



## **GUIDELINES FOR SUBCONTRACTORS**

### **IMPORTANT:**

**ALL THE FILLED UP APPLICATION IN SEALED ENVELOPE SHOULD REACH THE FOLLOWING ADDRESS ON OR BEFORE 15.00 HRS ON 15-12-08.**

**ADDL. GENERAL MANAGER  
EXTERNAL SERVICES DEPARTMENT  
02 ANNEXE, SECOND FLOOR  
BHARAT HEAVY ELECTRICAL LIMITED  
RAMACHANDRAPURAM, HYDERABAD- 502032**

**ON TOP OF ENVELOPE "APPLICATION FOR SUB CONTRACTOR REGISTRATION" SHOULD BE WRITTEN.**

**THE APPLICATION SHOULD BE FILLED IN CAPITAL LETTERS ONLY.  
THE APPLICATION FORM SHOULD NOT BE FOLDED OR DISTORTED.**

**Applicants are advised to read the following guidelines carefully to understand the required criteria:**

In order to evaluate the prospective contractors to facilitate REGISTERING THEM in 'EXTERNAL SERVICES BHEL (HYD)' following guidelines are issued. As the parameters identified are objective in nature, these guidelines will help in bringing in objectivity to the process of evaluation for registration.

1. When BHEL needs the sub-contractor services for a specific job, when the scope and nature of jobs are clear suitable contractor / contractors will be picked up from the registered panel.
2. Filled up application shall be evaluated by an Evaluation Committee appointed by BHEL Management. Mere fulfilling all the required criteria doesn't qualify a contractor to get registered.
3. All the enclosures should be duly signed by the applicant.

### **PARAMETERWISE GUIDE LINES**

#### **SL.NO. 1: STATUS OF COMPANY:**

This parameter is meant to assess the contractor based on incorporation status. As the monitoring mechanism vary based on whether the company is

Govt./Public sector, Public Ltd., Pvt. Ltd., Partnership, family, proprietary concern .

**SL.NO. 2: GOVT / PSU REGISTRATION:**

The parameter is meant for assessing the familiarity of the contractor with procedures and methods used in BHEL / PSUs / Govt. Sector based on the no. of projects in the relevant field carried out or no. of customers with whom the contractor has earlier worked, or jobs under process.

**SL.NO. 3: LABOUR LICENCES:**

Labour license is to be obtained by the contractor at the place of work after the awardal of the contract. The capability of the contractor to obtain labour license is assessed based on the number of jobs carried out in a Govt. / PSU / Private Sector

**SL.NO. 4: PF ACCOUNT NO:**

Having P F account number.

**SL.NO. 5: GROUP INSURANCE:**

Group insurance will be taken before commencing the work, based on the manpower estimated and duration of project. The potential of the contractor to obtain group insurance in time, taking into consideration the jobs handled by them in their previous experience to be assessed.

**SL.NO. 6: I.T. CERTIFICATE / PAN DETAILS:**

IT returns for previous three years based on whether the income tax clearance certificate is furnished or not. (Proof to be enclosed).

**SL.NO.7: SERVICE TAX REGISTRATION DETAILS:**

Contractor must be a service provider having valid service tax registration.

**SI.NO. 8:** A) Overhauls carried out in Steam/ Gas Turbines.  
B) Experience in E&C jobs of Steam / Gas Turbines  
C) E&C jobs carried out for Steam / Gas Turbines / Compressors instrumentation.

**SL.NO.9:** A) Overhauls carried out in Generator  
B) Experience in E&C jobs of Generator / Compressors.  
C) E&C jobs carried out for Generator Instrumentation & Electrical

**SL.NO. 10:**A) Overhauls carried out in Centrifugal Compressors & Pumps and Heat Exchangers Equipments Services  
B) Experience in E&C jobs of Heat Exchanger / Piping (Stress

Relieving , X-ray)

C) E&C jobs carried out for LT & HT switchgear

**SL.NO. 11:** A) Overhauls carried out in Gas turbines

B) Experience in E&C jobs of Gearbox / Pumps & Aux

C) Other instrumentation & Electrical jobs

**SL.NO. 12: VALUE AND NO.OF JOBS COMPLETED IN LAST 3 YEARS:**

Must have completed at least one job per year during last three years.

**SL.NO. 13: SINGLE LARGEST CONTRACT VALUE:**

This is to assess the capability of the contractor to handle large jobs.

**SL.NO. 14: COMPLETION CERTIFICATE FROM CUSTOMER**

Contractor should produce job completion certificate for the entire major job indicated in the profile completes during last three years.

**SL.NO. 15: CUSTOMER'S APPRECIATION LETTERS**

- The outline shall be similar to s1. No.14. The stress is on project completion capability and basis is appreciation letters from customers.
- Minimum one timely completion certificate
- Number of appreciation letters

**SL.NO. 16: TOOLS AND PLANTS LIST**

Based on the list of tools, tackles & plants submitted by the contractor and assessment of his potential to mobilize resources to meet the requirement of project (the basic list of tools and plants is provided for assessment purpose. Additional information can be added if desired by you).

**SL.NO. 17: PERFORMANCE ON BHEL / OTHER JOBS:**

The emphasis is to know whether the contractor is familiar with the procedures / systems of BHEL. Based on the number of jobs completed for BHEL or for other Customers having BHEL Equipment.

**SL.NO. 18: ORGANISATION CHART:**

Based on the size and strength of the organization, manpower the Organisation chart indicates the presence of aux functions like safety, QC and customer supports.

**SL.NO. 19: TECHNICAL SKILLS OF WORKMEN:**

The technical skills and qualification of all managerial and technical personnel should be listed to get better look on the functional capacities of

the contractor. Sufficient number of skilled manpower should be available with the contractor for carrying out the jobs.

**SL.NO. 20: ISO COMPLIANCE:**

Since BHEL is an ISO Certified company, the sub contractors should be encouraged to have ISO certification. However this criteria is not a binding for registration purpose.

**Data –Form for Registration / Updating Information of the Subcontractors (Mechanical)**

1.	Name of the Contractor, Address, Telephone, Fax, Email etc., (Indicate Partner's Name & details along with MOU)	:	
2	Details of Registration with Govt. / PSU's etc.	:	
3	Labor License Particulars (Enclose Certificate)	:	
4	P.F. Registration details (Enclose Certificate)	:	
5	Particulars of Group Insurance for workmen's Compensation Act (Furnish Policy No. & Copy)	:	
6	Income Tax Certificate, PAN & Service Tax Registration. (Enclose Certificates)	:	
7	Service Tax Registration details (Enclose Certificate)	:	
8	Experience in E&C jobs of Steam / Gas Turbines	:	(Furnish Order Value and job details for last three financial years)
9	Experience in E&C jobs of Generator / Compressors	:	
10	Experience in E&C jobs of HE / Piping (SR, Xray)	:	
11	Experience in E&C jobs of Gearbox / Pumps & Aux	:	
12	Value and Number of jobs completed in the last 3 years	:	
13	Details of single largest contract value (Enclose Certificate)	:	
14	Completion certificate from the customer (Enclose copy of Certificates)	:	
15	Appreciation letters from Customers (Enclose copy of certificates)	:	
16	List of Major tools & Plants available with the firm (Enclose List)	:	To be submitted in the enclosed format No.HY/ESD/CONT/02
17	Organization Chart (Including Engineers & Supervisory staff)	:	
18	Details of technical skills of work men (Enclose manpower list)	:	
19	IBR / <del>Electrical</del> Inspector Certificate for executing the IBR scope job / <del>Electrical</del> Installation (Enclose Certificate)	:	
20	Any other relevant information / ISO Certification	:	

**NOTE: Sl.no. 1 to 18 are mandatory. Non submission of information shall lead to rejection.**

Date:

Address:

(Signature &amp; Seal of Sub Contractor)

**Data –Form for Registration / Updating Information of the Subcontractors (Overhauling)**

1.	Name of the Contractor, Address, Telephone, Fax, Email etc., (Indicate Partner's Name & details along with MOU)	:	
2	Details of Registration with Govt. / PSU's etc.	:	
3	Labor License Particulars (Enclose Certificate)	:	
4	P.F. Registration details (Enclose Certificate)	:	
5	Particulars of Group Insurance for workmen's Compensation Act (Furnish Policy No. & Copy)	:	
6	Income Tax Certificate, PAN & Service Tax Registration. (Enclose Certificates)	:	
7	Service Tax Registration details (Enclose Certificate)	:	
8	Overhauls carried out in Steam	:	(Furnish Order Value and job details for last three financial years)
9	Overhauls carried out in Generator	:	
10	Overhauls carried out in Centrifugal Compressors & Pumps and HE Equipments Services	:	
11	Overhauls carried out in Gas turbines	:	
12	Value and Number of jobs completed in the last 3 years	:	
13	Details of single largest contract value (Enclose Certificate)	:	
14	Completion certificate from the customer (Enclose copy of Certificates)	:	
15	Appreciation letters from Customers (Enclose copy of certificates)	:	
16	List of Major tools & Plants available with the firm (Enclose List)	:	To be submitted in the enclosed format No.HY/ESD/CONT/02
17	Organization Chart (Including Engineers & Supervisory staff)	:	
18	Details of technical skills of work men (Enclose manpower list)	:	
19	IBR / Electrical Inspector Certificate for executing the IBR scope job / Electrical Installation (Enclose Certificate)	:	
20	Any other relevant information / ISO Certification	:	

**NOTE: Sl.no. 1 to 18 are mandatory. Non submission of information shall lead to rejection.**

Date:

Address:

(Signature &amp; Seal of Sub Contractor)

**Data –Form for Registration / Updating Information of the Subcontractors (CI&E)**

1.	Name of the Contractor, Address, Telephone, Fax, Email etc., (Indicate Partner's Name & details along with MOU)	:	
2	Details of Registration with Govt. / PSU's etc.	:	
3	Labor License Particulars (Enclose Certificate)	:	
4	P.F. Registration details (Enclose Certificate)	:	
5	Particulars of Group Insurance for workmen's Compensation Act (Furnish Policy No. & Copy)	:	
6	Income Tax Certificate, PAN & Service Tax Registration. (Enclose Certificates)	:	
7	Service Tax Registration details (Enclose Certificate)	:	
8	E&C jobs carried out for Steam / Gas Turbines / Compressors instrumentation.	:	(Furnish Order Value and job details for last three financial years)
9	E&C jobs carried out for Generator instrumentation & Electrical	:	
10	E&C jobs carried out for LT & HT switchgear	:	
11	Other instrumentation & Electrical jobs	:	
12	Value and Number of jobs completed in the last 3 years	:	
13	Details of single largest contract value (Enclose Certificate)	:	
14	Completion certificate from the customer (Enclose copy of Certificates)	:	
15	Appreciation letters from Customers (Enclose copy of certificates)	:	
16	List of Major tools & Plants available with the firm (Enclose List)	:	To be submitted in the enclosed format No.HY/ESD/CONT/03
17	Organization Chart (Including Engineers & Supervisory staff)	:	
18	Details of technical skills of work men (Enclose manpower list)	:	
19	<del>IBR</del> / Electrical Inspector Certificate for executing the <del>IBR scope job</del> / Electrical Installation (Enclose Certificate)	:	
20	Any other relevant information / ISO Certification	:	

**NOTE: Sl.no. 1 to 18 are mandatory. Non submission of information shall lead to rejection.**

Date:

Address:

(Signature &amp; Seal of Sub Contractor)

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# **LIST OF TOOLS AND PLANTS REQUIRED FOR MECHANICAL ERECTION WORK**

**Format No.HY/ESD/Cont/02**

Date: 01/09/2008

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Sno.	Discription / Specification	Quantity
<b>A. <u>HANDLING &amp; LIFTING EQUIPMENT:</u></b>		
1	Hydraulic jack. Capacity-25 T lift = 200 mm Dia of the table, piston = 90 mm Min. height above the ground level = 260 mm Force on the lever = 30 Kg Length of the level = 625 mm	
2	Screw Jack (ratchet type) Capacity: 5T lift 200 mm	
3	Jack bolts Min. ht. 75 mm, lift- 30 mm dia of bolt -36 mm	
4	Hand ratchet Jack Capacity -5T stroke: 370 mm Height above the ground level 90 mm Force on the level -50 Kg	
5	Hand ratchet Jack with chain and hooks. Capacity- 1.5 lift-- 2M Arm length -440 mm force on the lever-55 Kg. Min. distance between the top and bottom Hook: 440 mm, Hook size = 40 mm	
6	Chain pulley blocks Capacity - 3T, lift -6m	
7	Steel ropes with loops as per Site requirement,	
8	Eye bolts CSNO2 as per site requirement	
<b>B. <u>MACHINERY:</u></b>		
1	Power saw H. P. -1.5 Blade length 600 mm throats 200 mm, strokes/min = 60	
2	Elec. Air compressor With air receiver (Tank) pressure = 7 atp Capacity -5m3/minute Tank capacity = 3.5 M3 3 phase electrical motor: 440 V, 50 C/s air cooled With pressure gauge, starter for Motor, auto-start/stop, necessary Valves, tank with drain and Safety valve OR 2 of 2.6 M3/min. 6 atp tank: 1. 8 M3 all other things are same as above.	
3	Elec. Bench grinder with two Wheels H.p.=1, RPM =2900, wheel dia =200 mm, Thickness = 25 mm, 440V 3phase 50 c/s	
4	Portable electrical drilling Machine dia: 15 mm Dia. of the drill =15 mm, Power=350 watts 250V, 50 c/s	
5	Flexible shaft portable elec. Grinding machine Shaft dia, =20 mm, Length- 5M, Min. RPM = 2800 Input -1.3 kW With various shaped grinding wheels	

# **LIST OF TOOLS AND PLANTS REQUIRED FOR MECHANICAL ERECTION WORK**

**Format No.HY/ESD/Cont/02**

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6	Portable pneumatic drill with Morse taper No-3 dia 32 mm Drill dia. 32 mm Air compressor 1.8 M3/min. working pressure 5/7 atp RPM -190/360	
7	Portable pneumatic grinder Wheel dia=100 mm, Thickness=20 mm, Working pressure 5/7 atp	
8	Portable pneumatic grinder Wheel dia =200 mm, Thickness = 40 mm, Working pressure 5/7 atp.	
9	Chamfering machine Portable size 75 to 250 mm dia Czechoslovakian make (CKD) 6.8 KW 415 V motor with a starter on a trolley with a universal shaft coupling chamfering tool. Jaws are to accommodate the sizes 75 to 250 mm. OR similar one	
10	Hydraulic pipe bending machine, hind operated 1/2" to 2" mean radius of bend 45 to 230 mm with the blocks for 1/2", 3/4", 1", 1 1/4", 1 1/2", 1 3/4" and 2"	
11	Gas welding & cutting set with pressure gauges for oxygen and acetylene Cutting & welding up to 50 mm	
12	Welding transformer set with regulator 350 A, AC Max = 450 Amps Min = 75 Amps About 30 KVA Secondary = 85 V, Primary = 400/440V	
13	Welding D. C. Generator set with regulator 320 A, DC 90 V, Max: 320 Amps, Min: 30 A Motor KVA: 20, 2910 RPM 440V.	
14	Annealing Transformer and inductor Full set suitable for annealing alloy steel pipes (Mat. 13 cr. 44 Mo), after welding max, pipe size/-150 x 14 variation of annealing temp. reqd. 600°C to 720°C similar to A.C.L.C. Belgium makes)	
15	Argon welding equipment	
16	Electrode drying oven automatic with temp control Capable of accommodating 6 or 8 packets electrodes	
25	Tube bending machine (5 to 25 mm)	
26	Portable needle grinder pneumatic / electrical	
27	All common tools like straight edge, fitters vice vernier calipers, micrometers, dial gauges, lever type dial gauges, feeler gauges, surface plate, spanners, screw drivers, hammers, mallets etc. tools as required by RE at site to be brought by the Contractor.	
28	Mobile Crane 1 2 3 4	

**LIST OF TOOLS AND PLANTS REQUIRED  
FOR MECHANICAL ERECTION WORK**

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29	Hydra 1 2	
30	Lifting and Hoisting Wrenches etc. different capacity	
31	Wire Ropes and Slings of different sizes	

**SPECIAL TOOLS AND TACKLES REQUIRED FOR ERECTION**

Sno.	Description	Qty
1	Set of Torque spanners (M 6 to M 64)	
2	Feeler gauges (length 300; 200 mm of different widths)	
3	Precision Level Accuracy 0.02 mm / Mtr	
4	Inside and outside micrometers (0 to 250 mm, dia in different steps)	
5	Lever type and plunger type dial indicators	
6	Micron dial indicators	
7	Leaf feeler gauges (0.03 and 0. 05 mm)	
8	Depth gauges up to 400 mm	
9	Lead wire measuring gauges	
10	Digital / 35 mm camera	
11	Magnifying glasses	

# **LIST OF TOOLS AND PLANTS REQUIRED FOR CI&E ERECTION WORK**

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<b>Sno.</b>	<b>Description</b>	<b>Quantity</b>
1	Pipe bending machine (5 mm to 25 mm)	
2	Pipe; wrenches (6", 8", 12")	
3	Adjustable wrench (7", 8")	
4	Set of screw drivers	
5	Set of Allen keys (mm & inches)	
6	Set of spanners	
7	Set of needle files. (Round, triangular, square, half round and knife edge)	
8	Tube cutters	
9	Tube bender	
10	Small size hacksaw & fraksaw	
11	Cutting pliers	
12	Nose pliers	
13	Insulation stripper	
14	Dry cable jointer	
15	Crimping tool for control & power cables	
16	Die set: 1/4", 1/2", 3/4", 1-1/2", 2", ET.NPT, M20X1, M20X1.5	
17	Tap set of the above sizes	
18	Drill bits	
19	Number punch	
20	Alphabet punch	
21	Embossing machine with cassettes (Numbers and alphabets)	
22	Portable drilling machine up to 1-1/2"	
23	Soldering gun	
24	Soldering iron	
25	Multi meter - (a) Digital 3-1/2 digit (b) analog with Comment AC / DC. 0-10A & Voltage - 1000V	
26	Avo-meter	
27	Megger 500V, 1000V, 2500V, 5KV Motorized	
28	Calibration kit for thermocouples RTDS	
29	Continuity tester	
30	Calibration kit for vibration equipment	
31	0-30 MA ammeter	
32	Standard gauge for pneumatic instrument calibration	
33	Manometer 0-2M of H2O	
34	Vacuum pump	
35	Standard pressure gauges 0-2.5 Kg/cm2, 0-100 Kg/cm2, 0-160 Kg/cm2, 0-250 Kg/cm2	
36	Pneumatic calibrating kit	
37	Telephone headphones with accessories for cable testing etc.	
38	Hydraulic pump capable of generating 400 kg/cm2 pressure	
39	Dead weight tester for pressure gauges calibration upto 400 kg/cm2 range.	
40	Universal watch makers screw driver set	
41	Day welding and cutting set with all accessories	
42	Welding DC Generator set with regulator etc., 2 set	

# **LIST OF TOOLS AND PLANTS REQUIRED FOR CI&E ERECTION WORK**

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43	Spring balance 0-2 kg/cm	
44	Torque wrench 0-60 kg/cm	
45	Dual channel Oscilloscope	
46	Micro ohmmeter digital 0-200m ohm/0-10 ohms	
47	Phase Sequence meter	
48	tong Tester: (a) 0-300 amps AC (b) 0-100 amps DC	
49	Three phase variac 0-1 OA, 415/450 V	
50	Single phase variac 0-250V, 10A	
51	HV Test kit 0-30KV DC	
52	Relay test kit with phase shifter	