

To,
M/s. Rajkot Metlab Services,
NH-27, Opp. Tulip Party Plot,
Near JCB Showroom,
Rajkot – 360 022.

Sub: Renewal of Empanelment of Material Testing Laboratory with Airports Authority of India.

Reference : RMS/VR/23/12 dated 17.03.2023

This is in context to your above referred request letter dated 17.03.2023 for empanelment with Airports Authority of India on the basis of NABL Certificate accreditation no. TC-5212 with validity upto 08.11.2024.

1. M/s. Rajkot Metlab Services, Rajkot is included in the approved list of material testing laboratories for the following testing facilities :

Name and address of Laboratory	M/s. Rajkot Metlab Services Address: NH-27, Opp. Tulip Party Plot, Near JCB Showroom, Rajkot – 360 022.
Contact details	Email Id : testing@rajkotlab.com Website : www.rajkotlab.com Mobile No. +91 9725213600
Laboratory is recommended for following Tests:	
1	Admixture : Ash Content, Chloride ion content, Dry Material Content, pH, Relative Density.
2	Aggregate, Rock Stone : Calcium Carbonate, Soluble Chloride as Cl, Sulphate as S03 (Acid Extract).
3	Aggregates : Alkali Aggregate Reactivity, Deleterious Material.
2	Cement & GGBS : Alkalies as (K2O), Alkalies as (Na2O), Alumina Oxide (as Al2O3), Calcium Oxide as (CaO), Chlorides (As Cl), Insoluble residue, Iron Oxide (as Fe2O3), Loss on ignition, percent by mass, magnesium oxide (MgO), Silicon Dioxide (As SiO2), Sulphur as S03.
3	Fine Aggregates : Organic Impurities
4	Pozzalanic Materials : Alumina Oxide (as Al2O3), Calcium Oxide as (CaO), Chlorides (As Cl), Iron Oxide (as Fe2O3), Loss on ignition, percent by mass, Magnesium oxide (MgO), Sulphur Trioxide (as S03).
5	Decorative Chromium Plating on steel or Zinc die – cast base: Acetic Acid – Salt Spray (Fog) Testing.

6	Electroplated and Anodized aluminum coatings : Neutral Salt Spray (NSS)
7	Metal and their alloys, Metallic Coatings, Conversion Coatings, Anodic Oxide Coatings, Organic coatings on metallic materials : Neutral Salt Spray (NSS)
8	Metal and their alloys, Metallic Coatings, Conversion Coatings, Anodic Oxide Coatings, Organic coatings on metallic materials, decorative coatings of copper, nickel & chromium or Nickel and Chromium, Anodic Coatings on Aluminium : Corrosion Test in Artificial Atmospheres – Salt Spray tests (NSS)
9	Cast Iron & Pig Iron : Aluminum, Carbon, Chromium, Copper, Manganese, Molybdenum, Nickel, Phosphorous, Silicon, Sulfur, Titanium, Vanadium
10	Iron and Steel (Pig Iron, Cast Iron, Steel, Carbon Steel, Low Alloy Steel, High Alloy Steel, Stainless Steel, etc) : Antimony, Arsenic, Calcium, Lead, Niobium, Nitrogen, Tin, Titanium, Tungsten, Zirconium.
11	Low, Medium, High Carbon Steel & Low, Medium, High Alloy Steel : Arsenic, Cobalt, Phosphorous, Aluminum, Antimony, Arsenic, Boron, Calcium, Carbon, Chromium, Cobalt, Copper, Lead, Manganese, Molybdenum, Nickel, Niobium, Nitrogen, Phosphorous, silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zirconium.
12	Stainless Steel, Medium and High Alloy Steel and Duplex Steel : Molybdenum, Carbon, Manganese, Nickel, Niobium, Phosphorous, silicon, Sulfur, Titanium, Tungsten.
13	Stainless steel, medium and High Alloy Steel, Tool Steel, Maraging Steel, High Manganese Steel and Duplex Steel : Carbon, Chromium, cobalt, copper.
14	Water for construction purpose : Acidity, Alkalinity, chloride Content, Inorganic Impurities (Fixed Solids), Neutralization with 0.02 N H ₂ SO ₄ , Neutralization with 0.02 N NaOH, Organic Impurities (Volatile Solids), PH, Sulphate Content, Total dissolved solids, Total Hardness, Total suspended solids matter.
15	AAC, CLC, CC Hollow and solid concrete blocks Block : Compressive Strength, Density, Dimensions – Height, Dimensions – Length, Dimensions – Width, Drying Shrinkage, Moisture Content.
16	Adhesives : Tensile adhesion strengths
17	Aggregates (Coarse Aggregates, Graded aggregates, Key aggregate, Stone, Ballast, Rock) : Flakiness index, Impact value, Los angles abrasion value (LAA), Sieve Analysis / Particle Shape & Size / Shape ratio / Material Finer / Gradation / Grain Size Analysis, Specific gravity, Water absorption.

18	Aggregates (Coarse Aggregates, Graded aggregates, Key aggregate, Stone, Ballast, Rock, Fine Aggregates, Stone dust, Sand, Crusher dust, Binding, Screening material): Petrographic Examination, Soundness by $MgSO_4$ and Na_2SO_4
19	Aggregates (Coarse, Graded aggregates, Key aggregate, Stone, Ballast, Rock) : 10% Fines Value, Bulk Density, Crushing value, Elongation index, Stripping value.
20	Aggregates (Fine Aggregates, Stone dust, Sand, Crusher dust, Binding, Screening material): Bulk density & voids, Gradation (Sieve analysis 0.015 to 10 mm sieve size), Material finer than 75 micron, Specific gravity, Water absorption.
21	Anchor Bars and Rock Bolts / Rebar Grouting : Pull Out Test.
22	Anti Stripping Agent : Boiling Water Test.
23	APP Membrane, Polyethylene Films and Sheets for Concreting Works : Ageing Test, Dart Impact Strength, Dart Impact Strength, Thickness.
24	Bituminous Mix (PMB, CRMB, etc) : Binder content, Density of Mix, Flow, Stability.
25	Burnt Clay Bricks : Dimension - Length, Width, Height
26	Burnt clay bricks and Fly ash bricks : Compressive strength, Efflorescence, Warpage, Water absorption.
27	Cement (OPC, PPC, PSC, RHC, LHC, HAC, WC, SRPC, Integral Water Proofing Compound): Compressive strength, Consistency, Density, Determination of fineness by dry sieving, Final setting time, Initial setting time, Soundness by Le chatelier Methods, Fineness by blaine air permeability.
28	Cement Concrete Tiles : Dimensions & Surface quality, Flatness, Perpendicularity, Straightness, Resistance to Wear, Water absorption, Wet Transverse Strength.
29	Concrete : RCPT (Rapid Chloride Penetration Test), Split Tensile Test.
30	Curing compound : Ford Cup Viscosity, Loss of Water, Specific Gravity.
31	Door Shutters : Buckling, Edge loading, End immersion test, Flexure Test, General Flatness, Glue adhesion test, Impact Indentation, Knife test, Local Planeness, Misuse test, Screw withdrawal strength, Shock Resistance, Slamming test, Slamming test.
32	Doors & windows, Shuttering, Frames & Formworks : Moisture.
33	Fly ash bricks : Dimension - Length, Width, Height.
34	Foundry Sand : Bulk Density, Clay Content, Grain Fineness, Grain Fineness.
35	Fresh / Hardened Concrete : Water Penetration / Permeability of Concrete

36	Fresh Concrete: Setting Time
37	Fresh Concrete / Admixture : Air Content, Bleeding, Flow
38	Fresh Concrete, Admixture, Concrete Mix : Slump test
39	Glass beed : Gradation
40	Ground Granulated Blast Furnace Slag : Glass Content, Moisture Content
41	Gypsum Building Plaster Board : Dry Set Density, Free Moisture / Moisture, Mass of Plaster, Water Absorption.
42	Hardened Concrete : Moisture Movement
43	Hardened Concrete, Fresh Concrete, Admixture, Concrete Mix (Beam) : Flexural Strength
44	Hardened Concrete, Fresh Concrete, Admixture, Concrete Mix (Cube, Cylinder, Core, Beam): Compressive Strength (Normal / Accelerated Cured)
45	Hollow & Solid Concrete Blocks : Moisture Movement.
46	Manhole Cover : Dimension Test, Load Bearing Test.
47	Paver Block, Interlocking Block, Precast Concrete Blocks : Abrasion Resistance, Compressive strength, Flexural strength, Tensile splitting strength, Water Absorption.
48	Pipes for Plumbing & drainage fittings : Color, Density, Dimension, Hydrostatic Pressure, Resistance to external blows, Shore Hardness, A & D, Tensile Strength & Elongation.
49	Plaster of Paris : Compressive Strength (Dry)
50	Plywood for General Purpose : Acid & Alkalinity Resistance Test, Adhesion of plies, Density, Moisture content, Dimension, Glue shear strength, Resistance to Dry Heat, Static bending Strength Modulus of Rupture, Tensile strength Along the grain, Water resistance (Glue shear strength).
51	Pozzolana (Fly ash, GGBS, Fuel Ash , Bottom Ash, Micro silica) : Density, Compressive strength, Fineness Specific surface (Blajns), Setting time, Sieve Analysis (45 microns retained), Soundness by Le-Chatlier.
52	Precast Concrete Kerbs (Kerb Stone), Channels, Edging, Quadrants and Other Associated Fittings : Bending Strength, Dimension, Surface layer thickness, Water Absorption.
53	Preformed Fillers for expansion Joints : Compression, Density , Resistance to Handling, Water Absorption.

54	Reinforcing Bars : Tensile Strength (UTS), Tensile Strength (UTS), Yield Stress, 0.2 - 1.0% Proof Stress, Elongation %, Proof Stress.
55	Sealant : Ductility, Viscosity, Adhesion and Tensile Modulus, Consistency, Loss of Mass after Heat Aging, Mass loss after Heat Ageing, Penetration, Softening point.
56	Sheathing Ducts : Tension Load, Transverse Load Rating, Water Loss, Workability Test.
57	Small clear specimens of Timber : Density
58	Stoneware Pipe, Precast Concrete Hume Pipes : Absorption test (Water Absorption), Resistance to Acids / Alkalis, Three Edge Bearing Method / Crushing Strength.
59	Structural bearings : Shore Hardness
60	Tar , bituminous materials and Anti Stripping Agent : Flash Point and Fire Point, Solubility in Diesel, Specific gravity, Water Content.
61	Tar and bituminous materials : Ductility, Kinematics Viscosity, Loss on heating, Penetration, Softening point, Absolute Viscosity.
62	Tiles (Ceramic Vitrified Glazed / Un Glazed, Flooring, Wall): Breaking Strength, Modulus of Rupture, Dimensions & Surface quality, Flatness, Perpendicularity, Straightness, Resistance to Chemicals - acids and alkalis, house hold chemicals & swimming pool salts, Scratch hardness(Moh's Hardness), Water absorption.
63	Timber Used For Different Purposes : Moisture.
64	Water Stop used in Masonry and Concrete dams : Accelerated Extraction Test, Determination of tensile properties, Hardness of Plastics by Means of Durometer (Shore Hardness), Stability in effect of alkalies Test.
65	Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets : Wedge / Full Tensile Test
66	Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets, Bolts, screws and studs: Proof Load Test.
67	Externally, Internally Threaded Fasteners, Bolts, screws and studs : Tensile Test, Wedge Tensile Test, Full Size Tensile, Machined test Piece
68	Bar, Plate, Tube, Wire, Cast Specimen & Products : % Elongation, % Elongation, Yield Stress, 0.2 to 1.0% Proof Stress, 1% Proof Stress.
69	Barbed Wire / Fencing Wire : Wrapping Test, Diameter, Mass of Wire, Mass of Zinc Coating.
70	Cast Iron - Pig Iron, Gray Cast-Iron, White Cast Iron, Malleable Cast Iron, and Ductile (Nodular) Iron, High Carbon High Chrome / Ni Steel, Pipe & Products of Fe & Fe-Alloy Cast iron : Transverse Test
71	Coated / Painted / Plated Products : Impact resistance Falling weight test, Bend Test, Colour, Determination of the effect of heat, Flexibility Test, Neutral Salt Spray Test, Resistance to liquids, Resistance to Water, Scratch Hardness.
72	Coated Products : Adhesion Test (Cross Cut / Tape Test).

73	Coated, Painted, Plated Articles : Mass of Zinc Coating.
74	Deformed steel bars and wires (TMT Rebar) : % Elongation, % Reduction of Area, Ultimate Tensile Strength (UTS), Yield Stress, 0.2 - 1.0% Proof Stress.
75	Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets: Proof Load Test.
76	Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets, Bolts, screws and studs: Proof Load Test
77	Externally, Internally Threaded Fasteners, Bolts, screws and studs : Tensile Test, Wedge Tensile, % Elongation, % Reduction of Area, 0.2% Proof Stress, Full Size Tensile Test, Full Size Tensile Test, Wedge Tensile, Tensile Strength, Proof Load Test, Tensile Test, Wedge Tensile, Ultimate Tensile Strength (UTS), Yield Stress, 0.2 to 1.0% Proof Stress,
78	Fasteners, Nuts: Proof Load, Weight per meter.
79	Fusion Bonded Epoxy Coated Reinforcing Bars, Deformed steel bars (TMT Rebar) : Bend / Re bend Test
80	Inorganic & Organic Anodized, Coated, Painted, Plating, Products, Panels, Galvanized/Zinc Products, Copper/Nickel/Chromium, Nickel/Chromium coatings on steel, zinc alloys, aluminum alloys and plastics, Metallic products and Raw Materials : Evaluating Degree of Rusting on Painted Steel Surfaces, Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments, Water Resistance of Coatings.
81	Mechanical Splices for Steel Reinforcing Bars, TMT Coupler: Slip Test, % Elongation at maximum force, Tensile Strength (UTS / Pull Out).
82	Metal & alloys -Aluminum Section, Steel & Structural Steel Articles, Paints, Varnishes, , Enamels, Epoxy, Coating, Plating and Related Products: Gloss @ 60 Degree, Coating Thickness by Elcometer, Pencil Hardness test, Resistance to water, Resistance to acid & Alkal, Resistance to water.
83	Metallic Articles : Mass of Zinc Coating, Resistance to Humidity, Adhesion Test (Cross Cut), Bend Test (Conical Mandrel only), Coating Thickness, Effect of Heat, % Reduction of Area, Charpy Impact @ (+) 90 to (-) 196 °c, Elongation %, Proof Stress, Ultimate Tensile Strength (UTS), Yield Stress, 0.2 to 1.0% Proof Stress, Bend, Charpy Impact.
84	Metallic Material & Products : Hardness Test, Brinell 10/3000, 5/250, 2.5/187.5, Hardness Test, Rockwell A, B, C, Bend, Vickers Hardness Test, HV 2, HV 5, HV 10, HV 30.
85	Metallic Materials : % Reduction of Area, Elongation %, Yield Stress, 0.2 to 1.0% Proof Stress, Bend Test, Jominy, Proof Stress, Ultimate Tensile Strength (UTS).
86	Metallic Materials & Welded Items : Rockwell Hardness, Vickers HARDNESS, Brinell Hardness.
87	Metallic Tubular Products : % Reduction of Area, Bend, Elongation %, Flaring (Drift expansion), Flattening Test, Ultimate Tensile Strength (UTS), Yield Stress, 0.2 to 1.0% Proof Stress.
88	Metallic Welded Items : % Elongation, 1% Proof Stress, Bend Test, Fillet Weld Tensile, Fracture Test, Nick Break Test, HARDNESS, Impact, Nick Break Test, Fracture Test, Ultimate Tensile Strength/Stress (UTS), % Reduction of Area, Bend, Ultimate Tensile Strength (UTS), Yield Stress, 0.2 to 1.0% Proof Stress.

89	Nuts : Proof Load Test
90	Painted surfaces : Evaluating Degree of Blistering of Paints, Mass in Kg/10 liters.
91	Paints and Enamels : Drying Film Thickness.
92	Paints and Surface Coatings: Drop Impact, Knife test.
93	Pipelines And Related Facilities, Welded Pipes : % Elongation, % Reduction of Area, UTS, Yield Stress, 0.2 to 1.0% Proof Stress.
94	Plate, bar, Pipe, Tube, Wire, Cast Specimen & Products: Bend Test, % Elongation, % Reduction of Area, Bend, Bend Test, Ultimate Tensile Strength (UTS), Yield Stress, 0.2 to 1.0% Proof Stress.
95	Plate, Bar, Pipe, Tube, Wire, Cast Specimen & Products, Steel Plates, Chequered Plates, Dowel Bars, Prestressing Steel, Hollow Section, High strength Steel Bar, Steel tubes, GI Pipes, Steel Beam, Steel Column, Steel Channel, Steel Angles, Reinforced Coupler & Bar, Wire Strand, Prestressing Strands HT Strand, LRPC Strands, Barbed Wire, Fencing Wire: % Elongation, % Reduction of Area, Ultimate Tensile Strength (UTS), Yield Stress, 0.2 to 1.0% Proof Stress.
96	Plate, Bar, Pipe, Tube, Wire, Cast Specimen, Bolts, screws and studs (machined & Full Size test pieces) & Products: Ultimate Tensile Strength/Stress (UTS), Yield Stress, 0.2 to 1.0% Proof Stress, % Elongation, % Reduction of Area.
97	Proof Load Test: Proof Load Test
98	Reinforcement Coupler (Mechanical splices of steel reinforcing bars), TMT Couple: Tensile Strength (UTS / Pull Out)
99	Reinforcing Bars : Tensile Strength (UTS).
100	Reinforcing bars, rods and wire: Elongation %, Tensile Strength (UTS), Yield Stress, 0.2 to 1.0% Proof Stress.
101	Rivets: Diameter
102	Steel: Hardenability (End Quenched or Jominy) Test.
103	Threaded Fasteners: Full Size Tensile Test, Proof Load Test.
104	Tube & Pipes : Thickness
105	Washer : Twist Test, Permanent Load / Set Test.
106	Weld in Metallic Materials: FRACTURE TEST, Proof Stress, Yield Stress, 0.2 to 1.0% Proof Stress, Elongation %, Ultimate Tensile Strength (UTS).
107	Welded Items : Fracture Test, Nick Break Test, Bend Test.

108	Welding Rods, Electrodes, and Filler Metals : % Elongation, % Reduction of Area, Bend, Ultimate Tensile Strength/Stress (UTS), Yield Stress, 0.2 to 1.0% Proof Stress.
109	Welds & welded test specimens: Fracture Test, Nick Break Test
110	Welds and Welded, Brazed, Fused, Soldered test specimens & Products : % Elongation, 0.2% Proof Stress, % Reduction of Area, 0.2% Proof Stress, Ultimate Tensile Strength/Stress (UTS), Yield Stress, 0.2 to 1.0% Proof Stress.
111	Wire Strand, Prestressing Strands HT Strand, LRPC Strands, Barbed Wire, Fencing Wire : Tensile Strength (UTS), Mass per Unit Area, Proof Stress, Relaxation test – 100 H, Yield Stress, 0.2 to 1.0% Proof Stress, Elongation %, % Elongation (Total elongation), Breaking Strength of Strand, Cross Section Area, Diameter.
112	Wrought and Cast Products: Yield Stress, 0.2 to 1.0% Proof Stress, % Reduction of Area, Elongation %, Proof Stress, Ultimate Tensile Strength (UTS), Yield Stress, 0.2 to 1.0% Proof Stress.
113	Wrought, Cast and Welded Products: % Reduction of Area, Elongation %, Proof Stress, Ultimate Tensile Strength (UTS).
114	Zinc Coated Article : Adhesion Test, Uniformity of Zinc Coating (Preece Test).
115	Austenitic Stainless Steels: IGC, Huey Test, "PRACTICE B—FERRIC SULFATE-SULFURIC ACID TEST", "PRACTICE E—COPPER-COPPER SULFATE-16 % SULFURIC ACID TEST", "PRACTICE F—COPPER-COPPER SULFATE-50% SULFURIC ACID TEST", PRACTICE A—OXALIC ACID ETCH TEST, PRACTICE C—NITRIC ACID TEST, Method A, The 16% Sulfuric Acid/Copper Sulfate Test (Monypenny Strauss Test), Method B, The 35% Sulfuric Acid/Copper Sulfate Test, Method C, The 40% Sulfuric Acid/Copper Sulfate Test.
116	Bearing Steel : Carbide Structure
117	Cast Iron : Size & Distribution Of Graphite Flake & Nodular (By Comparison Method), Size & Distribution Of Graphite Flake & Nodular (By Comparison Method).
118	Cast Iron (CI, SGI, MCI, WCI, NCI etc.) : Micro Examination
119	Coated Products: Coating Thickness by Microscopic Method, Coating Thickness by Microscopic Method
120	Duplex Austenitic / Ferritic Stainless Steels : "TEST METHOD A—SODIUM HYDROXIDE ETCH TEST", "TEST METHOD C—FERRIC CHLORIDE CORROSION TEST", TEST METHOD B—CHARPY IMPACT TEST.
121	Fasteners: Decarb
122	Ferritic Stainless Steel : PRACTICE W—OXALIC ACID ETCH TEST, PRACTICE Z—COPPER-COPPER SULFATE-16 % SULFURIC ACID TEST.
123	Ferrous and Non-Ferrous Material : Volume Fraction Macro, Micro, Visual Examination, Weld Penetration, Weld Measurement, Porosity.
124	Metallic Materials : Degree of Banding, Grain Size Measurement, Macro / Micro Examination, Inclusion Rating (By Comparison Method), Case Depth.
125	Metallic Materials, Steel Bar , Billets , Blooms, And Forgings : Grain Size.

126	Metallic Welded Items : Fracture Test, Nick Break Test, Macro / Micro Examination, Macro, Micro, Visual Examination, Weld Penetration, Weld Measurement, Porosity.
127	Stainless Steels : Method A—Ferric chloride pitting test, Method B—Ferric chloride crevice test., Method E—Critical pitting temperature test for stainless steels.
128	Steel : Case Depth (Microscopic Method), Decarburization Depth (Microscopic Method), Inclusion Rating (By Comparison Method).
129	Steel Bar , Billets , Blooms, And Forgings : Macroetch.
130	Weld in Metallic Materials : Macro, Micro, Visual Examination, Weld Penetration, Weld Measurement.
131	Welds & welded test specimens : Bend Test.
132	Wrought steel products : Macroetch.
133	Wrought, Nickel-Rich, Chromium-Bearing Alloys : Method A, Ferric SulfateSulfuric Acid Test, Method B, Mixed Acid-Oxidizing Salt Test.
134	Clays and Soils : Electrical Resistivity by Wenner's Four Electrode method (By Soil Box).
135	Natural Building Stone : Apparent / True porosity, Apparent / True Specific Gravity, Compressive Strength, Density, Indirect Tensile strength (by Line Load test), Moh's Hardness (Scratch Hardness), Moisture Content, Resistance to wear, Split Tensile Strength, Water Absorption.
136	Rock : Compressive Strength (UCS), Point load index.
137	Soil : Direct Shear Test (DST) Angle of internal friction, Direct Shear Test (DST) Cohesion, Gradation (Sieve analysis 0.015 to 125 mm sieve size), Hydrometer Analysis, Light compaction – MDD, Light compaction- OMC, Permeability, Shrinkage Limit, Specific gravity, Unconfined Compressive Strength (UCS).
138	Soil & Clays : Triaxial Shear test, Cohesion, Triaxial Shear test, Angle of internal friction, Consolidation Test, Cv, Consolidation Test, CC, Consolidation Test, Pc, Free Swell Index (FSI).
139	Soil, Clays, GSB, WMM : Heavy compaction, MDD, Heavy compaction-OMC, Water content, Moisture Content %, Liquid Limit, Plastic Limit, California Bearing Ratio (CBR).
140	Ropes & Cordages : Breaking Load & Elongation.
141	Geogrids : Wide Width Tensile Elongation.
142	Geomembranes : Wide Width Tensile Elongation.
143	Geomembranes and Related Products : Puncture Resistance.
144	Geosynthetics : Static (CBR) Puncture Resistance, Thickness at 2 kpa.
145	Geosynthetics (polymeric, glass, and metallic) woven geotextiles, nonwoven geotextiles, geocomposites, knitted geotextiles, geonets, Gostrap (Peraweb),

	geomats, geogrids and similar open-structure geotextiles : Wide Width Tensile Elongation, Wide Width Tensile Elongation.
146	Geotextiles : Static (CBR) Puncture Resistance, Thickness at 2 kpa, Wide Width Tensile Elongation.
147	Geotextiles (Woven and Non Woven) : Aparent Opning Size, Mass per Unit Area.
148	Geotextiles and Geotextile-Related Products : Mass per Unit Area, Static (CBR) Puncture Resistance.
149	Textiles -Fabrics : Breaking load and elongation, Mass.
150	Reinforced Concrete Structures : Half Cell Potential test.
151	Adhesives : Tensile adhesion strengths.
152	Metal & alloys -Aluminum Setion, Steel & Structural Steel Articles, Ready Mix Paints, Enamels, Varnishes, Epoxy : Coating Thickness by Elcometer.
153	Clays and Soils : Electrical Resistivity by Wenner's Four Electrode method (By Soil Box).
154	Soil / Rock Field Test : Field Density by Sand Replacement.
155	Soil Field Test : Field Density by Core cutter method.
156	Soil & Rock Field Test : Pile Lateral load test, Pile Pull-out test, California Bearing Ratio (Field CBR), Dynamic Cone Penetrometer test, Electrical Resistivity by Wenner's Four Electrode method (ERT), Modulus of Subgrade Reaction, K. Value, Pile Vertical load test (Compression), Plate Load Test, Standard Penetration test.
157	Bituminous / Concrete Road Section : Bridge (Span) Load Test.
158	RCC Structure : Determination of Crack Depth.
159	Reinforced Concrete Structures : Carbonation Test, Half Cell Potential test, Rebound Hammer.
160	Reinforced Concrete Structures / Granite (Structural & Polished) / Marble / Kota Stone /) : Ultrasonic Pulse Velocity

1. The material testing laboratory is approved based on inspection reports/recommendations of the field unit.
2. Presently, the NABL accreditation certificate (TC-5212 dated 09/11/2022) of the laboratory is valid upto 08/11/2024 for testing. The field units must ensure before sending materials/samples for testing that the laboratory is equipped to carry out required test as per specifications and has valid NABL accreditation certificate on the day of submission of test samples/conducting field tests.

3. The empanelment shall remain valid upto **08/11/2024** or till the validity of NABL accreditation, whichever is earlier. However, in case any problem is faced by any Region/station, the same may be brought to the notice of office of undersigned for necessary action.
4. This issues with the approval of Competent Authority.

(Ramnivas Kumawat)

Asstt. General Manager (Engg.-Civil)
AAI, Rajkot International Airport, Rajkot