



BHARAT HEAVY ELECTRICALS LIMITED, BHOPAL
STEAM TURBINE MANUFACTURING DIVISION
MAIN, DETAIL, ROTOR ASSY & HYDRAULIC TESTING SECTION

NIT No:-STM/ASSY/TBGA/1920/001

ANNEXURE-V
SCOPE OF WORK

I) The work includes assembly work in various Steam turbine and nuclear turbine related auxiliary assemblies and sub-assemblies. Major assembly work involved in Steam turbine items is work such as Deblading and blading of Steam Turbine Rotors and casings, sealing fins assembly on rotors, casings and shaft sealing etc. and parting plane rectification of turbine casings., BF valve assembly and testing of various dia ranging from dia 400 to dia 2700 (Valve size may vary from range as per requirement), Oil guard rings or strainers assembly, Bearings and its pedestals, MS & HRH Strainers, RE Joints etc. and in nuclear turbine items such as LP valve support, Coupling guards, LP gland carrier, Baffle ring, HP pedestals, Oil mist separators etc. The scope of work may also cover some offloaded works from other product departments of BHEL Bhopal.

The work also includes assembly/dismantling of new/repair governing assemblies of Steam Turbine or Nuclear Turbine like Pressure control valves, Acceleration Governor, Emergency trip and testing gear, Low vacuum condenser trip assy, Servomotors (HPCV, IPCV), Main Trip Valve, Load Limiting Gear, Gland Steam Valve, Journal and thrust bearings of various variants, Emergency governor, HP Control valve and LP Control Valve Servomotors, Test Valve/Pilot Valve, Interceptor and moderation valve, 7 inch vertical governor, Combined isolation and governing valve, Follow-up pistons, main oil pump, over-speed trip unit for pedestal, hydraulic speed governor, electrohydraulic converter etc. as per drawing requirement; activity completion clearance from QST as per approved QAP etc. Technological hours will be certified as per approved technology and quantum of work executed.

Major Activities in each job are as follows:

1. To collect all assembly Items.
2. Deburring/Dressing and cleaning of parts.
3. Re-tapping of threaded holes.
4. Hydraulic testing of job as per testing pressure (If required).
5. Assembly of parts as per approved technological process and drawing.
6. Functional testing of assembled job (If required).
7. Final assembly of job.
8. QC checks at every point as per process
9. Final Painting and protection for dispatch of job



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The major jobs to be undertaken may include:

01. Blade Assy of HP Rotor
02. Blade Assy of IP Rotor
03. Blade Assy of LP Rotor
04. Blade Assy of HP Casing
05. Blade Assy of IP Casing
06. Blade Assy of LP Casing
07. Assy. and Hydraulic Testing of BF valve
08. MS and HRH Strainer Assembly
09. Bearing Assembly
10. Pedestal Assembly
11. Assy and Hydraulic Testing of RE Joint
12. LP Shaft Seal Assembly
13. Baffle Ring Assembly
14. LP Valve Support Assembly
15. LP Gland Carrier Assembly
16. RE Joint Assembly and Hydraulic Testing
17. Governing Assemblies like valves, servomotors, bearing assemblies etc.
- 18.

Technological Hours certification will be done as per approved technology and quantum of work executed.

II) Average Minimum Skilled Manpower required to execute the work per day = 6 Skilled Man for 60% contract value and average Minimum Skilled Manpower required to execute the work per day = 4 Skilled Man for 40% contract value. However, Manpower requirement may increase or decreased by department as per requirement of work.

Period of contract = Up to 30 June 2020 from the date of work order commencement. Duration of contract shall be strictly based on the performance, which will be evaluated after every three months by BHEL authority. BHEL also reserves the right to short close the contract at its discretion.

Total Required Tech-hrs. = 16622 Tech-hrs.



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III) SPLITTING OF CONTRACT:-

For ease of operation convenience, it is envisaged that the work shall be distributed amongst a maximum of two qualified agencies at L1 rate in the percentage ratio of **60:40**. If the total number of qualified agencies is 2, the whole work may be awarded to L1 party. The distribution is subject to acceptance of L1 rate by other bidders. In case of tie of rate between two vendors, the vendor who have executed more value of work orders (or similar nature of work orders) in last 3 years will be considered for work order first.