

Laboratory Mukand Test Labs, Mukand Ltd., Thane-Belapur Road, Post Kalwe, Mumbai, Maharashtra

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-6992

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Validity 05.03.2018 to 04.03.2020

Last Amended on --

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

<u>BAR MILL TEST LAB</u>				
I.	MECHANICAL PROPERTIES OF MATERIALS			
1.	Wire Rods, Wires, Bars & Bright Bars of Stainless Steel, Carbon Steel and Alloy Steel	Brinell Hardness Testing	ASTM E-10 IS 1500-1	50 HBW to 400 HBW, 5/750 50 HBW to 400 HBW, 10/3000
		Rockwell Hardness Testing	ASTM A-370 ASTM E-18	55 HRBW to 100 HRBW 20 HRC to 65 HRC
		Tensile testing	ASTM A-370 ISO 6892-1 IS 1608	170 N/mm ² to 1300 N/mm ² 320 N/mm ² to 1500 N/mm ²
		Yield Strength Ultimate tensile Strength % Elongation % Reduction Area		1 % to 80% 1% to 85 % (40 kN to 1000 kN)
		Izod Impact Test Charpy Impact Test	IS 1598 IS 1757 (Part 1)	0 to 169 J (27°C ± 2°C) 10 J to 240 J (23°C ± 5°C)
II.	METALLOGRAPHY TEST			
1.	Wire Rods, Wires, Bars & Bright Bars of Stainless Steel, Carbon Steel and Alloy Steel	Grain Size No. (Comparison Method)	ASTM E112 IS 4748	Grain size No.1 to 10
		Non-metallic inclusion rating in steel (Method A)	ASTM E-45, Method A ISO 4967 IS 4163	Type A, B, C, D Type A, B, C, D, DS
		Depth of Decarburization	ASTM E 1077 Microscopic Method	0.01 mm to 1 mm

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BRIGHT BAR DEPARTMENT TEST LAB				
I.	MECHANICAL PROPERTIES OF MATERIALS			
1.	Wire Rods, Wires, Bars & Bright Bars of Stainless Steel, Carbon Steel and Alloy Steel	Brinell Hardness Testing	ASTM E-10 IS 1500-1	50 HBW to 400 HBW, 5/ 750
		Tensile testing Ultimate tensile Strength % Elongation % Reduction Area	ASTM A-370 ISO 6892-1 IS 1608	320 N/mm ² to 1500 N/mm ² 1% to 80 % 1% to 85 % (8 kN to 400 kN)
WIRE ROD MILL TEST LAB				
I.	MECHANICAL PROPERTIES OF MATERIALS			
1.	Wire Rods, Wires, Bars & Bright Bars of Stainless Steel, Carbon Steel and Alloy Steel	Rockwell Hardness Testing	ASTM A-370 ASTM E-18	55 HRBW to 100 HRBW 20 HRC to 65 HRC
		Tensile testing Ultimate tensile Strength % Elongation % Reduction Area	ASTM A-370 ISO 6892-1 IS 1608	320 N/mm ² to 1500 N/mm ² 1% to 80 % 1 % to 85 %
II.	METALLOGRAPHY TEST			
1.	Wire Rods, Wires, Bars & Bright Bars of Stainless Steel, Carbon Steel and Alloy Steel	Grain Size No. (Comparison Method)	ASTM E112 IS 4748	Grain size No. 1 to 10
		Depth of Decarburization	ASTM E 1077 Microscopic Method	0.01 mm to 1 mm

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R&D TEST LAB				
I.	MECHANICAL PROPERTIES OF MATERIALS			
1.	Wire Rods, Wires, Bars & Bright Bars of Stainless Steel, Carbon Steel and Alloy Steel	Brinell Hardness Testing	ASTM E-10 IS 1500-1	50 HBW to 400 HBW, 5/750
II.	METALLOGRAPHY TEST			
1.	Wire Rods, Wires, Bars & Bright Bars of Stainless Steel, Carbon Steel and Alloy Steel	Grain Size No. (Comparison Method)	ASTM E112 IS 4748	Grain size No. 1 to 10
		Non-metallic inclusion rating in steel (Method A)	ASTM E-45, Method A ISO 4967 IS 4163	Type A, B, C, D Type A, B, C, D, DS