

Section I D - 1 - 2026OSB001
Scope of Work for Panels (RS13)

S.NO	SCOPE DESCRIPTION
1	Jobs shall be loaded on IBR-approved firms only.
2	BHEL will provide all raw material including tubes, plates and rods to fabricate the panel. The vendor is responsible for collecting all materials from BHEL stores along with a group certificate signed by BHEL QC/Customer via MIV in a timely manner.
3	The welding shall be performed by IBR qualified welders using BHEL approved welding consumables.
4	The welding procedure specification (WPS) and Non-Destructive Testing(NDT) procedure shall be prepared and submitted to BHEL for approval.
5	The welding consumables shall be vendor's scope. The welding consumable shall be procured from BHEL approved PRESSURE PARTS welding consumables vendors as per Annexure-E
6	The raw materials required for the WPS sample and First Off Inspection(FOI) shall be under the vendor's scope.
7	All fabrication, inspection, and testing shall adhere to relevant latest quality documents (CQP,SQP, SIP, QCP). Form 3B is under Vendor's scope.
8	All relevant documents (Drawings, GMS, and Quality documents) will be provided.
9	The cutting plans and joint location plans for both circuits and attachments shall be prepared by the vendor and submitted to OS for approval prior to the commencement of manufacturing.
10	Ensure that raw material specifications match the GMS and drawing. If any mismatches are noticed in the raw materials, notify the same to QC and OS immediately for replacement by BHEL.
11	Proper colour coding and melt transfers must be ensured for traceability during and after fabrication.
12	All tubes/rod shall undergo shot blasting prior to the commencement of fabrication.
13	Cut & edge prepare the tubes as per cutting, joint plan and drawing. Edge preparation of tube ends must be as per the drawing. (Refer to STD TP 062 05 99)
14	Build the panel using TIG/MIG/SMAW joints as per the approved WPS and drawing. Preheat must be followed as per WPS. Root welding must be done using TIG/MIG only.
15	Radiographic Testing (RT) shall be conducted on all tube butt joints (double-wall image – 100%) by the vendor using BHEL-approved sources. In case of rejection, the vendor must repair and retest the joint.
16	Maintain records of all joints with unique identification numbers for traceability.
17	All butt joints shall be flush ground, if required. Where flush grinding is performed, care shall be taken to ensure that the minimum tube thickness is maintained during the grinding process.
18	Form the panels using a panel forming machine.
19	Thoroughly inspect the formed panel and identify any weld defects or anomalies such as undercuts, burn-through, weld skips, porosity, etc.
20	Carry out weld repairs in accordance with the approved Welding Procedure Specification (WPS) and perform bow correction as required.
21	Fit, tack weld and full weld the wear bar (rod) as per assembly drawing.
22	Perform PMI check for tubes, attachments and welds as per CQP/SQP.
23	Trim the excess length, perform edge preparation at the tube ends, and ensure the tube bore is maintained as per the drawing requirements.
24	Do heat treatment wherever required as per SQP/CQP and WPS. The vendor may obtain heat treatment co-operation from BHEL. Alternatively, an additional ₹9.40/kg will be payable if the vendor performs the heat treatment on his own or through any IBR & BHEL-approved agency.
25	Heat treatment records and Charts shall be submitted to BHEL/Customer during final inspection.
26	Prepare dimensional and weld map reports for each panel. Dimensional reports are to be witnessed by BHEL QC/Customer as per CQP.
27	Offer completed panel for final inspection to BHEL QC/Customer along with the required documents: group certificate, RT report, FOT report, PMI report, LPI report, approved WPS, fixture clearance report, dimensional report, SR report, and weld map.
28	Perform air cleaning inside the tubes and conduct sponge test using the sponge sizes specified in SIPPPP15. Sponge test must be witnessed by BHEL QC/Customer as per CQP/SQP.

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29	Provide identification markings on the coils as per the drawing/CQP/SQP (work order, DU, quantity, serial number, top/bottom identity, tube colour code(SIPPP21)).
30	Hydraulic test shall be carried out as per SIP: PP:04. In case any defects are observed during the test, carry out necessary repairs and re-test until the coil meets the acceptance criteria.
31	Painting shall be under the vendor's scope.
32	Prepare a crate & stack the Coils in crate and handed over the panels to respective sites mentioned in Section I A along with Form III B. Crate material shall be given by BHEL. Vendor has to collect the crate material from BHEL stores. Fabrication of crate and Shipping to site shall be vendor's scope.
33	Provide VCI pellets inside all tubes, plastic end caps and capping channel to both ends of the panel.