



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI

SUPPLIER DEVELOPMENT CELL - OUTSOURCING DEPARTMENT

REQUIREMENT OF NEW VENDORS FOR STRUCTURAL FABRICATION / BOILER COMPONENTS / PIPING PRODUCTS

About BHEL:

BHEL, a Maharatna PSU under Government of India is India's largest engineering and manufacturing enterprise in the energy and infrastructure sectors. Established in 1964, BHEL is a leading power equipment manufacturer globally and one of the earliest and leading contributors towards building an Aatmanirbhar Bharat.

Supply of Components / equipment for Thermal Power plants is One of the major Business portfolio of BHEL. Among the various products in a Thermal power plant, Boiler and its related components are manufactured at BHEL's Trichy Manufacturing facility.

Business opportunity in BHEL - Trichy:

In order to meet our Country's growing Power demand, Government of India has set an ambitious target of adding 80 GW of power by 2030. And, currently BHEL has received & executing orders for the following projects: NTPC Talcher 2 x 660 MW, MEL Adani 2 x 800 MW, NTPC Lara 2 x 800 MW, NLC Talabira 3 x 800 MW, HPGCL Yamunanagar 1 x 800 MW, NTPC Singrauli 2 x 800 MW, Raigarh 2 x 800 MW, Mirzapur 2 x 800 MW, DVC Koderma 2 x 800 MW. In addition to the above orders, the following projects are at Tendering stage: NTPC Darlipalli 1 x 800 MW, NTPC Sipat 1 x 800 MW, Ukai 1 x 800 MW.

A very good Business potential is available to the Fabrication Vendors to tap the Business opportunity available with BHEL –Trichy to supply fabricated Structural items / Boiler components / Piping products for the above projects.

Given below the Major Product categories dealt by Outsourcing Dept. BHEL – Trichy and our Tentative Annual requirement :

Product Description	Annual Requirement (MT)
Ceiling Girders	15,700
Columns	46,000
Auto Weld& GF Structures	93,000
Ducts	25,000
Buckstays	13,000
Assembly Products	1,500
Piping Products	40,000
Punching/Pressing/Machining/Shearing/Gen Fabn. items	28,000
Grand Total	2,62,200

A general overview of the Products handled is given below:

Sl.No	Material group	Materials involved	Major Processes involved in Fabrication	Weight (MT) / Handling requirements
1	Ceiling Girders	Plates IS 2062 E350 BR/B0 (40 mm, 63mm, 72 mm, 80 mm, 100 mm, etc)	Gas Cutting, Welding (SAW), Drilling, Grinding, Hot Correction, Warpage correction, Trial assembly, etc.	Up to 100 MT
2	Columns	IS 2062 E350 BR/B0 Plates (25mm, 32mm, 40 mm, etc)	Gas Cutting, Welding (SAW), Drilling, Grinding, Hot Correction, Warpage correction, Trial assembly, etc.	Up to 40 MT
3	General Fabrication items	Predominantly rolled sections (Channels (ISMC), Beams (ISMB, NPB, UB, UC, etc), Angles (ISA), Square Hollow Sections (SHS). Plates of various thickness to be welded to rolled sections.	Gas Cutting, Welding (SMAW), Drilling, Grinding, Hot Correction, etc.	Up to 12 MT
4	Plate formed Beams(AW)	Predominantly plates (above 12 mm thickness) IS 2062 E250 / E350	Gas Cutting, Welding (SAW), Drilling, Grinding, Hot Correction, Warpage correction, etc.	Up to 20 MT
5	Ducts	Plates IS 2062 (5mm, 6mm, 7mm, 8mm, 10mm)	Gas Cutting, Welding (SMAW), Drilling, Grinding, Hot Correction, Plate rolling, Plate pressing, Trial assy, etc	Up to 12 MT
6	Handrails	Tubes ERW Nb32 Medium IS1161 (ST, ERW tubes, etc)	Tube bending, Galvanizing, etc	Up to 10 MT
7	Piping products (With BHEL material)	Pipes and pipe with attachments (CS, AS upto P22)	Marking, Cutting, Edge Preparation, Fit Up, Welding, Painting, Stencilling	Up to 20 MT
8		Plate formed Pipe/Mitre Bends/Welded Tees/ reducers/Dished Ends etc.	Marking, Cutting, rolling, Edge Preparation, Welding, NDT, Painting(internal/External), Stencilling	Up to 20 MT
9		Machining CS/AS (Stubs, Flanges, Carrier Plates, Flat End closures Etc.)	Marking, Cutting and Machining to required dia/ machining as per drawing, rust preventive oil application	Up to 5 MT
10		Machining P91- Ultra sonic Testing reference Block	Marking, Cutting and machining as per drawing.	Up to 5 MT

11		Pipe Clamps (Gr.70, Gr22& Gr 91)	Marking, cutting, forming/Pressing, drilling, welding(*Preheat), assembly, PWHT, assembly, Painting, stencilling	Up to 10 MT
12	Piping products	Rigid Strut Assembly	Machining, Welding, assembly, painting, stencilling	Up to 5 MT
13	Piping products (With BHEL/Vendor material)	Tanks & Vessels/Deaerators (Low capacity Tanks IBR/Non IBR) –	Marking, Cutting, rolling and Fabrication as per drawing, NDT, Painting as per QP, stencilling	Up to 40 MT
14	Piping products (With Vendor material)	Non IBR & Low Pressure Piping - Pipes & Fittings (Pipe Sizes upto NB 900 & Thickness 22mm) <i>(Carbon Steel (SA106 GRB/GRC, IS 1239/3589 Black/G&T, SA234WPB/WPC, API 5 L GRB), Alloy Steel (P22/P11), SS/Duplex)</i>	Raw material procurement, fabrication as per drawing, Painting and Despatch to site	Up to 20 MT
15		IBR carbon Steel & Alloy Steel Piping (Upto P22) - Pipes & Fittings	Raw material procurement, fabrication as per drawing, Painting and Despatch to site	Up to 20 MT
16	Attachments (V – clip, U plate, Spacer clip, Metallic End covers, Stud, Sleeve, Hex Nut, Tube Lug, UT Reference block)	Carbon Steel	(Raw material issue by BHEL) Shearing, Punching, Pressing, Machining and Welding	Up to 10 MT

COLUMNS:



DUCTS:



CEILING GIRDERS:



(A).PIPES (WITH VENDOR MATERIAL)

PLATE FORMED PIPES



PLATE FORMED PIPE WITH BRANCH & STIFFNER



Specifications:

- IS 2062 Gr A / Gr B
- SA515 Gr60 / Gr70
- Welded Pipes
- Variant 1: OD 4064 – 5000 mm
- Variant 2: OD 219 - 4000 mm
- Thickness: 6 – 25 mm

PLATE FORMED REDUCERS



MAITREE BENDS



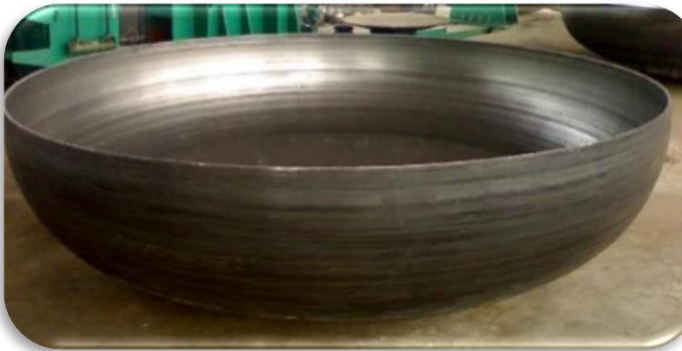
(B).PUDDLE FLANGE



Specifications:

- IS 2062 Gr A / Gr B
- SA515 Gr60 / Gr70
- OD 508 – 3000 mm
- Thickness: 6 – 25 mm

(C).DISHED END



Specifications:

- IS 2062 Gr A / Gr B
- SA515 Gr60 / Gr70
- OD 1000 – 4000 mm
- Thickness: 10 – 30 mm

(D).PIPE CLAMPS

HORIZONTAL CLAMP





Specifications:

- IS 2062
- SA515 Gr70
- SA 387 Gr22
- SA 387 Gr91
- OD: 219 – 1016 mm and ID controlled sizes also
- Thickness: 6 to 8 mm

SHOCK ABSORBER CLAMP



Specifications:

- SA515 Gr70
- SA 387 Gr22
- SA 387 Gr91
- Rod Dia M20 – M64 (SA 105, SA 182 F22, F91)
- Size OD: 219.1 – 1016 mm

TRUNNION CLAMP



Specifications:

- SA515 Gr70
- SA 387 Gr22
- SA 387 Gr91
- Thickness: 10 – 64 mm
- Size OD: 219.1 – 1016 mm

RISER CLAMP



Specifications:

- IS 2062
- SA515 Gr70
- SA 387 Gr22
- SA 387 Gr91
- OD: 219 – 1016 mm and ID controlled sizes also
- Thickness: 6 to 8 mm

U ROD CLAMP



Specifications:

- SA 105
- Dia: M12 – M64
- Size OD Range : 406 – 1016 mm

(E). MACHINING ITEMS

FLAT FACED FLANGE



BLANK FLANGE



SLIP ON WELD FLANGE



Specifications (Flange):

- SA 515 Gr70
- SA 105
- SA 182 F22
- Thickness: 10 – 100 mm
- Size OD: 33.4 – 3000 mm

STUBS



UT REFERENCE BLOCK



Specifications (Stubs):

- SA 182 F22
- SA 182 F91
- SA 105
- Thickness: 30 – 120 mm
- Size OD: NB15 – NB 100 mm

Specifications (UT Reference block):

- SA 335 P91 / P92
- SA 106 GRC
- SA 105
- Thickness: 30 – 120 mm
- Size OD: 219.1 – OD 1016 mm

TARGET PLATE



Specifications:

- SA 515 Gr60 / Gr70
- SA 240 TY304
- Thickness: 6 – 20 mm
- Size OD: 219.1 – 1061 mm

(F). ATTACHMENTS

COLLECTOR PLATE / WASHER PLATE



Specifications:

- CS / GR12 / GR 22
- Thickness: 12 – 50 mm
- Size: 500 x 300 mm

LUG PLATE



Specifications:

- CS / GR12 / GR 22
- Thickness: 6 – 20 mm
- Size: 700 x 350 mm

SCALLOPED PLATE (Straight Profile)



Specifications:

- CS / GR12 / GR 22
- Thickness: 12 – 16 mm
- Size: 600 x 70 mm

SCALLOPED PLATE (Inclined Profile)



Specifications:

- CS / GR12 / GR 22
- Thickness: 6 – 16 mm
- Size: 2100 x 150 mm

SHAPPED PLATES



Specifications:

- CS / GR12
- Thickness: 6 – 8 mm
- Size: 100 – 1000 x 150 – 300 mm

Outsourcing Business Model:

- 1) **OSB Process** – Material will be given by BHEL Trichy. Vendor to collect the material from BHEL – Trichy Stores and manufacture as per the BHEL Drawings, deliver back to BHEL Trichy Shipping. (Vendors located within 350 KM of BHEL – Trichy is preferable)
- 2) **OVM Process** – Vendor to procure the Raw Material and manufacture as per the BHEL Drawings, deliver to the Project sites.

Vendor Registration procedure:

Interested Vendors shall Register themselves by applying through our Online Supplier Registration Portal <https://supplier.bhel.in>.

The list of Material groups offered by Outsourcing Dept. for enlistment is given in the following link "<https://supplier.bhel.in> --> **Material Search** --> Select **Plant** as **Trichy (subcontractors)**".

Micro and Small Enterprises (MSE) and SC/ST vendors, Women Entrepreneurs under MSE category are encouraged to apply for vendor registration for availing the benefits being accorded as per the guidelines of MSME Ministry.

For clarifications / assistance required w.r.t. Vendor enlistment, anyone of the following persons in Supplier Development Cell (SDC) can be contacted:

Sl.No.	Name	Designation	Landline	Mobile	E – Mail ID
1	N.Padmanaban	Sr. Manager	0431 – 257 5030	9489202753	padmanaban@bhel.in
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