

PSGSG 13-14 /18	Product Specifications for Reducer assembly	Drawing No: RDDG4350517 2080
		Product: GSM245
		Date:06.09.2014
S. No.	BHEL Specification	

1.0	<p>APPLICATION:</p> <p>The stainless steel Reducerassembly to Drawing. No. RD DG 4 35 05172080 is used for gas filled applications. The gas pressure in this metal enclosure is maintained at 0.5-0.7 MPa. The drive housing assembly shall meet following specification.</p>
2.0	<p>DRAWINGS& QUANTITIES: (Total 5 Nos. drawings)</p> <p>Main Assembly Drawing Reducer Assembly : RD DG 4 35 0517 2080</p> <p>Component / part drawings::</p> <p>RDDG435-0517-2081 RDDG435-0517-2012A RDDG4 35-0617-113B RD DG 4 35-1133-4161A</p>
3.0	<p>SPECIFICATIONS:</p> <p>3.1 Material: Low Carbon Austenitic <u>stainless steel</u> confirming to AISI-304L.</p> <p>3.2 Standard seamless or ERW (straight/ spiral) tubular sections shall be used for construction, where ever applicable in design. Fabricated (allowing rolled and seam welded) / drawn sections can be used for other areas not conforming to standard pipe schedules.</p> <p>3.3 Drawn profiles, to size, only shall be used for direct welding with the flanges (To be machined to the drawing only after welding). No smithy is allowed for formation/ matching of profiles in view of defect inception. Pipe and flanges shall be MIG/TIG welded with suitable SS electrode.</p> <p>3.4 The welded sections shall be sized as per drawing and verified /tested using Dye Penetration (D.P.) technique at all stages of welding. Inside edges/weld shall be fused to obtain near smooth weld surface.</p>

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3.5	The flanges shall be manufactured to drawings after welding only. The flanges shall be machined as per instructions and maintaining parallelism of faces and perpendicularity as prescribed. To ensure paralality, it is must to machine the components after welding all the sections as prescribed. The flange sealing surfaces shall be polished to RA 0.6/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.
3.6	All flanges of different dimensions shall be welded by maintaining parallelalaly as per limits of manufacturing drawing.
3.7	Weld splatter, if any, shall be removed by chipping or grinding on completion of the weld. Particular care should be taken to avoid any splatter on the inside of the chamber, at the joint or other locations.
3.8	Dye penetration report shall be generated and submitted to BHEL
3.9	The tested assembly should be cleaned, degreased and prepared for pressure test. The assembly shall be tested at 8.5 bar pressure for 4 hours and pressure drop shall be recorded and communicated to BHEL. In case of unallowable pressure drop (>0.5%), a coarse 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.

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3.10	The supplier shall stress relieve tested component to ensure zero post supply deformation.
3.11	Stress relieved component shall be electro-polished on the inside surface using moderate current densities.
3.12	The assemblies further shall be sandblasted on the outer surface and powder coated (> 50 Micron) as specified in drawing. During this operation all flanges shall be masked at the sealing surfaces and at the rim.
3.13	The dimensional checks and the leak test shall be carried out in presence of BHEL inspector.
3.14	The accepted component shall be packed in wooden boxes with suitable PVC 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 2-weeks, adequate quantity of moisture absorbent shall also be placed with the component.
3.15	<p>Following certificates shall be furnished for acceptance of the component:</p> <p>3.15.1 Material source certificate,</p> <p>3.15.2 Material test certificate ,</p> <p>3.15.3 Stage wise DP tests</p> <p>3.15.4 Pressure drop test and pressure withstand test report</p> <p>3.15.5 Electro-polishing schedule</p> <p>A certified copy of above documents shall be sent along with the delivery note.</p>

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4.0	In case of doubts in specifications, the supplier shall contact BHEL for clarifications.

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