

PSGSG 14-15 / 005	Process Specifications for Compact Circuit breaker Enclosure	Drg.No.	RD DG 435 1351 1400
		Date	07.07.2014
		Product	CGSM 145
1.0	APPLICATION: Circuit breaker Enclosure (Drg No. RD DG 435 1351 1400) is a part of gas insulated switchgear equipment. The gas pressure in this metal enclosure is maintained at 0.75 MPa. This leak tight assembly shall meet following specification.		
2.0	SPECIFICATIONS:	Vendor's compliance	
2.1	Material: Low Carbon Austenitic stainless steel confirming to AISI-304.		
2.2	Standard seamless or ERW (straight/ spiral) tubular sections shall be used for construction, where ever applicable in design. Fabricated / drawn sections can be used for other areas not confirming to standard pipe schedules.		
2.3	Drawn profiles, to size, only shall be used for direct welding with the flanges. No smithy is allowed for formation/ matching of profiles in view of defect inception. Pipe and flanges shall be TIG / MIG welded with suitable SS electrode.		
2.4	The welded sections shall be sized as per drawing and verified /tested using Dye Penetration (D.P.) technique or x-ray at all stages of welding. Inside edges/weld shall be fused to obtain near smooth weld surface.		
2.5	The flanges shall be manufactured to drawings and welded as per instructions to the shells maintaining parallelism of faces and perpendicularity as prescribed.		
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2.6	The flange sealing surfaces shall be polished to RA 0.8 or better and the bolting holes shall be machined fine, using jig borer/ CNC milling, and shall have uniform chamfer. The tolerances, wherever not mentioned in the drawing, shall be within 0.1°. Any sharp corners shall be removed as per the drawing. Wherever not specified in the drawing, a chamfer of 0.5x45° shall be provided at the sharp corners and edges.		
2.7	Weld splatter, if any, shall be removed by chipping or grinding on completion of the weld.		
2.8	Dye penetration report shall be generated and submitted to BHEL.		
2.9	The tested assembly should be cleaned, degreased and prepared for pressure test. The assembly shall be tested at 9 bar pressure for 4 hours and pressure drop shall be recorded and communicated to BHEL. In case of pressure drop a course leak check shall be performed. The leak shall be rectified and the test repeated to satisfaction. Components indicating drop in pressure during this test will not be accepted. The arrangement shall be kept at 15 bar for 15 minutes prior to this test to verify pressure withstanding capabilities specified in drawing.		
2.10	Component shall be electro chemical polished on the inside surface.		
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2.11	<p>The assemblies further shall be sandblasted on the outer surface and powder coated (> 50 Micron) to shade as specified on drawing. During this operation all flanges shall be masked at the sealing surfaces and at the collar.</p>		
2.12	<p>The dimensional checks and the leak test shall be carried out in presence of BHEL inspector. It is preferable to have first stage inspection after assembling the first module at supplier's works.</p>		
2.13	<p>The accepted component shall be packed in wooden boxes with suitable covers on the flanges to prevent transit damages. A thick polyethylene cover shall be used to seal to component from ingress of moisture and water. For transit time higher than a week, adequate quantity of moisture absorbent shall also be placed with the component.</p>		
2.14	<p>Following certificates shall be furnished for acceptance of the component:</p> <ul style="list-style-type: none"> 1 Material certificate, 2 Material test certificate , 3 Stage wise DP / X-ray tests 4 Pressure withstand test report 5 Electro-polishing schedule <p>A certified copy of above documents shall be sent along with the delivery note.</p>		
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2.15	Components / fittings required for pressure test shall be arranged by supplier only.		
2.16	Qualifying Requirements:		
	The supplier shall be of national repute with proven record and should have supplied similar enclosures at least for the last 3 years. Supplies reference list shall be provided along with the offer.		
2.17	Performance Guarantee :		
	Supplier shall provide Guarantee certificate for the equipment to ensure reliability of the equipment for a period of not less than 12 months from the date of dispatch.		
2.18	Any Other information:		
	In case of doubts please contact BHEL for clarifications. Supplier can furnish any other/additional information, considering overall requirements.		
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