

TEST FACILITIES REQUIRED
FOR
PRODUCT : HOT ROLLED MEDIUM AND HIGH TENSILE STRUCTURAL STEEL
AS PER IS 2062 : 2011 (*SEVENTH REVISION*)

Clause	Requirement	Test Methods		Instrument / Equipment	Range & Least Count	
		Clause	Reference			
7	Freedom from defects	7.1 to 7.3	IS 2062	Micrometer -Flat End -Pointed -Ball ended (Conventional/Digital) Vernier Caliper (Conventional/Digital) Dial thickness gauge	Range : 0 – 25 mm LC: 0.01 mm / 0.001 mm Ranging from 0 to 300 mm LC: 0.02 mm 0-100/125 mm/ LC 0.01 mm	
8	Chemical composition					
	i)Ladle analysis	8.1	IS 2062 & IS 228 or any other established instrumental/che mical method	Strohlein or Leco apparatus for carbon & sulphur complete with all attachments Barometer with chart Hot plate Muffle furnace Complete range of chemicals/reagents and glass wares, measuring cylinder for chemical		
	ii)Product analysis	8.2	IS 2062		O- 1200 degree C LC-1 degree Celsius	

				analysis, Dessicator, Crucible, Thermometer, Electronic Balance, Distilled Water, Standard Samples		
10	Tensile Test	10.1 to 10.3	IS 2062 & IS 1608	Universal Testing Machine (Load cells of appropriate capacities or having 3-4 ranges in conventional equipment) Extensometer & SS scale Divider and Marker Calculator	Range: 0 to 1000 kN LC : 1 kN	
11	Bend Test	11.1 to 11.3	IS 2062 & IS 1599	Bend Test Equipment/ Mandrels/Templates/ UTM attachments/ clamps/vice/Magnifying glass/		
12	Impact Test	12.1 to 12.4	IS 2062 & IS 1757	Charpy Impact Tester Thermometer. Specimen inspection facility (Profile Projector/Go & No Go Gauges, dial gauges, dial stand, surface plate, Micrometer) Deep freezer	- 30 to + 50 C, LC 1 C	
13	Y Groove Crackability	13	IS 2062 & IS 10842	Surface Roughness Tester/Profilometer		

	Test			<p>Manual welding equipment & low hydrogen electrode 4 mm or 5 mm dia</p> <p>Basic coated low hydrogen electrode</p> <p>OR</p> <p>Gas Metal Arc Welding/submerged arc welding</p> <p>Burner</p> <p>Wire brush or abrasive paper</p> <p>Rutile electrode</p> <p>E3 XXXXX as per IS 814</p> <p>Oven for baking electrode</p> <p>Spacers more than 2 mm</p> <p>Magnetic particle equipment with all attachments and accessories</p> <p>Grinding wheel / polishing wheel and etching solutions</p> <p>Metallurgical microscope</p>	<p>0 to 500 c</p> <p>LC – 1 c</p> <p>20 to 50 X</p>	
14	Other Tests- Non destructive	14	IS 2062	NDT equipments and other accessories		

	testing, Metallurgical Tests			Metallurgical microscope with all attachments Polishing wheel; etching solution	100 x 400 x	
15 & 16	*Dimensions & Tolerances Squareness Width Thickness Length	15 & 16 and Table 4	IS 2062,IS 1852 & IS 12779	Try square Steel Rule /Scale Vernier / micrometer Tape Radius gauges, Filler gauges, Depth gauge, Straight edge, Protector outside and inside caliper, Magnetic V- block, Angle Protector (combination set) Carbon Paper and Plain Paper	400x400 mm, min 0 to 400 mm, min LC-1mm 0 to 300 mm/0 to 75 mm LC:0.02mm 0 to 13 meters, LC 10mm	

*Requirements and facilities are as per respective product/section standards listed in Table 4 of IS 2062.