



Lonestar Technical & Industrial Services L.L.C, NAL 046

Testing Laboratory (ISO/IEC 17025:2017)

Industrial city of Abu Dhabi (ICAD), Abu Dhabi, UAE

Issue Date: 15-09-2021 Expiry Date: 14-09-2024

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)
		Determination of Dry Density- Moisture Content Relationship Using 4.5 kg Rammer for Coarse and medium size Particles	BS 1377-4:1990, AMD 13925-2002, Cl. 3.5 & 3.6	
		Determination of In-situ Density by Sand Replacement Method.	BS 1377-9:1990, Cl. 2.2	
Construction	Soil	Determination of California Bearing Ratio (CBR)	BS 1377-4:1990, AMD 13925-2002 Cl. 7.2.3	Р
Materials		Determination of water content	*BS 1377-2:1990 Cl. 3.2	
(Physical Tests)		Density and unit weight of soil in place by sand cone method	ASTM D1556:2015	
		Determination of California Bearing Ratio (CBR)	ASTM D1883:2016	
	relationsh	Density/moisture content relationship	ASTM D 1557-12	
		Sampling	ASTM D75 / D75M:2019	
Construction Materials	Hardened	Determination of Compressive strength of concrete Cubes	*BS 1881-116:1983 - AMD 6720 :1991	В
(Physical Tests)	Concrete	Determination of density of hardened concrete	*BS 1881-114:1983 - AMD 6721:1991	- P





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		Method of normal curing of test specimens (20°C method)	*BS 1881-111:1983 - AMD. 9387:1997	
		Determination of Compressive strength of Hardened Concrete	BS EN 12390-3:2019	
	Hardened Concrete Shareq mo	Determination of density of hardened concrete	BS EN 12390-7:2019	
Construction Materials		Making and curing specimens for strength tests	BS EN 12390-2:2019	
(Physical Tests)		Shape, dimensions and other requirements for specimens and molds	BS EN 12390-1:2012	Р
		Determination of Depth of Penetration of Water Under Pressure in Hardened Concrete	BS EN 12390-8:2019	
		Electrical Indication of concretes Ability to Resist Chloride Ion Penetration	ASTM C 1202:2019	
		Determination of Water Absorption of Hardened Concrete	BS 1881-122:2011	





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	Distribution (Wet and dry Sieving) Density, Relative Density (specific gravity) and Absorption of Coarse Aggregates Determination of particle shape, Flakiness index Determination of Elongation Index of Coarse Aggregates Determination of Aggregates Determination of Aggregates Crushing value Soundness of Aggregates by Use of Sodium Sulfate & Magnesium Sulfate Descriptions of Fine Clay Silt and		BS 812-103.1:1985 Cl. 7.2 & 7.3	
		gravity) and Absorption of Coarse	ASTM C 127:2015	P
		· · ·	BS EN 933-3-2012	
Construction			BS 812-105:1990, Section 105.2	
Materials (Physical			BS 812-110:1990	
Tests)		of Sodium Sulfate & Magnesium	ASTM C88/ C 88 M-2018	P
		BS EN 933-1:2012	1	
		Clay Lumps and Friable Particles	ASTM C142 / C142M-17	
		Determination of Particle Density & Water Absorption	BS 812-2:1995, Clause 5	
		Ten Percent Fines Value	BS 812-111:1990	





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Construction Materials	Aggregates	Resistance to Degradation of Smal Size Coarse Aggregate by Abrasio and Impact in the Los Angeles Machine		Р
(Physical Tests)		Sieve Analysis of Fine and Coarse Aggregates	ASTM C136:2014	
	Asphalt	Asphalt Content of Hot-Mix Aspha by Ignition Method	ASTM D6307-2019	Р
Geotechnical Testing		Standard Penetration Test Determination of the penetration resistance using the split-barre sampler (Standard penetration test-SPT)	el 8264-1995 CL 3 3	S
	s e S	Soil Sampling Obtaining disturber samples from boring tools excavating equipment	BS 5930:2015 Clause 25.3	S
		Soil Sampling Open-tube sampling techniques	BS 5930:2015 Clause 25.4	S
		Rock Sampling Rotary core sampling techniques	BS 5930:2015 Sec. 4 Cl. 24.11 & 25.7	S
	Rock	Rock Quality Designation & Rock Core Recovery	BS 5930:2015, Section 6 Clause:36	P/S





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	Soil & Rock	Soil and Rock description	BS 5930:2015; Section 6, CI 32 & CI 36	P/S	
	Ground Water	Ground water sampling	BS 5930:2015 Section 4 Clause:26	S	
	Ground Water	Ground Water Level Measurement	BS 5930:2015 Section 8 Clause 52 (Clause 52.5 Standpipe Piezometer)	S	
	Soil	Determination of Particle Size Distribution	BS EN ISO 17892-4:2016, Clauses 5.2		
Geotechnical Testing	Soil	Hydrometer Sedimentation by the hydrometer method	BS EN ISO 17892-4:2016, Clauses 5.3		
	Soil	Liquid Limit, plastic Limit And Plasticity Index	ASTM D4318- 17e1		
	Soil	Liquid Limit, plastic Limit and Plasticity Index	BS EN ISO 17892- 12:2018, Clauses 5.3,5.5 & 6.5	P	
	Soil	Determination of water content	BS EN ISO 17892-1-2014		
	Soil & Rock	Natural Water Content Determination of Water (Moisture) Content of Soil and Rock by Mass	ASTM D 2216-2019		





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	Rock	Preparing Rock Core Specimens and Determining Dimensional and Shape Tolerances	ASTM D4543-2019	
Geotechnical Testing		Compressive Strength of Intact Rock Core Specimens	ASTM D7012-2014 e1, Method C	Р
	Reporting	Reporting	BS 5930:2015: Section 10, Cl. 63	
		Steel for the Reinforcement of Concrete: Weldable Reinforcing Steel: Bar, Coil and Decoiled Product: Specification Tensile Properties	BS 4449:2005+A3 :2016, Cl. 7.2.3	
Construction Materials (Physical Tests)	Tensile Properties	Steel for the reinforcement and prestressing of concrete. Test methods. Part 1: Reinforcing bars, wire rod and wire	BS EN ISO 15630-1:2019, Cl. 5	Р
		Metallic materials. Tensile testing. Method of test at room temperature	BS EN ISO 6892-1:2019	
	Bend performance	Steel for the reinforcement of concrete. Weldable reinforcing steel. Bar, coil and Decoiled product. Specification	BS 4449: 2005+A3 :2016, Cl. 7.2.5	Р





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Construction Materials (Physical Tests)	Bend performance	Steel for the reinforcement and prestressing of concrete. Test methods. Part 1: Reinforcing bars, wire rod and wire	BS E	EN ISO 15630-1:2019, Cl. 7	Р
Deep Foundation	Pile Integrity	Low Strain Impact Integrity Testing of Deep Foundations		M D5882-16	P/S
	Water / Waste water / Seawater / Ground water / Potable water	Organic Impurities Acid Soluble Chlorides as CI Acid Soluble Sulphates as SO ₃	C40 CHM 1744 CHM	M-SOP- 273 based on ASTM / C40M-20 M-SOP- 274 based on BSEN 1- Part 5 2006. M-SOP- 252 based on BSEN 1-1 2009 + A1 2012.	
		pH	CHN & Ch APH Meth	M-SOP-119 B, CHM-SOP-119 C HM-SOP 119 D based on IA-AWAA-WEP-23 rd Ed 2017 nod 4500 H+ B.	
Chemical		Oil & Grease	base	M-SOP-30E & CHM-SOP 30F ed on APHA-AWAA-WEP-23rd 2017 Method 5520 B	Р
		Total Dissolved Solids at 180° C	068	M-SOP-068C& CHM-SOP- D based on APHA-AWAA-WEP- Ed 2017 Method 2540 C	
		Total Suspended Solids at 103°C - 105 °C	AW A 2540		
	Water / Waste water /	Chemical Oxygen Demand		M-SOP-019 D based on APHA- AA-WEP-23 rd Ed 2017 Method) B	
	Natural Waters	Biochemical Oxygen Demand (5 days Incubation @ 20°C)	1	M-SOP-020 D based on APHA- AA-WEP-23 rd Ed 2017 Method B	





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		Chlorides	CHM-SOP-017 C& CHM-SOP- 017 D based on APHA-AWAA- WEP-23 rd Ed 2017 Method 4500 CI B	
Chemical	Water / Waste water / Seawater /Ground water / Potable water	Sulphates as SO ₄	CHM-SOP-004D & CHM-SOP- 004C based on APHA-AWAA- WEP-23 nd Ed 2017 Method SO4- 2E	P
		Metals: Cd. Cr. Cu. Pb. Ni. Zn.	CHM-SOP-79 E based on APHA-AWAA-WEP-23 rd Ed 2017 Method 3120 B CHM-SOP-076 E Based on APHA-AWAA-WEP-23nd Ed 2017 Method 3112 B (for Hg)	
	Soil	Metals: Al, Ba, Cd, Ca, Cr, Cu, Co, Fe, Pb, Mg, Mn, Mo, Ni, K, Ag, Na, V, Zn, Hg, As, Be, Se, Ti	CHM-SOP-079 D based on US EPA SW 846/3010A US EPA CE 81-1-1981, US EPA SW 846/6010 B, CHM-SOP-076 C based on US EPA SW 846/7471 A (for Hg)	





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		рН	CHM-SOP-250 based BS 1377-3:2018 Cl 12	
		Water Soluble Chlorides	CHM-SOP-243 based on BS 1377-3:2018 Cl 9.2 (Volhard's method)	
	Soil	Acid Soluble Chlorides	CHM-SOP-244 based on BS 1377-3:2018 CI 9.3	
		Acid Soluble Sulphates as SO ₄	CHM-SOP-245 based on BS 1377-3:2018 Cl 7.2,7.6,7.9	
			Water Soluble Sulphates as SO ₄	CHM-SOP-246 based on BS 1377-3:2018 Cl 7.2, 7.3,7.6
Chemical	Ground Water Low Alloy Steel	Sulphate as SO ₄	CHM-SOP-248 based on BS 1377-3:2018 Cl 7.2, 7.6, 7.8	
		Chloride	CHM-SOP-247 based on BS 1377-3:2018 Cl 9.2	
		рН	CHM-SOP-249 based on BS 1377-3:2018 Cl 12	P
		Low Alloy Steel: C, Si, Mn, P, S, Cr, Mo, Ni, Al, Cu, V, Nb, Ti, N	Documented In-house method CHM-SOP-117	
	High Alloy Steel	High Alloy Steel C, Si, Mn, P, S, Cr, Mo, Ni, Al, Cu, V, N	Documented In-house method CHM-SOP-138	





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				1 COD 057 h 1 1 MACA	
		PM 10	_	I-SOP-257 based on MASA- 2016 (3 rd edition)	
	Environmental	TSP		l-SOP-257 based on MASA- 2016 (3 rd edition)	
	Air	SO ₂	_	I-SOP-258 based on MASA- A:2016 (3 rd edition)	
		NOx	406:	I-SOP-162 based one MASA- 2016 / Federal Register Vol. Io 84: title 42 chapter :IV:1971	
Environmental	Stack Emissions SC NO Environmental	PM	_	I-SOP-170 based one US EPA od # 5 and 17	D
Environmental		СО	1	I-SOP 188 based on US EPA 030 / 034:1997	Р
		NOx	_	I-SOP 188 based on US EPA 030 / 034:1997	
		SO ₂		I-SOP 188 based one US EPA :1997	
		NO ₂	1	I-SOP 188 based on US EPA 030 / 034:1997	
		Noise	CHN 2:20	I-SOP-255 based on ISO 1996- 17	
	140136		Acou	stic Part 2 Cl:7.5	
END					

^{*} Standards are superseded / withdrawn / replaced.