



AN ISO 9001 COMPANY		BHARAT HEAVY ELECTRICALS LIMITED HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620 014. INDIA
BHE:ATP:SC:700:NV:001 Dt. 24-11-2011	DEPT. FAX No. PHONE No. E mail	ADVANCED TECHNOLOGY PRODUCTS SUB-CONTRACTING 91-(0431) - 2520565 91-(0431) - 2575189 mtr@bheltry.co.in

NEW VENDORS REQUIRED FOR MANUFACTURE OF STEAM SEPARATORS

BHEL ,Trichy seeks new vendors located in and around Trichy ,Chennai , Coimbatore , Salem ,Bangalore and other cities of Tamilnadu , who are experienced in Stainless steel fabrication for manufacturing of Stainless Steel Steam Separators .Total number of Separators to be manufactured is 240 Nos (Two hundred and Forty numbers). More details are available in BHEL website <http://www.bhel.com> (Tender notification page) or in Government Tender website <http://tenders.gov.in> (Public sector units , Bharat Heavy Electricals Limited page) , against Ref Number **BHE:ATP:SC:700:NV:001**. Interested vendors may contact the person in - charge, in the below mentioned address, indicating the respective reference number, on or before 20-12-2011.

Reference Number : BHE:ATP:SC:700:NV:001	Contact Person : M. Thiyagarajan Manager / Sub-Contracting /ATP Phone : 0431- 2575189 / 2575180 Fax : 0431 - 2520565 E mail : mtr@bheltry.co.in
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BRIEF DESCRIPTION OF STEAM SEPARATOR


BHEL, Trichy requires new vendors for manufacture of Stainless Steel Steam separators for 700 MW NPCIL project .The total number of separators to be manufactured is approximately 240 Nos (Two hundred and forty only) .

The manufacture of separators involves usage of various grades of SS materials like Stainless Steel sheets of grade DIN 17440- 1.4550 (2mm , 3 mm and 4 mm sheets) , SS rods of grade DIN 17440 - 1.4571 , SS Tube of diameter 20 mm of grade SA213 -TP 347 H and also 16 Mo3 plates . The above raw materials will be supplied by BHEL, free of cost .

The manufacture of Steam Separator requires manufacture of twenty nine components, involving critical activities like raw materials verification , Welding procedure and performance qualifications , Manufacture of required Tooling for pressing ,Forming , Bending & their qualifications , Shearing of SS sheets of different thicknesses to the required sizes, Rolling / Pressing / Bending as per drawing requirements, Long seam and cir - seam welding and NDE(PT & RT) , Solution annealing of cold worked components , Machining and drilling of flange holes and Final assembly with all components as per drawing . The verticality of the outer shell is to be maintained within 1 mm with respect to the bottom flange face. De greasing / passivation of components and assembly has also to be done by the sub contractor.

The above activities require individual stage clearances for each component and Sub assembly by Quality Control/ NDTL / Plant Lab / Processing group and also by NPCIL customer .

General arrangement of Steam separator is shown in the attached sketch.

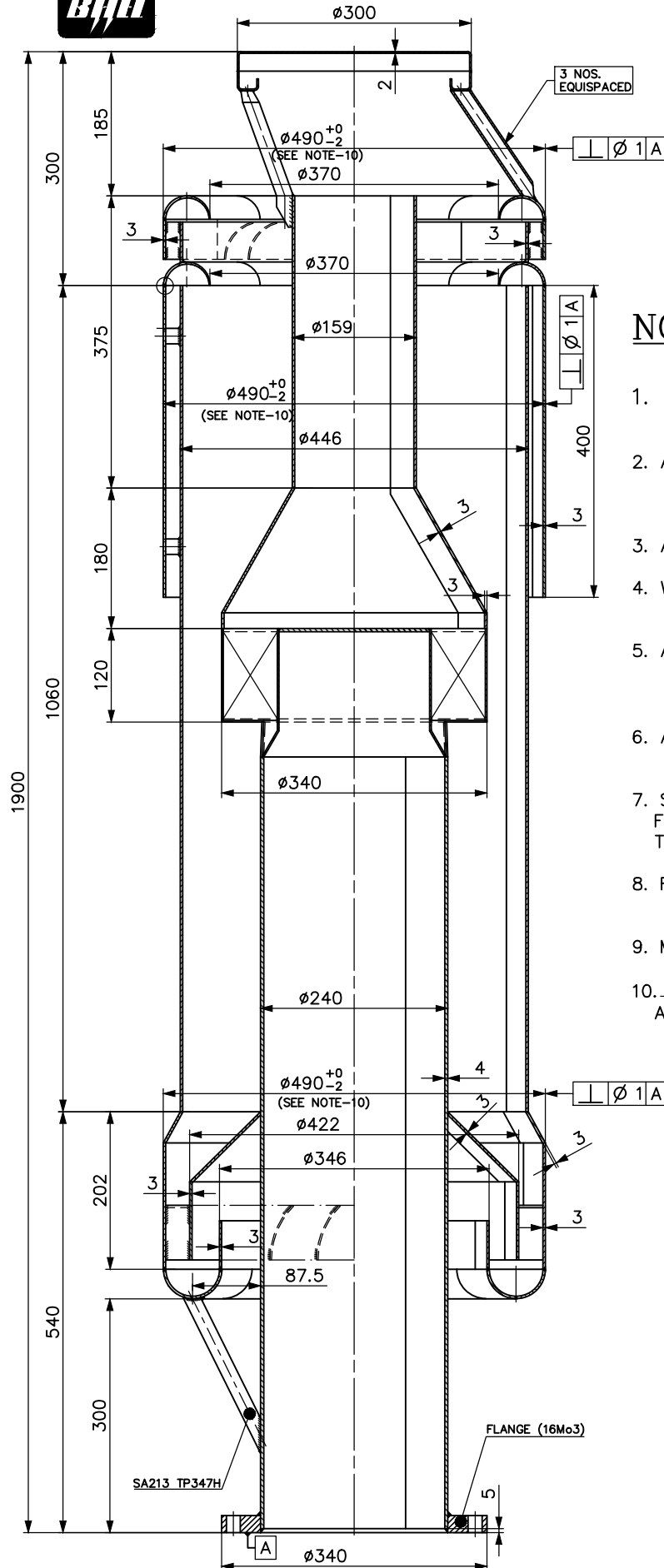
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SCOPE OF WORK FOR MANUFACTURE OF STEAM SEPARATOR

- Collection of raw materials from BHEL ,Trichy along with required documents and verification of the same.
- Preparation of Operation Process Sheets for components and assembly & cutting plans and approval from BHEL ,Trichy and Customer.
- Manufacture of Tooling and other facilities required and approval from BHEL ,Trichy before usage.
- Welding Procedure and welder performance qualifications shall be done by the vendor before start of actual job
- Welding consumables required for qualifications and actual job shall be procured by the Vendor and all relevant test certificates shall be produced for acceptance , before usage.
- Manufacture of individual components as per drawing . All butt welds shall be subjected to PT / RT. Other fillet joints shall undergo PT.
- Solution annealing shall be carried out where the % of cold working exceeds 10% and also for seven items as mentioned in the drawing .
- Surface treatment (Degreasing & passivation) of stainless steel components is to be done by the vendor and clearance to be obtained from QC/BHEL & Customer.
- Final assembly and welding as per drawing .
- Proper packing of individual separators and safe delivery to BHEL, Trichy.
- All the above operations involve BHEL and NPCIL inspection for intermediate stage and final inspection clearance.



STEAM SEPARATOR



NOTES:

1. ALL WELD EDGES SHALL BE SUBJECTED TO PT AS PER RELEVANT BHEL SPECIFICATION.
2. ALL BUTT WELDS SHALL BE SUBJECTED TO 100% RT. INSIDE AND OUTSIDE SURFACES SHALL BE SUBJECTED TO PT.
3. ALL FILLET WELDS SHALL BE SUBJECTED TO PT.
4. WELDS SHALL BE SMOOTHLY BLENDED WITH ADJACENT BASE METAL.
5. AFTER FORMING IT SHALL BE ENSURED THAT THE SURFACES SHALL BE SMOOTH AND WITHOUT WAVINESS.
6. ALL SHARP CORNERS / EDGES SHALL BE ROUNDED OFF.
7. SOLUTION ANNEALING SHALL BE CARRIED OUT FOR ALL COLD WORKED COMPONENTS WHERE THE AMOUNT OF COLD WORKING EXCEEDS 10%.
8. RADIUS AT BENDS SHALL BE SMOOTH AND WITHOUT WRINKLES.
9. MATERIAL : DIN17440-1.4550.
10. \perp OF SHELLS SHALL BE MAINTAINED AT ASSEMBLY STAGE.