

Eligibility Criteria for Joint Venture Company

Participation through Joint Venture Company, (Termed herein under as JVC) shall be applicable with terms and conditions as below:

- (i) The JVC should be incorporated under Companies Act, 1956 and number of Partners shall be limited to two (02) Nos. only. The minimum stake holding of any of partners in JVC should be 26%.
- (ii) The JVC by itself should be in the business at least for last 3 years ending on the initial date of opening of bid of tender.
- (iii) The GST registration and EPF registration (if required) should be in the name of JVC itself.
- (iv) The JVC fulfilling conditions (i) (ii) & (iii) above, should also meet any of the following conditions:-
 - (a) The JVC by itself should meet the financial and past experience criteria.
 - (b) The JVC by itself should meet any one i.e. either financial or past experience criteria
AND
Any one of the partners of JVC (of Indian Origin only) should meet the other criteria (i.e. either financial or past experience criteria) which have not been met by the JVC by itself.
- (v) The JVC cannot rely on any other arrangement such as Consortium or supporting company of the JV partner for meeting technical experience criteria.
- (vi) An independent undertaking in addition to "Undertaking of Joint Undertaking" from the Joint Venture Partner, based on whose experience the JV has qualified, shall be submitted stating that they shall maintain minimum 26 % shareholding in the JV from date of opening of bid till the completion of the contract period.
- (vii) The JVC and the Joint Venture partners shall be jointly and severally liable for the execution of the contract and an undertaking to this effect shall be submitted along with the PQR document.
- (viii) The JV partners shall not be allowed to bid independently or as a member in a Consortium/ Other JV for this bid.
- (ix) In case of award of contract, JVC partner who meet out the experience criteria shall be required to submit a Bank Guarantee for an amount equal to 1 % of the total order value in addition to the Contract Performance Guarantee of 10 % of total order value to be furnished by the JVC.
- (x) JVC has to submit the true copies of Article of Association including the details of directors of their respective board, percentage share of the JV partners in the Company and share holding pattern of each of the Partners, duly certified by the competent authority of JVC, as on the date of submission of bid.
- (xi) JV partners should invariably submit the self certified copy of latest income tax returns.
- (xii) MPPGCL reserves the right to seek additional information as it may deem fit to satisfy itself of the eligibility of the bidder.

(Approved by competent authority)

TENDER SCHEDULE (2022 MPPGC 238773 2)

Sub:- Work contract for AOH of Electrical Equipments of unit no. 5, 1x500MW, at SGTPS, MPPGCL, Birsinghpur

S.No.	PARTICULAR	Total Quantity (in Nos./set/Job)
1	GENERATOR MISC WORKKS IN GENERATOR OVERHAULING -	
1.1	CLEANING / PAINTING OF BUS DUCT PRESSURIZATION UNIT	1
1.2	H2 PURGING AFTER UNIT SHUTDOWN & H2 REFILLING BEFORE OF UNIT LIGHT UP.	1 JOB
1.3	CLEANING / PAINTING OF H2 DRIER	1
2	TRANSFORMERS	
2.1	GENERAL OVERHAULING OF HT TRANSFORMERS	
2.11	GENERATING TRANSFORMER	
2.111	CLEANING / WASHING OF TRANSFORMERS & GT COOLER BANKS	3
2.112	TERMINAL TIGHTNESS	3
2.113	INSPECTION OF SEAL OF BUSHING, INSULATORS, TERMINAL BUSHINGS ETC.	3
2.114	OVERHAULING OF FAN & PUMP MOTORS	36
2.12	STATION TRANSFORMER	
2.121	CLEANING / WASHING OF TRANSFORMERS & GT COOLER BANKS	2
2.122	TERMINAL TIGHTNESS	2
2.123	INSPECTION OF SEAL OF BUSHING, INSULATORS, TERMINAL BUSHINGS ETC.	2
2.124	OVERHAULING OF FAN & PUMP MOTORS	22
2.13	INTER-CONNECTING TRANSFORMER -	
2.131	CLEANING / WASHING OF TRANSFORMERS & GT COOLER BANKS	4
2.132	TERMINAL TIGHTNESS	3
2.133	INSPECTION OF SEAL OF BUSHING, INSULATORS, TERMINAL BUSHINGS ETC.	3
2.134	OVERHAULING OF FAN & PUMP MOTORS	18
2.14	UNIT AUXILIARY TRANSFORMER	
2.141	CLEANING / WASHING OF TRANSFORMERS & GT COOLER BANKS	2
2.142	TERMINAL TIGHTNESS	2
2.143	INSPECTION OF SEAL OF BUSHING, INSULATORS, TERMINAL BUSHINGS ETC.	2
2.144	OVERHAULING OF FAN & PUMP MOTORS	16
2.15	NEUTRAL GROUNDING PANEL (GEN., GT, ST, UAT'S)	
2.151	CLEANING / INSPECTION/ PAINTING	6
2.16	PAINTING OF TRANSFORMER OIL STORAGE TANK	
2.161	TRANSFORMER OIL STORAGE TANK 18 KL CAPACITY	2
2.162	PAINTING OF TRANSFORMER IDENTIFICATION BOARD AND LETTER WRITING	22
2.2	GENERAL OVERHAULING OF LT TRANSFORMERS CLEANING, WASHING, TIGHTNESS IF TERMINALS, INSPECTION OF SEAL OF BUSHING, INSULATORS, TERMINAL BUSHINGS OF FOLLOWING :	
2.21	LT DRY TYPE TRANSFORMERS	
2.211	CLEANING OF TRANSFORMERS	4
2.212	PAINTING OF TRANSFORMERS	4
2.213	TERMINAL TIGHTNESS,INSPECTION OF SEAL OF BUSHING, INSULATORS, TERMINAL BUSHINGS ETC.	4
2.22	LT OIL FILLED TRANSFORMERS	
2.221	CLEANING OF TRANSFORMERS	22
2.222	TERMINAL TIGHTNESS,INSPECTION OF SEAL OF BUSHING, INSULATORS, TERMINAL BUSHINGS ETC.	22
3	SWITCHYARD :-	
3.01	BAY EQUIPMENTS: CT / PT/ LA, CIRCUIT BREAKERS, ISOLATORS, MARSHALLING BOX, MOM BOX, EARTH SWITCH ETC. CLEANING AND PAINTING, TERMINAL TIGHTNESS (220kV SWITCHYARD bay No. 23 & 24)	2
3.02	BAY EQUIPMENTS: CT / PT/ CVT/ LA, CIRCUIT BREAKERS, ISOLATORS, MARSHALLING BOX, MOM BOX, EARTH SWITCH ETC. CLEANING AND PAINTING, TERMINAL	7

	TIGHTNESS (400kV SWITCHYARD)	
3.03	CIRCUIT BREAKER PLATFORM CLEANING AND PAINTING	7
3.04	CIRCUIT BREAKER PLATFORM AND IDENTIFICATION BOARD CLEANING AND PAINTING	7
4	BUS DUCTS : INSPECTION, TIGHTNESS, CLEANING, PAINTING AND REPLACEMENT OF INSULATORS (IF REQUIRED)	
4.1	21 KV GEN BUS DUCT	1
4.2	11 KV STATION BUS DUCT	2
4.3	6.6 KV UAT/STATION BUS DUCT	4
4.4	LT TRANSFORMER BUS DUCT	14
5	ESP :	
5.1	LTMSB, ACP BUSES & MCC (CLEANING , TIGHTNESS & COMPLETE INSPECTION OF ALL BUSES)	150
5.2	CLEANING ,TIGHTNESS WORK IN EC PANEL	72
5.3	REPAIRING OF EC PANEL	72
5.4	CLEANING & RESISTANCE CHECKING OF HEATERS, REPLACEMENT OF FAULTY ESP HOPPER HEATERS	378
5.5	SERVICING/REPLACEMENT OF SHAFT INSULATOR HEATING ELEMENTS	72
5.6	SERVICING/REPLACEMENT OF SUPPORT INSULATOR HEATING ELEMENTS	288
5.7	GENERAL OVERHAULING OF TR (TRANSFORMER RECTIFIER) SET	72
6	HT SWITCHGEAR (11 KV/ 6.6 KV)	
6.1	BUS CLEANING, TIGHTNESS & COMPLETE INSPECTION OF ALL BUSES.	6
6.2	BREAKER CLEANING,TIGHTNESS & OPERATION CHECKING	115
7	415V LT SWBD/ MCC/ACDB/ SWITCHGEAR PANEL :	
7.1	BUS CLEANING , TIGHTNESS & COMPLETE INSPECTION OF ALL BUSES	15
7.2	BREAKER /MODULE SERVICING,TIGHTNESS & OPERATION CHECKING	234
8	BOP SWITCHGEAR'S PANEL :	
8.1	BUS CLEANING , TIGHTNESS & COMPLETE INSPECTION OF ALL BUSES	17
8.2	BREAKER /MODULE SERVICING & OPERATION CHECKING	147
9	BOP LOCAL CONTROL PANELS / WALL MOUNTED PANELS-	
9.1	BREAKER /MODULE SERVICING & OPERATION CHECKING	50
10	POWER HOUSE LIGHTING & POWER SUPPLY -	
10.1	CLEANING , TIGHTNESS & COMPLETE INSPECTION OF ALL LIGHTNING TRANSFORMERS & LDB1	20
10.2	PROVIDING POWER SUPPLY AS PER SITE REQUIREMENT & FOR OTHER MAINTENANCE WORK OF BMD,TMD ETC.ROUND O'CLOCK	1 JOB
10.3	LIGHTING CIRCUITS IN TG, BOILER, SWITCHGEAR, WT PLANT, DM PLANT, FUEL OIL BUILDING	5 JOB
11	HT MOTORS :	
11.1	SERVICING OF HT MOTORS :	
11.11	CLEANING , TIGHTNESS, BEARING INSPECTION , GREASING ETC.	32
11.12	PAINTING OF HT MOTORS	32
11.13	NOMENCLATURE OF MOTORS	32
11.14	COMPLETE OVERHAULING OF HT MOTOR (UPTO 1000 KW)	4
11.15	COMPLETE OVERHAULING OF HT MOTOR (ABOVE 1000 KW)	1
11.16	HT MOTOR COOLER (GENERAL INSPECTION & CLEANING)	4
11.17	REPAIRING AND PAINTING OF CANOPY/ SHED OF HT MOTORS	8
12	LT MOTORS SERVICING :8	
12.1	MOTORS ABOVE 40 KW	25
12.2	MOTOR 40 KW TO 11 KW	45
12.3	MOTORS 10 KW TO 5.5 KW	25
12.4	MOTORS 5 KW TO 1.1 KW	90
12.5	MOTORS 1 KW AND BELOW	230
13	LT MOTORS OVERHAULING :	
13.1	MOTORS ABOVE 40 KW	10
13.2	MOTOR 40 KW TO 11 KW	10

13.3	MOTORS 10 KW TO 5.5 KW	10
12.4	MOTORS 5 KW TO 1.1 KW	10
12.5	MOTORS 1 KW AND BELOW	25
14	SERVICING OF BATTERY BANK/ CHARGER/DCDB :	
14.1	SERVICING OF UNIT / STATION / SWITCHYARD BATTERY SET	3
14.2	CLEANING / SERVICING OF 220 V DC DB	1
14.3	CLEANING / SERVICING OF 220 V DC SOLENOID VALVE DB	1
15	SERVICING OF SOOT BLOWERS :	92

Terms & Conditions:-

1. **Evaluation:** The contract shall generally be awarded on total package basis.
2. It is desired that the contractor should have clear knowledge of scope of work as detailed in the work schedule and hence sufficient manpower to be deputed by him for execution of desired work. Schedule of AOH is 45 days approx. This duration may be more or less and accordingly the contractor shall depute manpower to obtain desired work progress.
3. Bidders at their own discretion and cost may visit the site before quoting their rates.
4. The time taken to complete the maintenance work is the essence of the contract. Therefore trained & efficient manpower shall be provided so that work could be finished in shortest time. The time required to finish a job shall be decided by the Engineer in charge for the work, which shall be binding to the contractor. A delay of more than half an hour in taking up the job may call a penalty equal to the double the rate of that job as per the order schedule or part thereof as will be decided by the Engineer in charge for the work.
5. **WORKMANSHIP:-** The quality of work should be up to the National International standards for maintenance in respect of each job/ work. Irrespective of whether specifically indicated in specifications or not, the contractor shall perform the overhaul work, as per the recommendation of the concerned manufacturer or according to the Indian/Overseas standards applicable for each equipment.

The work of AOH/COH maint. of Electrical Equipment part of equipment is to be done as regards to condition of equipment as a whole depending upon outcome of the operational parameters, report of routine maintenance/break down maintenance of main or sub assembly and previous inspection. The equipment shall be disassembled completely. Repairs, rectification of defects, replacement of part, shall be done as per requirement and the equipment will be set all right assembled and boxed up properly to put into trouble free operation for a long period.

In order to complete the work in time it is desired that contractor shall provide adequate skilled and semiskilled workers, labourers, supervisors, engineers and site in charge and list of the same shall be submitted to concerned MPPGCL's site in charge.

During commissioning all the defects observed on unit/ auxiliaries shall be attended on top priority without any charges by the contractor. The contractor has also to detain sufficient number of Engineers, supervisors along with skilled workers, after firing the boiler in all the 3 shifts to attend the defects, if any, observed during commissioning/initial loading of the unit for a period of 7 days or full loading of the unit, whichever is earlier. Further, any breakdown/bad workmanship of equipment overhauled by contractor is to be attended free of cost with no time delay.

6. Penalty:-

- (i) DUE TO DELAY IN EXECUTION :-** Penalty shall be levied on the delays of each and every activity .The total work has to be completed within specified time period as per the PERT .For every delay of day or part thereof in each activity penalty **@ 1 % (one percent) of the cost of activity shall be levied . For every delay of one day or part thereof in AOH/COH maint. of Electrical Equipment part time penalty @ 1 % (one percent)of the total contract value shall be levied.** However total amount of the penalty including activity wise penalty shall be limited to 10 % of the total contract value.
- (ii) PENALTY DUE TO CLEANLINESS :-**The contractor shall maintain cleanliness and good housekeeping of the working area .The debris ,scrap material ash shall be removed regularly. If the area not cleaned properly by the contractor penalty may be imposed, which may extend up to 20 % of the order value for which the work is assigned.
- (iii) ADEQUATE STAFF :-** Minimum number of staff as guaranteed by the contractor should remain available at the premises of the power station at particular time of day .A penalty towards default should shall be deducted at the rate of twice the amount of wages as per minimum wages Act for respective category of the staff found un available at the power station.
- (iv) SPURIOUS MATERIAL /POOR WORKMANSHIP: -** For spurious material/poor workmanship of contractor penalty will be deducted & it will be discretion of the OIC.

- (v)** In case if any worker is observed not following the safety rules and regulations as per the requirement of factory Act and other labour laws, penalty as deemed fix (Not exceeding Rs. 500/- per day) shall be imposed by the Engineer on charge and/or Safety officer each time.
- (vi)** Contractor shall provide required consumables; however tentative list of consumables required is given in list, failing which penalty Rs. 1000/- per day for non-availability of consumables will be imposed. However, the consumables required viz. Grease, Petroleum jelly, Contact cleaner shall be provided by MPPGCL free of cost.
- (vii)** All T&P required for the work shall be provided by the contractor, however tentative list of T&P required is given in list, failing which penalty Rs. 1000/ per day for non-availability of T&P will be imposed. Contractor must arrange all the T&P to site in charge before execution of AOH work.

Superintending Engineer (Works)
SGTPS, MPPGCL, Birsinghpur

SCOPE OF WORK FOR AOH OF ELECTRICAL EQUIPMENTS OF 500MW UNIT

01. 500MW GENERATOR:-

(A) HYDROGEN DRYER AND BUS BUCT PRESSURISAION UNIT-

- (i) Cleaning, painting of different vessels, pipe lines of the system by approved enamel paint.
- (ii) To provide assistance in replacement of defective parts.
- (iii) Tightness checking of flanges and attending air leakages in the system, if any.

(B) HYDROGEN PURGING AND FILLING:-

- (i) Purging out of Hydrogen by CO2. Hot water arrangement shall also be done for CO2 purging.
- (ii) Purging out of CO2 by air.
- (iii) Air filling in generator casing after final box up.
- (iv) After work completion CO2 filling.
- (v) Filling of Hydrogen by purging out CO2 to attain desired purity.
- (vi) Filling of Hydrogen up to required pressure.
- (vii) Transportation of CO2 and H2 Cylinder from storage site to filling station.

Note:- The required spares shall be provided by MPPGCL.

02. TRANSFORMERS:-

(A) GENERAL OVERHAULING OF H.T. TRANSFORMERS-

(GENERATOR TRANSFORMER/UNIT AUXILIARY TRANSFORMER/ STATION TRANSFORMER/INTER-CONNECTING TRANSFORMER)

1. Cleaning/ Washing of transformers including cooler banks -

Complete external cleaning & washing of Transformers, consisting of main tank body, HV/LV turrets, headers, radiators/cooler banks, conservators, complete piping and cooler control panels and neutral grounding resistance panels etc.

2. Terminal tightness-

Opening of HV/LV side connections and rubber bellows for testing/ maintenance and reconnection of links after testing work. Terminal tightness checking etc.

3. Inspection of Seal of bushing, Insulators, Terminal bushings etc. -

- i) Inspection, checking and tightness of all gasket joints and bushings of HT/LT sides and to attend small oil leakage from any part of transformer either by draining oil, replacing the gasket or by sealing the leakage point (in instruction of site incharge). The gaskets shall be arranged by MPPGCL.
- ii) Topping up of oil and replacement of silica gel. To and fro transportation of Oil drums, oil filter machine from storage area to place of working and assistance in oil filtration where ever / whenever required. The man power must be deployed in shift during running of filter machine. The transformer oil will be provided by MPPGCL.

4. Overhauling of Fan & Pump motors-

- i) Dismantling and reassembling of cooling fan with motor overhauling including disconnections and reconnection of its wiring.
- ii) Cleaning of shaft and bearings, replacement of the defective bearings etc. The bearing shall be provided by MPPGCL.
- iii) Complete external cleaning of fan and motors.
- iv) Single coat painting of fan, motor body and its frame by approved make and color of enamel paint. All consumables and paint will be in contractor's scope.
- v) Replacement of cooling pump, painting etc. wherever required.

5. NEUTRAL GROUNDING PANEL (GEN., UAT, ST.)

(CLEANING/INSPECTION)

Preparation of surface by external cleaning, one coat of approved enamel paint shall be painted on neutral grounding panels and writing of identification mark.

6. Painting of Transformer oil Storage Tank-

Preparation of surface by external cleaning, one coat of one coat of approved enamel paint shall be painted on transformer oil storage tanks and writing of identification indicating capacity and tank number.

7. Painting of transformer identification board and letter writing

Preparation of surface by external cleaning, one coat of one coat of approved enamel paint shall be painted on board and letter writing of transformer identification.

(B) GENERAL OVERHAULING OF L.T. TRANSFORMERS:-

(LT DRY TYPE- 2000KVA) & (LT OIL FILLED Transformers-800 TO 3000KVA)

1. Cleaning/ Washing of transformers –

Complete external cleaning of Transformers, consisting of main tank, headers, radiators, conservators, marshaling box as well as external cabinets etc.

2. Terminal tightness-

- (i) Disconnection and termination of HT/LT cables wherever required including tightness checking of terminals. During the work any damage of cable lugs/insulation are found then re-lugging, re insulation work must be carryout.
- (ii) Opening and re-fitment of HT/LT cable boxes, internal cleaning of cable boxes, insulators and its single coat painting.
- (iii) Opening of HV/LV side connections for testing/maintenance of transformers & reconnection after testing work.

3. Inspection of Seal of bushing, Insulators, Terminal bushings etc.-

- i) Inspection, checking and tightness of all gasket joints and bushings of HT/LT sides, man holes and to attend small oil leakage from any part of transformer either by draining oil, replacing the gasket or by sealing the leakage point (as per instruction of site incharge). The gaskets shall be arranged by MPPGCL.
- ii) Topping up of oil and replacement of silica gel. To and fro transportation of Oil drums, oil filter machine from storage area to place of working and assistance, in oil filtration where ever required. The transformer oil will be provided by MPPGCL.

03. 400kV SWITCH YARD & BAY No. 23&24 OF 220kV SWITCH YARD:-

- i) Breaker, Isolators, Earth switch, Bay equipments- Cleaning, terminal tightness.
- ii) Painting & RYB colour identification marking of bay equipments: CT/PT/CVT/LA,
- iii) Circuit breakers, marshaling box, earth switch
- iv) Painting of identification/caution board with letter writing.
- v) IV. Circuit breaker platform cleaning & painting-

* 400 kV/220kV bay comprises of a circuit breaker cubicles, isolator MOM boxes and their operating pipe with handle, earthing blade operating boxes & their pipe with handle, marshalling box etc. Brief description of works to be carried out-

- i) Dismantling and reassembly of GT jumpers and GT neutrals as well as to provide and remove the shorting in 400 kV switch yard to assist in testing of transformer and generator.
- ii) Replacement of jumpers, clamps/connectors, droppers and other parts where ever required.
- iii) To provide assistance during 400 kV & 220kV breaker overhauling /testing.
- iv) Attending leakages of gas & oil, if found feasible.
- v) Replacement of isolator parts and adjustment of isolators, if required.
- vi) To provide assistance in replacement of lightning Arresters, CTs and PTs etc.
- vii) The material required for replacement of damaged parts like ACSR conductor, clamps/connectors/hardware etc. shall be provided by MPPGCL.

- viii) External cleaning of circuit breaker cubicles, isolator's MOM boxes, earthing blade operating boxes, MOM boxes, operating pipes and their handles to prepare their surface for painting.
- ix) The circuit breakers cubicles, isolators MOM boxes earthing blade operating boxes and MOM boxes shall be painted by approved make enamel paint.
- x) The operating pipe handles of Isolators shall be painted by red colour approved make enamel paint.
- xi) The operating pipes and handle of earthing blades shall be painted by green colour approved make enamel paint.
- xii) 400KV circuit breaker platform: cleaning and painting one coat with red oxide and double coat by approved make Aluminum paint.
- xiii) The consumables required for cleaning, painting and letter writing like sand paper, cleaning agent, paint, thinner, brush, painting M/c, air compressor etc. and skilled painter shall be in contractor scope. The clarity should be maintained.

04. BUS DUCTS:-

(Inspection, Cleaning, Tightness, Painting & replacement of insulators etc. of 21kV/ 11/6.6 kV bus duct & LT transformer (ESP, FIRE WATER, CW PH, DM PLANT) Bus Duct

Brief description of works to be carried out -

- i) Single coat spray painting by approved make and colour of enamel paint shall be done by the contractor on bus duct & bus support structures. All consumables including cleaning agent, paint, aluminum paint, thinner etc. and spray painting gun and hose pipe will be in contractor's scope. Contractor shall arrange portable air compressor for spray gun
- ii) All name plates / identifications plates of the bus duct should be covered by polythene or thin grease layer before painting the bus duct and the same shall be removed after completion of painting.
- iii) Replacement of insulators, gaskets, space heaters, silica gel etc. The material will be provided by MPPGCL.

05. ESP (ELECTROSTATIC PRECIPITATOR)- 72 fields

(LTMSB, ACP & MCC, BAPCON control panels, TR set, heaters)

Each MCC is consisting of panels and each panel has motor feeder modules. These modules are provided on front & rear side of the panels. For AOH purpose each panel shall be considered one unit irrespective of modules in front & rear of panels).

Following works are to be carried out-

- i) The Bus Bar Chamber, breaker cubicles /feeder modules and control cubicles of MCCs shall be thoroughly cleaned.
- ii) All joints of bus bars and droppers shall be checked, cleaned & tightened.
- iii) Complete power cable connection at switchgear shall be cleaned tightened and lugs/termination kit may be replaced wherever required.
- iv) Checking, identification of defective parts and replacement of the same. The spare parts shall be provided by MPPGCL.
- v) General overhauling of TR set- attending oil leakage, oil filtration, replacement of silica gel, tightness checking, disconnecting switches etc.
- vi) Cleaning, general checking, testing of BAPCON control panels and replacement of defective components where ever required including minor repairing in EC panel.
- vii) Providing assistance during air load test of ESP field. IR checking of ESP fields.
- viii) Checking of all type heaters, thermostat, cables etc. & replacement, if required.
- ix) Complete external cleaning & washing of rectifier transformers. All consumables including cleaning agent and thinner etc. and hose pipe will be in contractor's scope. Contractor shall arrange portable air compressor for compressed air.

06. HT SWITCH GEAR PANELS (11KV & 6.6 KV):-

Following works shall be carried out in 11K.V & 6.6 kV switchgear during AOH:-

- i) The Bus Bar Chamber, breaker cubicles (Front & back side) shall be thoroughly cleaned in after opening of all fixtures of BKR's /Bus-Bar chamber.
- ii) All joints of bus bars and droppers shall be checked, cleaned & tightened.
- iii) Complete control wiring connections shall be checked, tightened and lugs may be replaced wherever required. Painting of panels by enamel paint, if required.

- iv) Complete power cable connection at switchgear shall be cleaned, tightened and lugs/termination kit may be replaced wherever required. Provide assistance for Close/trip operation of breaker.
- v) Checking, identification of defective parts and replacement of the same. The spare parts shall be provided by MPPGCL.

07. 415 V LT SWBD/ MCC/ACDB/DCDB SWITCHGEAR PANEL

Each MCC is consisting of panels and each panel has motor feeder modules. These modules are provided on front & rear side of the panels. For AOH purpose each panel shall be considered one unit irrespective of modules in front & rear of panels).

- i) The Bus Bar Chamber, breaker cubicles/feeder modules and control cubicles shall be thoroughly cleaned. Provide assistance for Close/trip operation of breaker.
- ii) All joints of bus bars and droppers shall be checked, cleaned & tightened.
- iii) Complete control wiring connections shall be checked, tightened and lugs may be replaced wherever required. Painting of panels by enamel paint, if required.
- iv) Complete power cable connection at switchgear shall be cleaned, tightened and lugs/termination kit may be replaced wherever required.
- v) Checking, identification of defective parts and replacement of the same. The spare parts shall be provided by MPPGCL.

08. BOP SWITCHGEAR PANEL:-

Each MCC is consisting of panels and each panel has motor feeder modules. These modules are provided on front & rear side of the panels. For AOH purpose each panel shall be considered one unit irrespective of modules in front & rear of panels)

- i) The Bus Bar Chamber, breaker cubicles /feeder modules and control cubicles shall be thoroughly cleaned.
- ii) All joints of bus bars and droppers shall be checked, cleaned & tightened.
- iii) Complete control wiring connections shall be checked, tightened and lugs may be replaced wherever required. Painting of panels by enamel paint, if required. Complete power cable connection at switchgear shall be cleaned tightened and lugs/termination kit may be replaced wherever required. Provide assistance for Close/trip operation of breaker.
- iv) Checking, identification of defective parts and replacement of the same. Spares shall be provided by MPPGCL

BOP LOCAL CONTROL PANELS/WALL MOUNTED PANELS:-

Local control panels- DC Starter Panels, various hoist panels, EOT Control panels, Battery charger panels, LCP for various equipments etc. including VFD Channels-

- i) Complete cleaning, checking of control wiring, tightness of lugs and their replacement wherever required.
- ii) Complete checking of power & control cables shall be cleaned tightened and lugs/termination kit may be replaced wherever required.
- iii) Provide assistant for troubleshooting of fault in EOT/hoist operation and replacement of any defective components as and when required.
- iv) Cleaning of all six channels of VFD system in the supervision of site in-charge.
- v) Providing assistance to site in-charge for testing & replacement of any defective component where ever required. Supply of spare parts is in MPPGCL's scope.

09. POWER HOUSE LIGHTING & POWER SUPPLY:-

- A.
 - (i) Inspection, checking, cleaning and single coat spray painting by approved enamel paint of lighting transformers.
 - ii) Cleaning, checking and tightness of lighting circuit and to replace all defective components to ensure healthiness of power supply.
 - iii) Identification marking of lighting circuit with their rating in thick alphabet letters. Paint shall be contractor's scope.
- B. (i) Checking of lighting circuits and to attend faulty circuit of Boiler and turbine highways. To provide cable jointing ferrules, cotton tape, PVC insulation tape etc., is in contractor's scope.

- (ii) Cleaning of 70W, 125 W, 150 W, 250 W HPSV/HPSV/HPMV 100W GLS Lamps 40/80 Tube light fixtures/fittings, LED light fittings etc.
- C. Checking cleaning and tightening of lighting circuits in T/G & Boiler area, 0.4/6.6 kV unit and station switchgear & MCC's including welding receptacles.
- D. Checking, cleaning and tightening of lighting circuits of CW pump house, WT Plant, LDO Pump house and other areas of 500MW unit and to replace defective component for ensuring healthiness of power supply & light.

Providing of Power Supply:-

- A. To provide power supply at various places wherever required. Associated laying of power cable of required size and its termination shall be in contractor's scope.
- B. HT/LT Cables, lugs and switch fuse units will be provided by MPPGCL.
- C. Replacement/repairing of damaged cables at module/motor end wherever required.

DEPLOYMENT OF ONE SKILLED AND ONE SEMI SKILLED WORKER-

The contractor shall ensure the availability of power supply, given to different agencies involved in AOH work of the unit for complete period during AOH.

10. H.T. MOTORS:-

Servicing of HT motors: -

The scope of servicing includes those motors that were lifted from its foundation and not covered under the overhauling package.

The scope of work for servicing of H.T. motors shall be as given below :-

- a) External cleaning of motor by air or suitable agent thoroughly.
- b) Opening of fan cover and checking of fan tightness.
- c) Cleaning of motor terminal box & Air ducts.
- d) Checking of tightness of terminal motor connections, internal leads and lugs. Replacement, if required.
- e) Greasing of DE & NDE bearings.
- f) Checking of earthing strips, broken / missing earth strips fitting.
- g) Measuring of IR valve.
- h) Single coat spray painting by approved make and colour of enamel paint shall be done by the contractor. All consumables including cleaning agent paint, thinner etc. and spray painting gun, and hose pipe will be in contractor's scope.
- i) Writing of nomenclature of motors.
- j) All name plates / identifications plates of the motors should be covered by polythene or thin grease layer before painting the motors and the same shall be removed after completion of painting.

Complete Overhauling of HT motors:-

- a) Opening of connections and shifting of motor from foundation to work place.
- b) External cleaning of motor's stator body & its coolers (the integral part) by pressurized air.
- c) Complete dismantling of motor.
- d) Threading out of the rotor. Balancing of rotor if required.
- e) Thorough cleaning of motors and it's various parts by using suitable cleaning agent.
- f) Inspection of all parts like bearing, housing, shaft, stator winding wedge & rotor and replacement of defective parts. Greasing of bearings.
- g) Cleaning of stator by air or any other suitable agent.
- h) Varnishing of the stator & rotor using Dr. Beck / Elantas make (Red Colour) HT grade.
- i) Drying out of the stator.
- j) Reassembly of complete motor, measurement of IR.
- k) Reduced voltage running trial of the motor after overhauling at working site to check the mechanical parameters.
- l) Coupling fitting of the motor.
- m) Shifting of the motor from the working site to its foundation.

- n) Connection of the motor.
- o) Replacement of any motor with spare motor available at site/store will also in the scope.
- p) Single coat spray painting by approved make and colour of enamel paint shall be done by the contractor. All consumables including cleaning agent paint, thinner etc. and spray painting gun, and hose pipe will be in contractor's scope. Writing of nomenclature of motors.
- q) All name plates / identifications plates of the motors should be covered by polythene or thin grease layer before painting the motors and the same shall be removed after completion of painting.
Note- Painting of canopies of ID, FD & PA fan motors with approved make and colour of enamel paint shall be done by the contractor.

HT MOTOR COOLER (GENERAL INSPECTION & CLEANING)

The scope of overhauling of coolers of HT motor.

- a) Remove the outer cover of motor side and dismantling from motor stator body and shifting of cooler for cleaning.
- b) Opening of cooler inspection window and other parts.
- c) Cleaning of cooler tubes by using pressurized air/water & proper size brush.
- d) Cleaning of inner box and application of black rubber paint.
- e) Fitting of cooler by using appropriate gasket after drying of rubber paint.
- f) Fitting of water outer cover as per original and air leakage checking.
- g) Fitting of cooler inspection windows and other parts.

11. LT MOTORS SERVICING:

The scope of servicing includes those motors which were lifted from its foundation and not covered under the overhauling package.

The scope of work for servicing of L.T. motors shall be as given below:-

- a) External cleaning of motor by air or suitable agent thoroughly.
- b) Opening of fan cover and checking of fan tightness.
- c) Cleaning of air ducts.
- d) Cleaning of motor terminal box.
- e) Checking of motor connection, internal leads and lugs. Replacement if required.
- f) Greasing of DE & NDE bearings.
- g) Checking of earthing strips, broken / missing earth strips fitting.
- h) Measuring of IR value.
- i) Single coat spray painting by approved make and colour of enamel paint shall be done by the contractor. All consumables including cleaning agent paint, thinner etc. and spray painting gun, air compressor and hose pipe will be in contractor's scope. Nomenclature writing of motors.
- j) All name plates / identifications plates of the motors should be covered by polythene or thin grease layer before painting the motors and the same shall be removed after completion of painting.

12. LT MOTORS OVERHAULING:

- a) Opening of connections and shifting of motor from foundation to working site. External cleaning of motor.
- b) Complete dismantling of motor.
- c) Threading out of the rotor.
- d) Thorough cleaning of motors and its various parts by using suitable cleaning agent.
- e) Inspection of all parts like bearing, housing, shaft, stator winding wedge & rotor and rings and replacement of defective parts. Greasing of bearing.
- f) Cleaning of stator by air or any other suitable agent.
- g) Varnishing of the stator & rotor using Dr. Beck ELMOLUFT 1A, FD, LT grade varnish and proper drying out.
- h) Reassembly of complete motor, measurement of IR & its trial.
- i) Coupling fitting of the motor.
- j) Shifting of the motor from the working site to its foundation.
- k) Connection of the motor.
- l) Replacement of any motor with spare motor available at site/store will also in the scope.

- m) Single coat spray painting by approved make and colour of enamel paint shall be done by the contractor. All consumables including cleaning agent paint, thinner etc. and spray painting gun, air compressor and hose pipe will be in contractor's scope. Nomenclature writing of motors.
- n) All name plates / identifications plates of the motors should be covered by polythene or thin grease layer before painting the motors and the same shall be removed after completion of painting.

TERMS & CONDITIONS FOR HT/LT MOTORS-

- 1) The overhauling or servicing of any HT/LT motors in particular shall be decided by Engineer in charge/ site in-charge.
- 2) HT varnishes, Enamel paint and rubber paints etc. shall be provided by the contractor & got approved by site in charge before start of work. However, required spares of the equipments shall be provided by MPPGCL free of cost.
- 3) T&P: All kind of tools and tackles required for the AOH shall be provided by the contractor well in time. However, testing devices and special tools supplied with the equipments by the manufacturer will be provided by MPPGCL whenever required for particular job only if such special tools are generally not available in open market.
- 4) All heating elements for proper dry out like row of high wattages bulbs, halogen or hot air blower etc. is to be provided by the contractor.
- 5) To provide welding machine, GP electrodes, gas cutting set & oxy acetylene gas cylinder as and where required is in contractor's scope.
- 6) Workmanship of the work of overhauling and servicing of HT/LT motors shall be of good quality. For this purpose, the firm shall ensure that experienced, trained workers only (like fitter, reager etc.) shall be deployed. Contractor shall deploy separate gang for overhauling, serving and painting.
- 7) Painting and nomenclature writing on HT/LT motors may be carried out irrespective of their overhauling and servicing as per the direction of Engineering in charge.
- 8) Contractor will have to arrange all necessary resources & tools as hydra, wrench machine, bearing pullers, lugs crimping tools etc. with appropriate capacity during overhauling and shifting of HT motors.
- 9) Machining work of defective bearing housing, shaft of motor (if required) will be in contractor's scope.
- 10) The quantity of motors to be overhauled/serviced is tentative only in the AOH schedule which will depend on site conditions or as decided by EIC.

13. SERVICING OF BATTERY BANK/ CHARGERS/ DCDB:-

There are four Nos. battery & battery charger sets and each battery set consists of 110 cells mounted on wooden stands and supported by porcelain insulators at bottom. Works to be carried out are as given below:-

- (i) Cleaning & checking of all copper links, battery cells, and wooden stand.
- (ii) Retightening and application of petroleum jelly on copper links. The petroleum jelly shall be in MPPGCL Scope.
- (iii) Checking of level and gravity of electrolyte of each cell and topping up by DM water/Acid of appropriate gravity wherever required. The DM water or acid shall be provided by MPPGCL.
- (iv) Painting of wooden stand by black rubber paint.
- (v) Providing assistance to site incharge for taking load trial of battery sets.
- (vi) Cleaning, tightness of battery charger and DCDB (5FA & 5FB)- DCDB is consisting of panels and each panel have feeder modules. These modules are provided on front & rear side of the DCDB panels. For AOH purpose each panel shall be considered one unit irrespective of modules in front & rear of panels)
- (vii) Replacement of faulty/defective part on the instruction of engineer-in-charge.
- (viii) Complete power cable connection at DCDB shall be cleaned, tightened and lugs/termination kit may be replaced wherever required.

14. WALL SOOT BLOWERS & AIR HEATER BLOWERS- Total Qty. 88+4=92

The work covers assistance in checking, cleaning, attending, limit setting, replacement of defective parts etc. Spares will be provided by MPPGCL.

EXCLUSIONS:-

Following works are excluded from the above scope of work:-

- (i) Major repairing/overhauling of the HT/LT transformers, Generator & Bus ducts.
- (ii) Rewinding work of HT/LT motors & Transformers.
- (iii) Major overhauling of BCW, MDBFP, ID fan motors.

- (iv) Major overhauling/servicing of 400kV, 220kV, 11 kV, 6.6KV and 0.4kV Circuit Breakers, CT, CVT, isolators, battery cells, battery chargers, ESP system, VFD system & EOT cranes.
- (v) The white metal bearing maintenance job.

Note:- The above works are excluded from the scope of work as it requires expert services and special maintenance techniques.

SPECIFIC TERMS & CONDITIONS

1. The contractor must ensure that the workers have enough knowledge to work on electrical equipments as per scope of work. The experienced workers (50%) of the running contract may be engaged for AOH work.
2. Looking to quantum of overhauling work contractor must ensure to deploy sufficient number of experienced manpower of all categories & supervisor/engineer to ensure high class workmanship and timely completion of the AOH activities, failing which penalty pro-rata basis upto 10% may be imposed by MPPGCL.
3. The contractor shall provide all safety appliances such as Safety Boot, Safety Helmet, Safety Belt, Insulated hand gloves, Face mask, goggles and sanitizer etc. required for the work to his workers and shall ensure their use.
4. First-aid box with necessary medicine, cotton, antiseptic cream, dettol etc. shall always be kept available at site.
5. The contractor shall be responsible for the safety of the Board/Company's equipment. In case any loss or damage occurred to the equipment, the charges for the same shall be recovered from contractor.
6. The contractor shall have to pay the wages to his labour according at the rate declared by the Govt. of M.P. time to time and must follow the payment procedure to his labour as directed by MPPGCL. Contractor should also make the payments to workers, if they are retained on overtime due to requirement of work at various sites. All the payments should be made through bank only.
7. The contractor has to engage manpower for all days in a week and even on general holidays, local holidays and national holidays during the AOH period.
8. If the period of AOH is extended due to any reason, then contractor will have to provide the manpower as per the site requirements. One month period will be granted from the date of scheduled completion of AOH, to complete any pending job due to non availability of shutdown or adverse weather condition.
9. The contractor shall submit following document after placement of order and before the start of work.
 - (a) Copy of valid labour license.
 - (b) Documents related to insurance of workers.
 - (c) Copy of EPF registration certificate.
 - (d) Copy of valid 'A' class electrical license.
 - (e) Copy of GST registration certificate.
 - (f) Copy of PAN card.
 - (g) Agreement Bond.
 - (h) Complete list of persons deployed giving details viz. Name, Present address, Permanent address, qualification, EPF No., Police verification and copy ID card of all the workers & bank A/c etc.
10. The EOT crane facility will be provided by MPPGCL free of charge. Free workshop facility, if available will be provided by MPPGCL. Contractor shall provide 14T hydra as & when required for AOH works.
11. In case of accident during work all responsibility of the injured person shall rest with the contractor, MPPGCL shall not be responsible for transport or Medical facility. The contractor shall ensure that the accident report in requisite form-22 duly signed by the Doctor attending to the injured persons and also signed by the contractor or his authorized representative is submitted to the Office-In-Charge within 24 hours of accident. The contractor or his authorized representative/supervisor should be available to Engineer-In-Charge all the time for meeting any emergencies related to plant or personnel.
12. The E.E.(EMD)-III/A.E (EMD-III) is also empowered to impose penalty on pro-rata basis for less deployment & delay in execution of work due to non-availability of consumables/T&P/Un-satisfactory workmanship or non-compliance of instructions.
13. For payment, contractor will submit bill along with attendance, payment sheet, EPF challan, certificate of welfare officer, safety officer etc. Contractor will be fully responsible if there any delay in processing the bill due to pending formalities/documents; the bill may be returned or kept pending.
14. All payment shall be made after verification of attendance & payment sheet by A.E.(EMD-III). Contractor shall be fully responsible for making payment to his workers/labours at Govt. approved rates applicable from time to time towards:
 - (i) Payment of wages (ii) Contribution of EPF of each worker (iii) Payment of overtime (iv) Payment against paid holidays (v) Any other payment as per rule.

15. The Contractor shall abide by the Factory's Acts, safety Rules of MPPGCL and other Rules & Regulations of the govt. of M.P.
16. No female worker and the worker below 18 year age should be engaged.
17. The Contractor shall make his own arrangement for accommodation and transportation of his workers.
18. The contractor shall be responsible for obtaining valid gate pass for his workers from the security officer, Birsinghpur.
19. If any grievance is received from the workers regarding less payment/ delay in payment deliberately or non compliance of Labour Laws, unsatisfactory work performance, noncompliance/ignorance of instructions of officers, deployment of fewer workers consistently; the contractor will be liable to penalize, black listed/debarred.
20. The quantity indicate in the schedule is tentative only however payment will be made on actual basis.
21. **Contract Agreement:** Refer clause 2.7 at page no. 38 of Standard Bid Document. However, cost of agreement/stamp duty as per prevailing rate shall be borne by the firm. At present, non judicial stamp paper worth Rs. 500/- for order value up to Rs. 50 lakh and for order value more than Rs. 50 lakh, worth Rs. 0.1% of contract value subject to maximum of five lakh Rupees & revenue stamp worth Rs. 2/- is required.
22. All the existing and future legal/financial/other liabilities of the contract shall be in the scope of the contractor.
23. All other terms & conditions as per standard norms of MPPGCL.
24. Biometric attendance of the labour engaged for the work shall be maintained by the contractor.
25. **Contract Period:** Contract period shall be **01 year** from the date of work order. However work should be completed within 45 days as per instruction of OIC.
26. **Extension of Contract:** The contract period and/or quantity may be extended by 25% on same rate, terms & condition. Contractor shall be bound to accept the same. Any further extension in contract shall be done after obtaining consent of the contractor.

GENERAL CONSUMABLE LIST:-

S.N.	Particulars	UNIT	QUANTITY
01.	GENERAL PURPOSE ELECTRODE	PACKET	5
02.	PETROL	LTR.	50
03.	DIESEL	LTR.	25
04.	FEVICOL	KG	30
05.	COTTON WASTE	KG	400
06.	CLOTH	METRE	400
07.	KEROSENE	LTR.	10
08.	RUSTOLENE	LTR.	20
09.	SOFT WIRE BRUSHES	NOS.	5
10.	ORDINARY CLEANING BRUSHES	NOS.	8
11.	PIDILITE FEVI KWIK INSTANT GLUE (IN 0.5 GRAM PACK)	NOS.	20
12.	PIDILITE M-SEAL REGULAR EPOXY COMPOUND (IN 25 GRAM PACK)	NOS.	20
13.	TEFLON TAPE	METRE	100
14.	INSULATION TAPE	METRE	1500
15.	EMERY PAPER	METRE	3
16.	WIRE BRUSH	NOS.	5

17.	THINNER	LTR.	50
18.	HT VARNISH DR. BECK	LTR.	10
19.	LT VARNISH DR. BECK	LTR.	30
20.	HACKSAW BLADE (MIRINDA) 1/2"	NOS.	25
21.	HACKSAW BLADE (MIRINDA) 1"	NOS.	15
22.	ARALDITE WITH HARDNER	NOS.	20
23.	PENCIL CELL	NOS.	25
24	BATTERY 9V	NOS.	10
25	BATTERY 1.5 V	NOS.	20
26	LUGS 2.5 SQ.MM	NOS.	0
27	LUGS 4 SQ.MM	NOS.	0
28	LUGS 6 SQ.MM	NOS.	0
29	LUGS 10 SQ.MM	NOS.	0
30	CLEANING BRUSH	NOS.	5
31	CABLE TIE	NOS.	500
32	CLEANING AGENT	NOS.	50
33	WASHING POWDER	KG	50
34	SOAP BAR	NOS.	50
35	MECATEC (OIL LEAKAGE ARRESTING PUTTY)	NOS.	20
36	MARKER PEN (RED, BLACK)	NOS.	20
37	POLYTHENE	METRE	100

Note:-Any other item not specifically mentioned but required for overhauling shall be supplied by the contractor.

PENALTY ON SHORT SUPPLY OF GENERAL CONSUMABLE:-

S.N.	Particulars	UNIT	DEDUCTION (PER UNIT)
01.	GENERAL PURPOSE ELECTRODE	PACKET	500
02.	PETROL	LTR.	200
03.	DIESEL	LTR.	150
04.	FEVICOL	KG	100

05.	COTTON WASTE	KG	50
06.	CLOTH	METRE	50
07.	KEROSENE	LTR.	100
08.	RUSTOLENE	LTR.	500
09.	SOFT WIRE BRUSHES	NOS.	40
10.	ORDINARY CLEANING BRUSHES	NOS.	40
11.	PIDILITE FEVI KWIK INSTANT GLUE (IN 0.5 GRAM PACK)	NOS.	10
12.	PIDILITE M-SEAL REGULAR EPOXY COMPOUND (IN 25 GRAM PACK)	NOS.	50
13.	TEFLON TAPE	METRE	50
14.	INSULATION TAPE	METRE	50
15.	EMERY PAPER	METRE	200
16.	WIRE BRUSH	NOS.	50
17.	THINNER	LTR.	150
18.	HT VARNISH DR. BECK	LTR.	400
19.	LT VARNISH DR. BECK	LTR.	300
20.	HACKSAW BLADE (MIRINDA) 1/2"	NOS.	50
21.	HACKSAW BLADE (MIRINDA) 1"	NOS.	80
22.	ARALDITE WITH HARDNER	NOS.	300
23.	PENCIL CELL	NOS.	20
24.	BATTERY 9V	NOS.	50
25.	BATTERY 1.5 V	NOS.	20
26.	CLEANING BRUSH	NOS.	50
27.	CABLE TIE	NOS.	10
28.	CLEANING AGENT	NOS.	200
29.	WASHING POWDER	KG	50
30.	SOAP BAR	NOS.	25
31.	MECATEC (OIL LEAKAGE ARRESTING PUTTY)	NOS.	200
32.	MARKER PEN (RED, BLACK)	NOS.	50
33.	POLYTHENE	METRE	30

LIST OF T&P AND INSTRUMENT FOR AOH

S. NO.	DESCRIPTION	SPECIFICATION	UNIT	QTY
A	T&P			
1	CHAIN PULLEY BLOCK	10 MT	NOS.	2
		5 MT	NOS.	2
		3 MT	NOS.	2
		1 MT	NOS.	2
2	LIFTING AND PULLING MACHINE (HOOK CHUCK)	5 T	NOS.	1
		3 MT	NOS.	1
		3 MT	NOS.	2
3	SLINGS, D-SHACKLES AND EYE BOLTS	5 MT	NOS.	2
		7 MT	NOS.	2
		20 MT	NOS.	2
4	SLINGS IN LENGTH OF 2 MTR & 3 MTR EACH	24MM	NOS.	2
		16MM	NOS.	2
		12MM	NOS.	2
		10MM	NOS.	2
		08MM	NOS.	2
5	STEEL WIRE SLINGS 6 MTRS	1/4"	NOS.	2
		3/4"	NOS.	2
		1"	NOS.	2
		3/2"	NOS.	2
6	BELT SLINGS	5 MT	NOS.	2
7	SPANNER SET DE, RING AND BOX- SPANNER (6 TO 50 MM. SIZE)		SET	3
8	BRAZING EQUIPMENT		SET	1
9	REGULATOR & GAS HOSES		SET	1
10	SOCKET SPANNERS SET FROM 36 MM. TO 50 MM. WITH 1" SQUARE DRIVE HEAD INCLUDING RATCHET DRIVE AND DISTANCE PIECE		SET	1
11	MANILA ROPE	1" SIZE	MTR	50
12	HOSE PIPES 25 MTR. LENGTH EACH OF SIZE:			
	(A) 50 MM. FOR WATER CLEANING		NOS.	2
	(B) 25 MM. FOR COMPRESSED AIR CLEANING		NOS.	2
13	HAMMER (SLEDGE HAMMER)	1 KG.	NOS.	1
		2 KG.	NOS.	1
14	TEFLON HAMMER		NOS.	2
15	COPPER BARS		NOS.	3
16	FULL ALLEN KEY SET	UPTO M24 SIZE	SET	3
		UPTO M36 SIZE	SET	3
17	CHISEL OF SUITABLE SIZE		SET	3

18	GRINDING MACHINE	FF-2	NOS.	1
		GQ-4	NOS.	1
		AG-2	NOS.	1
19	PORTABLE DRILL MACHINE		NOS.	2
20	BEARING PULLER	INSIDE	NOS.	2
		OUTSIDE	NOS.	2
21	WELDING TRANSFORMER SET WITH WELDING CABLE OF 150 M LENGTH		SET	2
22	PORTABLE WELDING GENERATOR SET SINGLE PHASE, 450 AMPS. WITH REGULATOR, CABLE		SET	1
23	GAS CUTTING SET WITH HOSES OF 60 MTR. EACH		SET	1
24	FILES OF SUITABLE SIZE		SET	4
25	TAP SET M6 TO M36 OF STD. PITCH		SET	1
26	HYDRAULIC JACK	50 TONS	NOS.	2
		100 TONS	NOS.	2
27	HAND BARREL PUMP		NOS.	1
28	FILLER GAUGE		SET	1
29	HAND LAMPS	AC	SET	10
		DC	SET	10
30	TROLLEY FOR MATERIAL HANDLING OF CAPACITY 2 TONNES (MIN.)		NOS.	1
31	SPRAY GUN (FOR PAINTING WORK)		NOS.	1
32	HOT AIR BLOWER		NOS.	1
33	GREASE GUN- CAPACITY 20KG (WITH 03 NOS EXTRA GREASE HOSE PIPES)		NOS.	1
34	DRILL MACHINE		NOS.	0
35	WELDING M/C (3 PHASE) ALONG WITH CABLE & OTHER ACCESSORIES		NOS.	1
36	CUTTING M/C		NOS.	1
37	ROPES (20 TO 25 MM) OF LENGTH 20. METRE		NOS.	50
38	HELOZEN WITH 50 MTR CABLE		NOS.	0
39	EXTENSION BOARD WITH CABLE LENGTH OF 20 MTRS		NOS.	5
40	COMPLETELY FILLED OXYGEN CYLINDER		NOS.	0
41	HOLDTIGHT		NO.	1
42	SEALING ROPE & LIFTING BELT	CAPACITY 3T & 5T	NO.	2
43	HAND OPERATED OIL TRANSFER PUMP		NO.	1
44	GASKET CUTTING SCISSOR / TOOLS		NO.	1
45	SLIDE WRENCH 12"	12"	NOS.	3
46	SLIDE WRENCH 10"	10"	NOS.	3
47	SLIDE WRENCH 8"	08"	NOS.	3
48	PIPE WRENCH 12"	12"	NOS.	3
49	PIPE WRENCH 10"	10"	NOS.	3
50	PIPE WRENCH 8"	08"	NOS.	3

51	HACKSAW FRAMES		NOS.	4
52	POLYPROPYLENE ROPE		MTR	50
53	CIR CLIP PLIER		NOS.	2
54	ALLEN KEY SET OF MM. SIZE		SET	0
55	TAP SETS OF UNC & BSW THREADS	UPTO 1" SIZE	SET	1
56	DIE SET		NOS.	1
57	SCREW DRIVER		SET	6
58	RECHARGEABLE TORCH		NOS.	4
59	TESTER		NOS.	12
60	PULLERS		NOS.	2
61	NOSE PLIER & CUTTING PLIER		NOS.	6
62	HOLE PUNCH SET		SET	1
63	DRILL BITS CSK AND PLAIN (8,10,12,16,24,36 MM EACH)		NOS.	1
64	Digital Multi meter of branded company for work upto 1KV with high quality connecting lead		NOS.	4
65	Digital Megger having range from 500 Volt to 2.5 KV of branded company		NOS.	4
66	TRIPAL (10 Mtr.length)		NOS.	3
67	AIR BLOWER		NOS.	3
68	Tong tester to measure AC as well as DC		NOS.	4

NOTE:- Above quantities are indicative only and may increase as per site requirement. All the above material should be of reputed make/ISI marked.

LIST OF SAFETY APPLIANCES

S.N.	PARTICULARS	UNIT	QTY.
01.	ASBESTOS HAND GLOVES	PAIR	1
02.	ASBESTOS APRON	NOS.	1
03.	ASBESTOS CLOTH	NOS.	1
04.	RUBBER HAND GLOVES	PAIR	5
05.	LEATHER HAND GLOVES	PAIR	3
06.	SAFETY SHOES	NOS.	50
07.	SAFETY BELTS	NOS.	5
08.	HOOKS	NOS.	5
09.	SAFETY HELMET	NOS.	50
10.	EAR MUFF	NOS.	50
11.	EARPIECES	NOS.	50
12.	SAFETY GOGGLES	NOS.	10
13.	TORCH	NOS.	10
14.	NOSE MASK	NOS.	100
15.	FACE SHEILD	NOS.	50

16.	PVC SINGLE SIDE DOT STRING GLOVES	PAIR	1
17.	SAFETY NET	NOS.	1
18.	LIFELINE (ROPES- 15 TO 20 MTR)	NOS.	1
19.	WELDING HELMET	NOS.	2

Superintending Engineer (Works)
SGTPS, MPPGCL, Birsinghpur

Addendum

In Chapter-II: General Conditions of Contract (GCC)

2.86 LIMITATION OF LIABILITY:

Except in cases of criminal negligence or wilful misconduct or except otherwise provided for specifically elsewhere in tender document: -

- a) The contractor shall not be liable to the owner, whether in contract, tort or otherwise for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits, provided that this exclusion shall not apply to any obligation of the contractor to pay liquidated damages/penalty to the owner and
- b) The aggregate liability of the contractor to the owner, whether under the contract in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the contractor to indemnify the owner with respect to patent infringement.

ANNXURE-XV

Checklist of formats/documents to be uploaded/submitted with bid/offer

Sr. No.	List of Documents/Formats	Whether Applicable (Yes/No) to be indicated by tender issuing authority of MPPGCL	Response of the bidder (Yes/No)
1	Earnest Money Deposit – Exemption document	Yes	
2	All the relevant documentary evidence for meeting technical, financial and other specific (if any) criteria of PQR of the tender.	Yes	
3	Undertaking as per Annexure-III regarding successful execution of contract awarded earlier.	Yes	
4	In case of participation in the tender through Joint Venture company/Partnership Firm basis- Requisite documents in this regard.	Yes	
5	Undertaking as per Annexure-IV for observing fair and ethical practices.	Yes	
6	Affidavit as per Annexure-IX regarding no banning/blacklisting/delisting.	Yes	
7	Indemnity Bond as per Annexure-X.	No	
8	Tender acceptance letter as per Annexure-XI.	Yes	
9	Scanned copy of authority letter to submit the offer by the Digital Signature Certificate of the authority who have submitted the offer.	Yes	
10	Details of plant, machineries, installed manufacturing capacities and present commitments.	No	
11	Details of test proposed to be conducted with details of specifications/codes, Test lab and on line/off line testing facilities available for the offered item(s).	No	
12	Self-attested copy of material test certificate. Original certificate to be produced on demand.	No	
13	Photocopies of valid type test certificates.	NO	

S.E. (Works)
SGTPS, MPPGCL,
Birsinghpur