

**CERTIFICATE OF MANUFACTURE & TEST OF BOILER MOUNTING & FITTINGS**  
(Regulation 269 of the Indian boiler Regulation, 1950)

| S. No.                    | Description | Qty  | Cast No. | Specifications |
|---------------------------|-------------|--|----------|----------------|
| 01                        | Thermowell  | 192 Nos.   |          | AISI 316 SS    |
| Maker's Name              |             | M/s Tempsons Instruments (I) Pvt. Ltd.,<br>B-188A, Road No.5, Mewar Industrial Area,<br>UDAIPUR - 313 001 (RAJ.) |          |                |
| Customer                  |             | M/s BIHARAT HEAVY ELECTRICALS LTD<br>BANGALORE<br>A/C MEHA TPS 2X500MW   |          |                |
| Intended Working Pressure |             | 192 Nos Thermowells stem at 600°C at 250<br>Kg/cm <sup>2</sup> pressure Annexure "A" Attached.                   |          |                |
| Hydraulic Test Pressure   |             | (BR Test for pressure 375 Kg/cm <sup>2</sup> )   |          |                |
| Dimension                 |             | As per the drawing bearing No. 421252<br>approved by the Chief Inspector of<br>Factories & Boilers, Jaipur       |          |                |
| Drawing No.               |             | 421252   |          |                |
| Identification Mark       |             | TW 3594 TO TW 3785   |          |                |
| Date of Inspection        |             | 06.02.2009   |          |                |


**Chemical analysis (%)**

| Sr. No. | C     | Mn   | Si    | S      | P     | Ni    | Cr    | Mn   |
|---------|-------|------|-------|--------|-------|-------|-------|------|
| 01      | 0.057 | 1.01 | 0.442 | 0.0224 | 0.031 | 10.38 | 16.86 | 2.03 |

**Physical/Mechanical Properties :-**

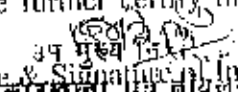
| S. No. | Ultimate Tensile Strength Kg/Cm <sup>2</sup> | Elongation % | Reduction % Area |
|--------|--|--------------|------------------|
| 01     | 699Mpa                                       | 51.5         | 67               |

Certified that Particulars entered herein by us are correct. The part has been designed and constructed to comply with Indian Boiler Regulations for a working pressure as specified in the intended working pressure column in the presence of our responsible person whose signature is appended below :-

Maker's Representative      Maker :      M/s Tempsons Instruments (I) Pvt. Ltd.,  
Name & Signature      UDAIPUR - 313 001 (RAJ.)  
  
R.D. DEVAL  
(Manager Marketing)

We have satisfied ourselves and the fitting has been constructed and tested in accordance with the requirements of Indian Boiler Regulation, 1950. We further certify that the particulars entered herein are correct.

Place :      JAIPUR  
Date :      20 FEB 2009

Name & Signature of Inspection Officer Who Witnessed The Test  
  
06.02.2009 (Raj.)

**INSPECTING AUTHORITY & CHIEF INSPECTOR OF FACTORIES & BOILERS, RAJASTHAN - JAIPUR**

Chief Inspector of Factories & Boilers  
Rajasthan, JAIPUR

*Seen*  
TO REVIEWED/VERIFIED  
BHEL-EDN-BANGALORE  
N. M. DEVARAJA  
DATE: ...20/2/2009.....