/C78M	Standard test method for flexural strength of concrete (using simple beam with third-point loading)
ASTM C88	Standard test method for soundness of aggregates by use of sodium sulfate or magnesium sulfate
ASTM C109/C109M-16	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
ASTM C127	Standard test method for relative density (specific gravity) and absorption of coarse aggregate
ASTM C128	Standard test method for relative density (specific gravity) and absorption of fine aggregate



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ASTM C131/C131M	Standard test method for resistance to degradation of small-size coarse aggregate by abrasion and impact in the Los Angeles machine
ASTM C136/C136M	Standard test method for sieve analysis of fine and coarse aggregates
ASTM C138/C138M	Standard test method for density (unit weight), yield, and air content (gravimetric) of concrete
ASTM C140/C140M	Standard test methods for sampling and testing concrete masonry units and related units
ASTM C142/C142M	Standard test method for clay lumps and friable particles in aggregates
ASTM C143/C143M	Standard test method for slump of hydraulic-cement concrete
ASTM C172/C172M	Standard practice for sampling freshly mixed concrete
ASTM C191-18	Standard Test Method for Time of Setting of Hydraulic Cement by Vicat Needle (Method A)
ASTM C204-18	Standard Test Methods for Fineness of Hydraulic cemnt by Air Permeability Apparatus
ASTM C231/C231M	Standard test method for air content of freshly mixed concrete by the pressure method
ASTM C232/C232M	Standard test method for bleeding of concrete
ASTM C293/C293M	Standard test method for flexural strength of concrete (using simple beam with center-point loading)
ASTM C403/C403M	Standard test method for time of setting of concrete mixtures by penetration resistance
ASTM C469/C469M-14	Standard test method for static modulus of elasticity and Poisson's ratio of concrete in compression
ASTM C494/C494M-17	Standard specification for chemical admixtures for concrete (clause 18.3)
ASTM C496/C496M	Standard test method for splitting tensile strength of cylindrical concrete specimens
ASTM C535	Standard test method for resistance to degradation of large-size coarse aggregate by abrasion and impact in the Los Angeles machine
ASTM C642	Standard test method for density, absorption, and voids in hardened concrete
ASTM C876	Standard test method for corrosion potentials of uncoated reinforcing steel in concrete
ASTM C1064/C1064M	Standard test method for temperature of freshly mixed hydraulic cement concrete



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ASTM C1202	Standard test method for electrical indication of concrete's ability to resist chloride ion penetration
ASTM D1557	Standard test methods for laboratory compaction characteristics of soil using modified effort (56,000 ft-lbf/ ft3 (2,700 kN-m/m3))
ASTM D5334-14	Standard test method for determination of thermal conductivity of soil and soft rock by thermal needle probe procedure
ASTM D5731	Standard test method for determination of the point load strength index of rock and application to rock strength classifications
ASTM D6938	Standard test methods for in-place density and water content of soil and soil- aggregate by nuclear methods (shallow depth)
ASTM D7012	Standard test methods for compressive strength and elastic moduli of intact rock core specimens under varying states of stress and temperatures
BS 812-2	Testing aggregates- methods for determination of density
BS 812-103	Testing aggregates- method for determination of particle size distribution
BS 812-105.1	Testing aggregates- methods for determination of particle shape- flakiness index
BS 812-105.2	Testing aggregates – methods for determination of particle shape- elongation index of coarse aggregate
BS 812-106	Testing aggregate – method for determination of shell content in coarse aggregate
BS 812-109	Testing aggregates – methods for determination of moisture content
BS 812-110	Testing aggregates- methods for determination of aggregate crushing value (ACV)
BS 812-111	Testing aggregates- methods for determination of ten per cent fines value (TFV)
BS 812-112	Testing aggregates- method for determination of aggregate impact value (AIV)
BS 812-121	Testing aggregates – method for determination of soundness
BS 1377-2	Methods of test for soils for civil engineering purposes – classification tests (clauses 3.2, 4.3, 5.3, 6.5, 8.2, 9.2, 9.3 and 9.5 only)
BS 1377-4	Methods of test for soils for civil engineering purposes- compaction-related tests (clauses 3.3, 3.4, 3.5, 3.6 and 7 only)
BS 1377-9	Methods for test for soils for civil engineering purposes - in-situ tests (clauses 2.1, 2.2, 2.5, 4.1 and 5.1 only)
BS 1881-102	Testing concrete- method for determination of slump
BS 1881-108	Testing concrete - method for making test cubes from fresh concrete



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BS 1881-120	Testing concrete - method for determination of the compressive strength of concrete cores
BS 1881-122	Testing concrete- method for determination of water absorption
BS 1881-202	Testing concrete- recommendations for surface hardness testing by rebound hammer
BS 1881-204	Testing concrete- recommendations on the use of electromagnetic cover meters
BS 1881-208	Testing concrete- recommendations for the determination of the initial surface absorption of concrete
BS 6073-2	Precast concrete masonry units- guide for specifying precast concrete masonry units
BS 6717-1	Precast concrete paving blocks - specification for paving blocks
BS 7976-2:2002+A1:2013	Pendulum test value – method of operation
BS EN 196-1:2016	Methods of testing cement. Determination of strength
BS EN 196-3:2016	Methods of testing cement. Determination of setting time and soundness
BS EN 196-6:2010	Methods of testing cement. Determination of fineness
BS EN 446	Grout for prestressing tendons- grouting procedures
BS EN 772-1	Methods of test for masonry units – determination of compressive strength
BS EN 772-11	Methods of test for masonry units- determination of water absorption of aggregate concrete, autoclaved aerated concrete, manufactured stone and natural stone masonry units due to capillary action and the initial rate of water absorption of clay masonry units
BS EN 933-1	Tests for geometrical properties of aggregates- determination of particle size distribution- sieving method
BS EN 933-7	Tests for geometrical properties of aggregates – determination of shell content- percentage of shells in coarse aggregates
BS EN 1097-6	Tests for mechanical and physical properties of aggregates- determination of particle density and water absorption
BS EN 1097-8:2009	Tests for mechanical and physical properties of aggregates - determination of the polished stone value
BS EN 1338	Concrete paving blocks – requirements and test methods
BS EN 1339	Concrete paving flags – requirements and test methods
BS EN 1340	Concrete Kerb units – requirements and test methods



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BS EN 1367-4:2008	Tests for thermal and weathering properties of aggregates - determination of drying shrinkage
BS EN 1926	Natural stone test methods – determination of uniaxial compressive strength
BS EN 12350-2	Testing fresh concrete- slump-test
BS EN 12350-6	Testing fresh concrete- density
BS EN 12390-2	Testing hardened concrete- making and curing specimens for strength tests
BS EN 12390-3	Testing hardened concrete- compressive strength of test specimens
BS EN 12390-5	Testing hardened concrete- flexural strength of test specimens
BS EN 12390-6	Testing hardened concrete- tensile splitting strength of test specimens
BS EN 12390-7	Testing hardened concrete- density of hardened concrete
BS EN 12504-1	Testing concrete in structures- cored specimens- taking, examining and testing in compression
BS EN 12504-2	Testing concrete in structures - Non-destructive testing. Determination of rebound number
BS EN ISO 15630-1:2010	Steel for the reinforcement and prestressing of concrete. Test methods. Reinforcing bars, wire rod and wire
IWPT-109	Temperature monitoring in concrete aggregates/rock
IWPT-184	Determination of settlement characteristics of soil for lightly loaded foundation by the shallow pad maintained load test (zone load test) based on BS 1377- 9:1990 clause 4.2
Physical	
ASTM A90/A90M- 13(2018)	Standard test method for weight [mass] of coating on iron and steel articles with zinc or zinc-alloy coatings
ASTM D1143/1143M- 07(2013)e1	Test method for deep foundations under axial compressive load
ASTM D2172/D2172M	Standard test methods for quantitative extraction of bitumen from bituminous paving mixtures
ASTM D2584	Standard test method for ignition loss of cured reinforced resins
ASTM D2726/D2726M	Standard test method for bulk specific gravity and density of non-absorptive compacted bituminous mixtures
ASTM D3549/D3549M	Standard test method for thickness or height of compacted bituminous paving mixtures specimens



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ASTM D4138	Standard practices for measurement of dry film thickness of protective coating systems by destructive, cross-sectioning means
ASTM D5882	Standard test method for low strain impact integrity testing of deep foundations
ASTM D6760-14	Standard test method for integrity testing of concrete deep foundations by ultrasonic crosshole testing
ASTM D6926	Standard practice for preparation of bituminous specimens using Marshall apparatus
ASTM D6927	Standard test method for Marshall stability and flow of asphalt mixtures
ASTM D7234	Standard test method for pull-off adhesion strength of coatings on concrete using portable pull-off adhesion testers
BS EN 124	Gully tops and manhole tops for vehicular and pedestrian areas - Definitions, classification, general principles of design, performance requirements and test methods
BS EN 6566-5	Plywood - specification for moisture content
BS EN 12504-4:2004	Testing concrete - determination of ultrasonic pulse velocity in concrete
IWPT-183	NACE recommended practice for testing of protective coatings based on ASTM standards D5162 and G62-14

HACH- Hach Company

IWPT- In-house Work Procedure for Testing

SMEWW- Standard Methods for the Examination of Water and Wastewater

