Laboratory	**Hindustan Analytical and Testing Laboratory, No. 19, 1st Cross, Temple Arch, Kempegowda Layout, Bangalore, Karnataka**
Accreditation Standard	**ISO/IEC 17025: 2005**
Certificate Number	**TC-8018** **Page 1 of 4**
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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		CHEMICAL TESTING		
I.	**WATER**			
1.	**Drinking Water/ Surface Water/ Bore Well Water**	pH	IS 3025 (Part 11) Electrometric Method	2.0 to12.0
		Color	IS 3025 (Part 04) Platinum Cobalt (Visual Comparison Method)	5 Hazen Unit to 500 Hazen Unit
		Odor	IS 3025 (Part 05)	Agreeable / Disagreeable
		Turbidity	IS 3025 (Part 10) (Nephelometric Method)	0.1 NTU to 400 NTU
		Total Hardness as $CaCo_3$	IS 3025 (Part 21) EDTA Titrimetric Method	4 mg/L to 2000 mg/L
		Calcium as Ca	IS 3025 (Part-40) EDTA Titrimetric Method	1.6 mg/L to 500 mg/L
		Magnesium as Mg	APHA 23rd Edition 3500- B	1 mg/L to 500 mg/L
		Chloride as Cl^-	IS 3025 (Part 32) (Argentometric Method)	4 mg/L to 1000 mg/L
		Total Dissolved Solids	IS 3025 (Part 16) (Gravimetric Method)	10mg/L to 2000 mg/L
		Total Suspended Solids	IS 3025 (Part 17) (Gravimetric Method)	5mg/L to 100 mg/L
		Sulphate as So_4	IS 3025 (Part 24) (Turbidity Method)	1mg/l to 500 mg/L
		Nitrate as No_3	IS 3025 (Part 34) Chromotropic Acid Method	0.5 mg/L to 5 mg/L
		Fluoride as F	APHA 23rd Edition 4500D (SPADNS Method)	0.1mg/l to 5 mg/L
		Iron as Fe	IS 3025 (Part 53) (1,10 Phenonthroline Method)	0.1mg/l to 5 mg/L

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Hexavalent Chromium as Cr^{6+}	IS 3025 (Part 52) (Di phenyl Carbazide Method)	0.1mg/L to1 mg/L
		Copper as Cu	IS 3025 (Part 42) (Neocuproine Method)	0.1mg/L to 1 mg/L
		Manganese as Mn	IS 3025 (Part 59) (Formaldoxamine Spectrophotometric Method)	0.1mg/L to 1 mg/L
		Residual Free Chlorine	IS 3025 (Part 26) (Iodometric Titration)	1 mg/L to 5 mg/L
		Total Alkalinity	IS 3025 (Part 23) (Indicator Method)	5 mg/L to1000 mg/L
		Aluminum	IS 3025 (Part 55) (Erichrome Cyanine R Method)	0.1mg/L to 1 mg/L
		Boron	4500 APHA 23rd Edition (Curcumine Method)	0.1mg/l to 1 mg/L
		Conductivity	IS 3025 (Part 14) (Electrometric Method)	1 µs/cm to 2000 µs/cm
		Total Acidity	IS 3025 (Part 22) (Indicator Method)	5 mg/L to 1000 mg/L
		Total Solids	IS 3025 (Part 18) (Gravimetric Method)	10 mg/l to 2000 mg/L
		Dissolved oxygen	IS 3025 (Part 38) (Winkler Method)	0.1 mg/L to 8 mg/L
II.	**POLLUTION AND ENVIRONMENT**			
1.	**Waste Water (Sewage/Effluent)**	pH	IS 3025 (Part 11) (Electrometric Method)	2.0 to 12.0
		Turbidity	IS 3025 (Part 10) (Nephelometric Method)	0.1NTU to 100 NTU
		Biochemical Oxygen Demand (3 days @ 27 °C)	IS 3025 (Part 44)	3 mg/L to 2000 mg/L

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
		Chemical Oxygen Demand	IS 3025 (Part 58) (Open Reflux Method)	5 mg/L to 5000 mg/L
		Oils and Grease	IS 3025 (Part 39) (Partition Gravimetric Method)	5 mg/L to 5000 mg/L
		Chloride as Cl^-	IS 3025 (Part 32) (Argentometric Method)	2 mg/L to 1000 mg/L
		Total Dissolved Solids	IS 3025 (Part 16) (Gravimetric Method)	10 mg/L to 2000 mg/L

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Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection

MECHANICAL TESTING

I.	**MECHANICAL PROPERTIES OF METALS**			
1.	**Ferrous and Non Ferrous Alloys**	Nominal mass	IS 1786 Cl.7.2	0.1 kg/m to 7 kg/m
		Tensile strength (R_m)	IS 1608 Cl.3.10.1	40 kN to 540 kN
		Yield strength (R_{eH})	IS 1608 Cl.3.10.2.1	40 kN to 540 kN
		Percentage elongation after fracture (A)	IS 1608 Cl.3.4.2	5 % to 60 %
		Bend Test	IS 1599 Cl.4.2	6 mm to 12 mm Mandrel dia (mm) 10, 20, 32, 40
		Rebend Test	IS 1786 Cl.9.4	6 mm to 12 mm Mandrel dia (mm) 10, 20, 32, 40
		Rockwell Hardness	IS 1586-1	20 mm to 88 HRA 20 HRBW to 100 HRBW 20 HRC to 70 HRC

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