

PSGSG/20-21/12	Product Specifications for SS-304L MOLECULAR FLANGE SETS	Drg.No.		
		Date	28.10.2020	
		Product	GSM-245	
S.NO	BHEL Specification		Vendor compliance	
			YES/ NO	Remarks
1.0	Material: Low Carbon Austenitic stainless steel confirming to AISI-304L			
2.0	Compliance with National/International standards : The material shall comply with the requirements of the following national standard and also meet the requirements of this specification 1) INDIAN : IS:6911 – 2017, Gr.: X04Cr19Ni9, Solution Annealed 2) AMERICAN : ASTM A240M, Type:304, Solution Annealed 3) EUROPEAN : EN 10088-2, Gr.: X5CrNi18-10			
3.0	Dimensions and Tolerances: All the components shall be within ±0.5mm			
4.0	1. Finish: a) Surface finish of the components shall be at least Ra 0.8. b) The component shall be free from dirt, grease and loose particles. c) Drawn profiles, to size, only shall be used for direct welding. No smithy is allowed for formation/ matching of profiles in view of defect inception. d) Weld splatter, if any, shall be removed by chipping or grinding on completion of the weld (if allowed in drawing). e) Any sharp corners shall be removed as per the drawing. Wherever not specified in the drawing, a radius of R1 shall be provided at the sharp corners and edges. f) Parallelism of the tube must be maintained within 0.1 degree and any deviation shall be subjected to rejection in supply.			
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5.0	Properties:				
	Parameter	Test method	Value (Minimum)		
	Chemical a) Carbon b) Silicon c) Manganese d) Nickel e) Chromium f) Sulphur g) Phosphorus h) Iron	IS 228	≤0.08 ≤1.0 ≤2.0 8.0-10.5 17.5 – 19.5 ≤ 0.030 ≤ 0.045 remain		
5.2	Density, minimum	IS 6911-2017	8.0		
5.3	Tensile strength, Minimum	IS 1633 and IS 1608-2017	400		
5.4	Brinell Hardness	IS 1586	192		
5.5	Elongation	IS 1633 and IS 1608-2017	40		
5.6	0.2 percent Proof-Stress	IS 1633 and IS 1608-2017	200		
6.0	Qualification requirements: The supplier should have the experience of supplying similar material during last two years. Supplies reference list shall be provided along with the offer.				
7.0	Packing : The components shall be packed in high density cardboard boxes, with a primary wrapped in polyethylene and packed individually in dust free boxes after degreasing. The components shall be guaranteed against all manufacturing defects.				
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