

2026OSB058-SECTION I D -SCOPE OF WORK

SCOPE –Headers Fabrication

GENERAL REQUIREMENTS:

1. Vendor must be IBR certified. The vendor shall fabricate Headers, as per BHEL-issued/approved drawings, Quality Plans and Welding Procedures.
2. The vendor shall collect all raw materials from BHEL premises in a timely manner from respective stores.
3. Welding must be performed by IBR-certified welders. Welding consumables are to be procured from the BHEL approved vendors. Vendor shall create a WPS and get it approved with PQR back up by Welding technology centre of BHEL.
4. All fabrication, inspection, and testing will adhere to relevant quality documents (Customer Quality Plans, Standard Quality Plan, Standard Inspection and testing procedures, Quality Control Procedures). Final IBR Form III-H for Headers will be vendor's scope.
5. The vendor will maintain a history card for the job, including details of any rework performed during the process. Compliance with production guidelines and notes as per the manufacturing GMS is mandatory. Stage wise inspection/certification by IBR/Customer as per requirement to be carried out for header fabrication.

THE JOB DETAILS

6. Vendor has to collect the Raw materials viz., pipes, tubes, forgings, fittings and plates from respective BHEL stores with relevant IBR documents for Attested items through their vehicle arrangement.
7. Inspect the raw materials details & specification by spectrometer. All IBR inspection formalities should be followed.
8. Traceability to be maintained in all Attested/Certified items and cut bits as per QCP.
9. Prepare Cutting Plan and Joint Plan and obtain approval from BHEL. While preparing cutting plan for tubes of header stubs, care to be taken to include allowance for welding hydro dummy. 30 mm Extra will be issued by BHEL as hydro allowance in tubes.
10. All Tooling and Fixtures, Positioners, Rollers shall be arranged by vendor.

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11. Mark, Cut & edge prepare the pipes as per approved drawing/cutting plan/Joint plan.
12. Holes near to planned butt joints shall be drilled after clearing NDE of joints as per applicable QPs.
13. Mark and Drill the pipes.
14. Proper Pre-heating, inter-pass temperature and post heating to be maintained with records as per WPS and Quality plans.
15. Ensure pipes are handled without any scoring marks.
16. All components & attachments, hydro dummies to be machined from respective supplied raw materials.
17. Positive Material Identification shall be ensured for all materials before welding.
18. Ensure straightness of short nipples during welding. Avoid distortion during welding.
19. Welding and Inter Stage & Final PWHT of headers shall be strictly as per Quality plan provided.
20. Stud Welding to be carried out as per Drawing, Quality Plan & Welding requirement
21. Conduct NDE as per Quality Plan for all weldments.
22. Complete all welding before PWHT. Ensure PMI of weldment.
23. PWHT to be carried out as per Quality plan at IBR approved/calibrated furnaces by vendor. Heat treatment charts shall get cleared by IBR.
24. Alternatively, BHEL Trichy may extend support for PWHT on a chargeable basis. Applicable charges are **Rs. 9.6 Per kg** of Header in a Batch Furnace for heat treatment. Vendor has to arrange their own transport facilities for safe delivery of header to BHEL Shops for PWHT and safe collection without damaging the parts.
25. Hardness requirements on weldment and raw materials shall meet quality plan requirements for all materials.
26. NDE clearance post PWHT shall be obtained as per Quality Plans.

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27. All headers shall be 100% hydro tested by vendor to the test pressure of 1.5 times the design pressure mentioned in the drawing (Irrespective of Note mentioned in the drawing for shop hydro testing of header). Raw materials for Hydro dummy blanks for closing the ends of header as per pressure requirement will be issued by BHEL. Vendor has to cut and machine it suitably as per the drawing: 2-03-000-00094 to the ID and Test Pressure.
28. Any bow in pipe shall be corrected by Mechanical means as per Quality Plan. Hot correction in pipe is not allowed.
29. Witness by IBR/Customer shall be carried out as per requirement.
30. After hydro test, remove the dummy blanks and carryout final machining. Maintain all dimensions as per drawing.
31. Carryout deburring and inside cleaning after final machining. Ensure with boroscopic inspection as per Quality Plan.
32. Final inspection by BHEL QC/IBR/Customer as per Quality Plan.
33. Final Painting as per approved painting scheme. Colour coding on field weld ends, painting as per approved painting scheme to be followed.
34. Put VCI pellets, close the end with end caps and capping channel, provide identification details like Work order, DU, Wt. Hydro details etc., as per Quality Plan. Vendor has to arrange capping channel, plastic ID cups and metallic end covers for closing all open ends before despatch.
35. Hand over finished job as DTS (Direct to Site) with relevant documents and Vendor has to arrange vehicle to move the job to site. In case of any contingency, vendor has to handover the job at BHEL Trichy Shipping with his own vehicle arrangement.
36. Form III-H for Header is with vendor's scope.

A. IBR INSPECTION FEES

The vendor must pay IBR inspection fees for the states where manufacturing occurs, except for Tamil Nadu.

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After making the payment, the vendor must submit a copy of the fee payment letter to BHEL, Trichy, indicating the Heating Surface Area (HSA) of the pressure parts covered by the fees for Re-imbursement.

B. TRANSPORTATION

Transportation cost for material collection & despatch of finished goods shall be in vendor's scope.

C. WPS & NDT MATERIAL

Vendor has to arrange materials for establishing WPS (PQR) and NDE Procedures.