

DEPARTMENT OF MECHANICAL ENGINEERING, BUET, DHAKA

Chart of Items Tested

For Test Fees Please Contact the Department of Mechanical Engineering, BUET. Tele : 9665636

Sl. No.	Name of the Products	Type of Test
1.	PVC Pipe, Bend, Reducer, Adapter, Sand Trap, Straight Coupling, R. Screen/ S. S. Strainer and Connectors.	Dimension Test
		Pressure Test
		a. 1 - 4 inch dia.
		b. 5 – 6 inch dia.
		c. 8 inch dia.
		d. 10– 12 inch dia.
		e. 16 inch dia
		f. 18 inch dia
		For Tee and Y joints, 1.5 times of the above rate. For Cross joints, 2.0 times of the above rate.
		Resistance to Acetone Test
		Heat Reversion Test
		Resistance to Sulfuric Acid Test
		Impact Strength Test
		Tensile Strength Test
		Percentage Elongation Test
Modulus of Elasticity Test		
2.	F.G. Strainer	Dimension Test (Diameter, Thickness, Slotted length, Open area)
		Axial tension test
		Axial compression test
		Diametrical compression test
		Pre boiling test
		Post boiling test
3.	Fallar screw	
4.	Fallar Bar	
5.	Ductile iron pipe	Complete test
6.	PVC Water Stopper	Tensile Strength Test
		Percentage Elongation Test
		Specific Gravity Test
		Stiffness in Plexure Test
		Cold Brittleness Test
		Aged Tensile Strength Test
		Including Aging Test Aged % Elongation Test (Provided Tensile Strength Test is Included)

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Sl. No.	Name of the Products	Type of Test
7.	Solvent Cement	Long Term Pressure Test at 20°C/60°C (24 hour / 336 hour)
		Short Term Pressure Test at (1 hour) Film Properties Test 1 hr. 24 hr.
8.	Hose Pipe	Working Pressure Test
9.	Rubber Sheets	Tensile Strength Test
		% Elongation Test
		Hardness Test
		Specific Gravity Test
		Compression Set
		Tension Set
10.	Polythene Sheets	Tensile Strength Test
		% Elongation Test
11.	Steel Products	Tensile Strength Test
		Yield Strength Test
12.	Steel Strips	Dimension Test-width and thickness (per specimen)
		Steel Laminates (M/C)
13.	Steel Tubes	Flattening Test
		Reverse Bending Test
		Hydrostatic Pressure Test
		Flange Test
14.	G. I. Pipes	Hydrostatic Pressure Test
		Bursting Pressure Test
		Dimension Test
		Galvanizing Test
		Bending Test
15.	G. I. Sheets	End Condition
		Dimension Test (includes pitch, depth, thickness and gauge)
		Zinc Coating Test
16.	C. I. Pipe	Bending Test
		Dimension Test
17.	Glass Filled Nylon	Pressure Test
		Complete Test
18.	Hand Pump	Complete Test
		Dimension Test (partial)
19.	Card Pins, Grill Pins and Metal Pins	Dimension Test (complete)
		Breaking Angle Test (Rupture)
		Symmetry of Pin-Tip Test
20.	Insulator Pins	Dimension Test
		Mechanical of Pin -Tip Test
21.	Cylinders and Containers	Dimension Test
		Water Capacity Test
		Hydrostatic Pressure Test
		Zinc Coating Test
		Root Bend Test

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Sl. No.	Name of the Products	Type of Test
		Neck Bend Test
		Tensile Strength Test
		Yield Strength Test
		% Elongation Test
22.	Nuts and Bolts	Tightening Torque Test
		Tensile Strength Test
		% Elongation Test
		Modulus of Elasticity Test
		Compressive Strength Test
		Diamond Strength
		Poisson's Ratio Test
		Stress Under Proof Load Test
		Shear Test
23.	Sluice Valve	Pressure Test (Gland and Seat)
24.	Metering Enclosure	Flaming Temperature Test
		Flexural Strength Test
		Flexural Modulus Test
		% Elongation Test
		Specific Gravity Test
25.	Cotton Threads	Tensile Strength and % Elongation Test
26.	Glass Fiber Strainer	Tensile Strength and % Elongation Test
27.	Aging	i. in oven air ii. in oven acid iii. in oven water
28.	Engine Test	Single Cylinder 2/3 Cylinder 4 or more Cylinder
29.	Motor Vehicle	Three Wheeler Test
30.	Pump Test	Submersible pump (A): Q = 2 cusec, H = 150 ft / 45.7 m
		Submersible pump (B): Q > 2 cusec or H > 150ft / 45.7 m
		Submersible pump-(A) with variable voltage (280-440VAC)
		Submersible pump-(B) with variable voltage (280-440VAC)
		Centrifugal pump: Q = 2 cusec, H = 100ft / 30.5 m
		Centrifugal pump: 2 < Q = 5 cusec, H = 100ft / 30.5 m
		High head (H > 100ft / 30.5 m) multistage centrifugal pump
		Fire lighting pumps
		Submersible pump star-delta starter, main switch test
		Pump or motor installation
31.	Gear Box	Complete Test
32.	Motor Test	Power (P) = 10 kW
		10 kW < P = 25 kW
		25 kW < P = 50 kW

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Sl. No.	Name of the Products	Type of Test
33.	Fuel Testing	Calorific Value of Liquid Fuel
		Water Content
		Viscosity of Oils (Viscosity Index)
		Carbon Residue of Oils Flash Point
		Fire Point of Liquid Fuels
		Density / Specific Gravity
		Ash Content of Oil (% wt)
		Viscosity Grade of Oil
		Acidity
		Sulphated ash
		Total acid no
		Total base no
		Rust Inhibilar
		Coal
		Calorific Value of Coal Proximate Analysis of Coal Gray king coal Swelling Inde x Moisture content
34.	Grooved Rubber Pad	Complete Test
35.	Stainless Steel Strainer	Complete Test
36.	Housing Pipe	Dimension test
		Strength test (axial tension)
		Strength test (compression)
		Internal Hydrostatic pressure test
		External Hydrostatic pressure test
37.	Bearing Bush Evaluation	Complete Test
38.	Fumigation Sheet	According to the demand of test
39.	Plastic linear	According to the demand of test
40.	Calibration Test	Pressure Gauge (high range, normal)
		Pressure Gauge (low range)
		Vacuum Pressure Gauge
		Proving Ring
		Range less than 100 kN
		Range between 100 kN and 500 kN
		Range greater than 500 kN
		Stop watch: 0-9 hour
		Wobble Meter (Mitutoyo Dial Indicator) Resolution: 0.01 mm
		Hood type airflow meter
		Slide Caliper: Range: 0.01 mm
		Anemometer: Range: 0-500 ft/min.
		Measuring Scale: 0.01 mm
		Micrometer: 1 μ m
		Micro Pipette: a. 5-40 μ l b. 40-200 μ l
Pyrometer		

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Sl. No.	Name of the Products	Type of Test
		<p>Water Flow meter</p> <p>13 mm to 25 mm 26 mm to 50 mm 100 mm 150 mm 200 mm</p> <p>Digital Thermometer</p> <p>Flow Meter</p> <p>Thickness Meter</p> <p>Radix digital 6-channel temperature indicator with six number of sensor PT-100, temperature range (0-400°C), Model: MP-2006</p> <p>Digital temperature indicator/detector (Thermocouple type-K) Range: 300°C (Model: TEH.XMDT 3301)</p> <p>Analog (mercury) Thermometer (0-360°C)</p> <p>Analog/Digital Tachometer (Model: DH-2M)</p> <p>Digital Slide Caliper (Digimatic Caliper)</p> <p>Dry and wet bulb type hygrometer (Masons Type)</p> <p>Compressed Air Pressure Gauge (0-10 kg/cm²)</p> <p><u>Tensile Tester:</u></p> <p>i. Weight Calibration for 2 side ii. Bursting Test (Paper Tester) Calibration iii. Elasticity Tester Calibration iv. Furnace Calibration</p>
41.	Relaxation Test of H. T. Wire	<p>i. Ten hours Test (4 materials) per test (3 specimen) 1st time fees for set-up 2nd time fees for set-up</p> <p>ii. 100 hours test (1 material) per test (3 specimen)</p> <p>iii. 1000 hours test (1 material) per test (3 specimen)</p>
42.	FRB Body Side Window	<p>Fiber Glass Content test</p> <p>Insert Pull out Test (Glass Shutter)</p> <p>Hardness Test</p> <p>Water Absorption Test</p> <p>Bolt Pull out Test</p> <p>Insert Pull out Test (Louver Shutter)</p> <p>Fibre Glass Content Test</p>
43.	H. T. Seven Wire Strand	<p>Cross Sectional Area</p> <p>Yield Strength Test (in accordance with AASHTO M203 or M204)</p> <p>Ultimate Strength</p> <p>Elongation</p> <p>Modulus of Elasticity Test</p> <p>Stress/Strain Curve</p> <p>Stress/Strain Separate</p> <p>Proof Load</p> <p>Tensile Strength</p> <p>Grade</p>

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Sl. No.	Name of the Products	Type of Test
44.	Bearing Pad	Dimension Ash Content Minimum Tensile Strength Shear Modulus Test Minimum Elongation at Break Max. compression set at 100°C for 24 hours Accelerated aging at 100°C for 70 hours Maximum change in hardness Change in Tensile Strength Maximum change in elongation Peel Strength / Vulcanized Bond Physical and Chemical Test of Steel Laminates Heat Persistence Test Low Temperature Brittleness Grade Evaluation Test Elastomer Content Strength Test Breaking Load 0.2% Proof Load Accelerated Aging Adhesion Strength Tensile Strength Abrasion Tear strength Ultimate Elongation Creep Deflection Short term Duration Compression test Compressive Strain at 1.5 times, max. design load (90 M.T.)
45.	Elastic Rail Clip	Hardness RC Hardness HV Toe Load Test Longitudinal Resistance
46.	Roin Forcing Plate	Minimum Tensile Strength Yield Strength Elongation at Break Relaxation cost % for 10 hours <u>Rail /steel Clippers:</u> 10 hours 100 hours 1000 hours
47.	H. T. Steel	Shear Modulus
48.	M. S. Deformed Bar (Rod) or M.S. Sheet	Tensile Strength Impact Test Yield Strength % Elongation Dimension Test Ultimate Strength Unit weight per kg.

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Sl. No.	Name of the Products	Type of Test
49.	AC Test	HV = 2 Ton
		2 Ton < HV = 10 Ton
		10 Ton < HV = 50 Ton
		Window type Current rating Starting current Humidification Air flow
50.	Conveyer Rubber Belts	Dimension test (Width of belt, Thickness, Ply Numbers, cover thickness)
		Working Strength
		Unit weight (kg/m ²) of surface
		Nylon Fabric belt tensile strength
		a. Longitudinal direction
		b. Transverse strength
		Specific Weight
		Hole location tests
		Carrying capacity Diameter of pulleys
51.	Insulation sample	Thermal conductivity
		R-Value
		Thermal conductivity and R-Value
		Water Absorption
52.	Plastic Pallets	Dimension test
		Weight test
		Static Load test
		Dynamic Load test
53.	Ice box	Thermal conductivity Time temperature graph at room temperature/exposed to sun for each particular product
54.	Welding Electrode	Elongation test
55.	Tape use in gas -line pipe	Thickness of PF Backing
		Thickness of Butyl rubber Adhesive
		Tensile strength
		Yield strength
		Elongation at break
		Water vapor transmission rate Weight in kg/meter

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