

NOZZLE FABRICATION - SCOPE OF WORK

W.O.No. : 1044800100
CUSTOMER : BPCL KOCHI
DISCRIPTION : COMPRESSOR BCL806

1. Fabricated Suction nozzle dia30": 23310700047-00

Component drg: 33310700083-00 (PIPE)
43310700114-00 (RIB)

2. Fabricated Discharge nozzle dia24" : 23310700048-00

Component drg: 33310700084-00(HALF PIPE)

In-house Facilities required for Fabrication-

1. EOT Crain 1-2 Tons for handling the job.
2. Plate rolling machine:
(max thickness of plate -45 mm, min. rolling inside dia 672 mm)
(max thickness of plate -32 mm, min. rolling inside dia 335.2 mm)
3. Welding facilities –Shielded metal arc welding (**SMAW**)

Facilities required for Fabrication that can be outsourced from BHEL approved vendors –

1. Facilities to carry out Radio-Graphic Test and MPI for weld joint.

CHECK LIST / GUIDE LINES DURING FABRICATION

1. Pipe of Suction nozzle (drg no. 33310700083-00) can be made from two-piece or four piece.
2. Deviations for dimension without indication of tolerance will be according to TC72066.
3. All the individual component should be checked as per drg before fit-up.
4. **Assemble all the components, tack weld them in position and offer for inspection before final welding. Assembled pipe for Suction and discharge nozzle shall be checked at 4 section along the length .Template for inspection will be provided by Bhel.**
5. Welding should be carried out as per WPS -WE001.
6. Use only qualified welders.
7. Carry out DP test after welding the root layers on each butt weld joint to ensure sound weld.
8. Use the proper auxiliary stiffener and supports during fit-up and welding to minimize the distortion. (Auxiliary stiffener and supports will be in vendor scope)
9. All welds shall be checked for 100% Radio-Graphic Test as per std. HY0850170.
10. All weld (Butt and Fillet) shall be checked for 100% MPI as per std HY0850180.
11. Witness of NDT test of weld joint by BHEL/BHEL appointed TPIA

12. Final inspection i.e., dimensional check-up , visual inspection by M/s. BHEL or BHEL appointed Third party .
13. Vendor should submit all relevant documents /Reports to BHEL during the dispatch of the job.
14. Ensure the all free issued materials against part nos. in the WBOM before fit up and welding.

List of activities involved in the fabrication of Nozzle:

1. 30" Suction Nozzle:

1. Bending of plate to half pipe as per drg 33310700083-00.(Pos no. 1 & 2)
2. Edge preparation in half pipe.
3. Assembly of two half pipe with plate (pos no. 3 & 4) and welding.
4. Assembly of rib in the pipe and welding
5. Weld edge preparation in pipe.
6. Welding of pipe with nozzle flange.
7. Post weld NDT inspection.

2. 24" Discharge Nozzle:

1. Bending of plate to half pipe as per drg 33310700084-00.
2. Edge preparation in half pipe.
3. Assembly of two half pipe and welding.
4. Weld edge preparation in pipe.
5. Welding of pipe with nozzle flange.
6. Post weld NDT inspection

Note: Vendor should have technical discussion with BHEL before submitting the offer.

Free Issue Material for Fabrication of Nozzles:

Sl no.	part no.	Component description	Matl code	matl spec	QTY
1	33106008	Nozzle Flange for dia 30" Suc nozzle	TC9416442135	HY19364	1
2	33106010	Plate for Half pipe (pos no. 1& 2) for dia30" Suc nozzle	HY1041870205	HY10470	2
3	33106011	Plate for pos no. 3 & 4	HY1041870205	HY10470	2
4	33106012	Plate for RIB	HY1041870132	HY10470	1
5	33106015	Nozzle Flange for dia 24" Disch nozzle	TC9416415138	HY19364	1
6	33106017	Plate for Half pipe for dia24" Disch nozzle	HY1041870175	HY10470	2

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