



BHARAT HEAVY ELECTRICALS LIMITED, BHOPAL

(Works Engineering & Central Services Department)

ELECTRONICS MAINTENANCE (EMX-Electronics)

TENDER No. : WE&CS/EMX/20-21/ENQ/05-R Dt 03.08.2020

Sealed tenders are invited from parties for “*Annual Maintenance Contract (AMC) for installed DROs , Process Plant Instruments and Battery Chargers for a period of two year.*” Detailed Scope of work, commercial terms & conditions and Schedule of rate are available on our web site www.bhelbpl.co.in. Complete set of tender documents can be downloaded from site.

Date of submission of the Tender : *On or before 17/08/2020 up to 11: 00 A.M*

Tender opening (Part-1) Date and time : 17/08/2020 at 2:00 P.M.

Place of Tender Submission; :

**Tender Room (Green -Works Tender Box),
ADM Building
Ground Floor,
BHEL, Bhopal.**

Note : All corrigendum, corrections, amendments, time extensions, clarifications etc, to the tender notice will be hosted on BHEL website (www.bhelbpl.co.in). Bidders should regularly visit website(s) to keep themselves updated.

Vivek Singh Yadav
Mgr (EMX)
BHEL,Bhopal

Enclosure:

Tender Documents

General Terms and Condition

Annexure – II, A to I

TENDER

Tender Enquiry No. **WE&CS/EMX/20-21/ENQ/05-R Dt 03.08.2020** for the work of "Annual Maintenance Contract (AMC) for installed DROs , Process Plant Instruments and Battery Chargers for a period of two year".



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BHARAT HEAVY ELECTRICALS LTD

WORKS ENGG. & CENTRAL SERVICES DEPTT.
EMX DIVISION

Enquiry No: WE&CS/EMX/2021/ENQ/05-R

Dated: 03.08.2020

**Sub- "Annual Maintenance Contract (AMC) for installed DROs ,
Process Plant Instruments and Battery Chargers for a
period of two year".**

Dear Sir,

Sealed tender subscribing the name of work, tender notice no. and due date is invited by the undersigned for executing the following work: -

Description of Work	EMD Amount	Due Date	Duration of Contract
"Annual Maintenance Contract (AMC) for installed DROs , Process Plant Instruments and Battery Chargers for a period of two year".	52460	17.08.2020	2 year from start of work

NOTES

1. Vendor must submit complete information against Qualifying Conditions (Clause no. iii of Annexure C). The offer meeting this clause would only be processed.
2. The "Bidder to Confirm" Column of all annexures shall be filled in by the Vendor and submitted along with the offer. Inadequate/incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance.
3. The offer and all documents enclosed with offer should be in English language only.
4. **SCOPE OF WORK:** "Annual Maintenance Contract (AMC) for installed DROs, Process Plant Instruments and Battery Chargers for a period of two year". as per scope of work annexure - B for a period of 2 year. The list of DRO and process plant instruments as per annexure – II is attached . In addition to the DRO , process plant Instruments mentioned in Annexure –II, other DROs and instruments present in BHEL factory premises , if any, is to be attended promptly without any delay.
5. **FACILITIES:** This is a labour contract. The tools required for the AMC has to be brought by the contractor. However any special tools required for carrying out the work is required, the same shall be provided by BHEL.
6. **TERMS OF PAYMENT:** Shall be as under : –
 1. The payment shall be made on quarterly on actual deployment basis after satisfactorily completion of all the break down calls and preventive maintenance as per scope of work. The record for the breakdown call attended shall be

recorded and submitted along with the bill duly certified by Engineer in charge. The payment shall be made as per BHEL norms after verification of work by EMX and all payments will be subject to deduction of income tax at source as per Income Tax Act.

2. In case MSME- payment within 45 days/in case of others - 60 days payment.

7. Penalty:

1. **Penalty for Non Deployment.** If the overall attendance of Skilled and unskilled manpower is less than 85% for the quarter, penalty of Rs 200 per skilled worker per day of absence will be deducted. Total absence for the quarter shall be considered for the deduction. The deduction is over and above the deduction for the absence of the manpower. (For details see Annexure – B). For deduction purposes, the actual man-days in a quarter will be considered based on attendance record.
2. **Penalty for Non Performance-** If the required manpower is not deployed within 24 hours from the receipt of the complaint, penalty of 1/2 percent per week up to a maximum of 10 percent will be deducted.
3. GST on penalty shall be extra.

8. Earnest Deposit:

Earnest Money Deposit (EMD) of ₹ 52460 /- may be accepted only through Electronic Fund Transfer credited in BHEL account (before tender opening), which can be deposited online through link <https://www.bhelbpl.co.in/qcins/iccs.htm> Tenders not submitted with earnest money are liable to be rejected. EMD given by all unsuccessful tenderers shall be refunded normally within fifteen days of award of work. EMD of successful tenderer will be retained as part of Security Deposit. EMD shall not carry any interest. **DD or any other mode will not be accepted.**

9. SECURITY DEPOSIT:

Security Deposit means the security provided by the Contractor towards fulfilment of any obligations in terms of the provisions of the contract and shall be refundable after expiry of guarantee period. The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit. The security deposit shall be refunded at the end of the contract.

The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted through Electronic Fund Transfer in favour of BHEL or Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.

10. INSPECTION:

The bidder can inspect the machine tools with prior intimation on any working day from 9:00 hrs to 16:00 hrs before the last date for submission of tenders.

11. **TENDER SUBMISSION AND OPENING: Tender submission location:** Tender Box (For Works), Tender Room,
Ground Floor, Administrative Building,
Bharat Heavy Electricals Limited, Bhopal – 462 022.

Tender Submission time/date: Before 11:00 hrs on 17.08.2020 Tenders received after 11:00 hrs will be treated as LATE TENDER and will not be considered.
Tender opening time/date: 14.00 hrs on 17.08.2020 in Tender Room.

The tender envelope must carry the following information on the top of the envelope:

Tender/Enquiry No: WE&CS/EMX/2021/ENQ/ENQ/05-R

Party's name:

Tender/Enquiry Opening date: 17.08.2020

The bid submitted should include the following

1. Techno-commercial Bid

In the Techno-commercial bid, the detailed technical specifications of the scope of supply and scope of work along with all the commercial terms and conditions should be included.

2. Price Bid

It should provide the price in the enclosed Price Bid format only only. If the price is provided in any other format , the same is liable to be rejected.

The Techno-commercial & Price bids should be submitted in separate marked envelopes.

Contractors should bring their authorisation letter from their company for witnessing the tender opening. Contractors will be permitted in tender room to witness the tender opening from 14:00 hrs onwards.

BID OPENING

- 1) PART-I (EMD, tender fee and Techno-Commercial Bid) is to be opened on the due date and time as specified in the Tender Notice, in the presence of bidders who may like to attend in the tender room itself. Part-II (Price Bid) shall be opened subsequently of the technically qualified parties.
- 2) Date and time of Price Bid (Part-II) opening shall be intimated to the technically and commercially acceptable bidders only.
- 3) Not more than two representatives will be permitted to be present for the tender opening.
- 4) No correspondence shall be entertained from the bidders after the opening of Price bid(s).
- 5) Standard pre-printed conditions of the bidders attached to the offer will not be accepted and only those mentioned in the body of his offer will be considered.
- 6) Unsolicited bids shall not be entertained. Unsolicited revised Price Bids also, shall not be entertained at any stage of the tendering process.
- 7) BHEL reserves the right to go further for price negotiation after opening of price bid if needed.
- 8) Vendor not submitting EMD, their offer's PART II will not be opened. If exempt, kindly provide the relevant certificate(like Udyog Aadhar, MSME Certificate etc)

LANGUAGE AND CORRECTION

- 1) The bidder shall quote the rates in English Language & International Numerals only
- 2) Bidder shall fill the original tender documents issued by BHEL. All entries and Signatures in the bid shall be in Blue ink only; each page of the bid shall be signed & stamped using official seal of the company by the bidder.
- 3) All entries shall be filled in neat & legible handwriting. No over-writings erasures & corrections are permitted and may render such bid liable for rejection. However, if any cancellations, corrections & insertions are in the bid, the bidder shall dully attest the same.
- 4) The Rate quoted shall be deemed to cover working under adverse conditions as well as supervision from the contractor side, Risk and overheads of all kinds. The Rate quoted shall take into account all labour, Income Tax, GST & restrictions involved in carrying the work.

TENDER EVALUATION

- 1) Prices should be indicated both in words as well as in figures. If there is a difference between price quoted in words and figures or if there is any other price discrepancy, lower value(s) will be considered for evaluation & ordering.

- 2) **L1 will be evaluated based on Lump-sum basis (i.e Lowest total cost including taxes).**
- 3) **In the course of evaluation, if more than one bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts form the respective L1 bidders.**

Incase more than one bidder happens to occupy the L1 status even after soliciting discounts, the L1 bidder shall be decided by a toss/draw of lots, in the presence of respective L1 bidder(s) or their representative(s).

Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.

DEVIATIONS

1) Bids shall be submitted strictly in accordance with the Technical specification and Term & Conditions of the Tender Enquiry. "No– Deviation" are allowed.

12. In the event of acceptance of tender, and if the contractor fails to commence work within prescribed period, BHEL shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money.
13. Accepting authority reserves the right to reject any or all quotations without assigning any reason thereof.
14. A contract agreement will be executed by the party on non-judicial stamp paper as per prevailing rate notified by the government(presently Rs 500) , incorporating the terms and conditions of the contract agreed before start of work.
15. In the event of award of any contract to you, you will have to observe and perform all the laws/enactment in force. For an example you will have to submit the information about wage bills amount and deduction of contributory provident fund of all of your employees every month.
16. Permanent P.F. Account No. ESI Reg. No., GST No , Labour License No. etc. allotted by concerned authority should also be mentioned in your quotation. This is necessary as per the latest directives from Regional Provident Fund Commissioner M.P. Government.
17. Documents regarding your registration with GST may also be forwarded along with income tax clearance.
18. All the documents sent herewith should be returned back, duly signed on each paper along with your offer.
19. For General terms and conditions for inviting reconditioning tenders and award of contract ref. Annexure-G , H and I.
20. Quotations must be valid for at least 120 days from due date.

21. TENDER COST : NIL

22. RULES AND REGULATIONS OF THE CENTRAL/STATE GOVERNMENT:

In the event of award of any contract to Central/State government, it will have to observe and perform all the laws/enactment for the time being in force. For an example the information about wage bills amount and deduction of contributory provident fund of all of your employees every month have to be submitted. Permanent

P.F. Account No., ESI Reg. No., Labour License No. etc. allotted by the concerned authority should also be mentioned in your quotation. This is necessary as per the latest directives from Regional Provident Fund Commissioner M.P. Government. Documents regarding your registration with Sales Tax and Excise authorities may also be forwarded along with income tax clearance.

23. All the documents being sent herewith should be returned back to us duly signed on each paper along with your offer. The general terms and conditions being attached herewith shall also form an integral part of contract Agreement for individual machines in case the work order for any is awarded to you.

WORKS ENGGG AND CENTRAL SERVICES DEPT

EMX DIVISION

Price Bid (Annexure – A)

NIT: - WE&CS/EMX/2021/ENQ/05-R

Date: - _____

"Annual Maintenance Contract (AMC) for installed DROs , Process Plant Instruments and Battery Chargers for a period of two year"..

1. Nature of Work: -

To accomplish all the activities mentioned in the NIT as per the scope of work single price by contractor is as follows:-

SI No	Description	Rate in Rupees
1	Skilled man day rate	

Notes:-

1. Strictly avoid over writing, cutting or unclear writing.
2. This rate will be taken up as final rate including of PF, ESI, all other statutory Levies, **but Excluding GST.**
3. **The bidder shall follow BHEL Terms and Condition.**
4. The GST shall be paid extra, as per the Govt. rules, as applicable.
5. Bidder have to quote man day rate of skilled worker only.
6. Evaluation of L1 bidder shall be done on overall cost to BHEL.
7. **The price bid submitted in any other format is liable to be rejected.**
8. **Any price bid lower than the statutory minimum daily wages (including PF, ESI, Bonus and Welfare fund) is liable to be rejected.**

Annexure – C

Scope of work & other conditions of "Annual Maintenance Contract (AMC) for installed DROs , Process Plant Instruments and Battery Chargers for a period of two year".is as follows.

Preventive maintenance to be carried out as per list of DRO and instruments enclosed in Annexure- II shall be carried out on half-yearly basis.

DRO MAINTENANCE

1. Cleaning of machine panels of dust ingress by vacuum cleaner/compressed air, cleaning of DRO scales, transducers etc.
2. The breakdown maintenance of DRO systems: All the reported breakdowns of DRO installed on these machines are to be attended on receipt of complaint throughout the year by the contractor's staff who shall be posted full time in 1st shift and 2nd shifts. Services will also have to be provided in areas where 3rd shift is operative and also on Sundays & Holidays as required. The place for stationing the contractor's personnel inside the work place shall be provided by BHEL. The work will include following:
 1. Replacement of damage scale with new scale. The necessary modifications in bracketories, mounting holes etc. if required shall also be carried out.
 2. Removal & re-fitting of scale wherever required, at the time of major mechanical repairs. Repair of cable breakages, soldering, cable routing etc.
 3. Testing of performance of DRO, repeatability etc.

PROCESS PLANT INSTRUMENTS AND ELECTRONIC BATTERY CHARGER MAINTENANCE

1. Details of Instruments and nature of works for which the Maintenance Works Contract is to be given are as below:

Instruments and devices to be maintained:

- (i) Sensors
 - (ii) Indicators
 - (iii) Controllers
 - (iv) PID Controllers
 - (v) Recorders
 - (vi) Transducers
 - (vii) Programmable Controllers
 - (viii) Transmitters
 - (ix) Electronic Battery Chargers
2. Type of complaints to be attended:
 - (i) The contractor has to attend all types of problems related to Hardware & Software of the Instruments/Battery Chargers and undertake repair, programming & parameterization as required.
 - (ii) These Instruments are fitted in various Plants & machines like: Ovens (Electrical, LPG Gas & Steam), SR Furnaces, Muffle Furnaces, Salt Baths, bushing process plants, Boilers, Oxygen /LPG/ Acetylene plants, varnish curing plants, VPI plants, electroplating plants, Hot and cold coil pressing machines etc. The list of Instruments/Chargers is enclosed at Annexure – II).
 - (iii) Break down maintenance.

The work of the maintenance shall consist of the following activities :

- a. The maintenance and repair work will be done on labour basis and the spares and BHEL Bhopal shall provide components as required.
- b. Since the process plants are working round the clock, the Fault/ breakdown may occur any time. The breakdown/Complaint should be attended immediately with in

2 Hrs. during the working Hrs. in 1st & 2nd shift and also in 3rd shift, if required and shall restore to normal working condition the instruments within two days. However, if any spares are required it will be provided by BHEL. Delay due to non-availability of spare will not be ascribable to the contractor.

- c. Daily breakdown report should be submitted to the BHEL Engineer- in- charge. The report should include the details of spares / equipment replaced. The record of complaint & rectification and other related record should be maintained by the contractor at BHEL format.
- d. Spare Parts: All the spares parts, items & consumables (like ink, chart paper, cartridges etc.) require to maintain the Instruments shall be supplied by BHEL Bhopal. However, the contractor should periodically intimate regarding the status of the spares to Engineer-in-charge for timely procurement by BHEL.
- e. Calibration: Instruments, sensors and other devices requiring calibration by TSD, shall be disconnected from the process plant by the contractor and connected back after calibration. This will be done as per instruction from Shop/TSD.
- f. The contractor's personal / must be equipped with all the test equipment, working & special tools, safety equipment etc. needed for repairs of electronic controls of machine tools ,DRO systems and instruments.
- g. The Contractor will have to depute and station well qualified and Experienced staff to undertake the preventive maintenance & maintenance work of electronic controls of machine tools & DRO systems.
- h. The minimum staff to be deployed & their min. qualification for carrying out the work per day will be as follows :**Skilled Worker 7 Nos. (Qualification ITI, Certificate / Experience Certificate of the Person deployed to be submitted)**

3. Other Terms & Conditions:

Penalty shall be deducted from running bills by Engineer in-charge on the basis of following rates: If the overall attendance of Skilled manpower is less than 85% for the quarter, penalty of Rs 200 per skilled worker per day of absence will be deducted. Total absence for the quarter shall be considered for the deduction. **The deduction is over and above the deduction for the absence of the manpower.** Total work order consists of 8 quarter of 3 month duration each starting from the date of issue of work order.

NOTE: This penalty is over and above the deduction from running bill for absence of Manpower

Example:-

If the total attendance for the quarter is 375 man-days.

- 1. Manpower Deployed – 330 (88% deployment)
Penalty Deducted – Nil
- 2. Manpower Deployed – 300 (80 % deployment)
Penalty Deducted – $200 \times 75 = 15000$

NOTE: This penalty is over and above the deduction from running bill for absence of Manpower

If the party fails to deploy the man power within 1 day from the date of the complaint, penalty of 1/2 % per week will be deducted up to a maximum of 10%.

4. Appointment and Termination of Worker by Contractor

Approval of BHEL shall be obtained for the staff to be engaged before start of work. The persons once entrusted with the work shall not be withdrawn during the full contract period. If for any reason the person engaged leaves the jobs, approval for replacement shall be compulsorily be taken from BHEL before the existing person is relieved.

Contractor shall have sole discretion to decide on employing, rewarding or terminating the services etc. of his employees. However, new employee must possess such qualification, experience, age requirement, medical & physical fitness as required for the work awarded to the contractor.

In case of termination of service of any employee of contractor, the contractor will ensure that wage payment and other dues to his employees is made on termination of service of such employees.

5. Performance of the contractor shall be reviewed every three months by maintenance staff and if the same is found to be unsatisfactory, BHEL shall have a right to terminate the contract at any point of time.

Annexure-C

Tender Enq No – WE&CS/EMX/2021/ENQ/05-R

Qualifying Criteria:

Qualifying Conditions cum Eligibility Condition for **Annual Maintenance Contract (AMC) for installed DROs , Process Plant Instruments and Battery Chargers for a period of two year.**

- (i) Average annual financial turnover during the last 3 years, ending 31st March 2018-19, should be at least 3.93 lakhs. Balance Sheet and P&L copy of preceding 3 year to be submitted.
- (ii) Experience of having successfully running/completed similar works (Annual AMC) during last 7 year ending Mar 2020 , should be either of the following:
 - (a) One similar running/completed works in each of the contract value 10.50 lakhs or more
Or
 - (b) Two similar running/completed works in each of the contract value 6.56 lakhs or more.
Or
 - (c) Three similar running/completed works in each of the contract value 5.25 lakhs or more.

Note: Similar work means AMC of Electronics Instruments / DRO / Electronic Controls of machine Tools.

- (iii) Copy of P.O. / W.O. & satisfactory completion report in case of completed/running work and the criteria at Sl. No. (ii) above should be submitted along with the Techno Commercial offer. The complete details of the customer contact person, name, address and contract no. are also to be submitted. (BHEL reserve the right to verify the submitted details.)

Vivek Singh Yadav
Manager EMX

ANNEXURE -D

Eng No – WE&CS/EMX/2021/ENQ/05-R

Checklist for the Tenderer

Sl No	Description		Page Reference
1	NIT (signed on all pages)	Yes/No	3-6
2	Price Bid (Annexure - A)	Yes/No	7
3	General terms and Condition Annexure G,H and I	Yes/No	16-26
4	Company/Firm Registration documents		6
5	PAN Card of the Firm/Company(with copy)		6
6	ESI No and Supporting Document		6
7	EPF No and supporting Document		6
8	GST No (self-attested copy) and GST compliance as per Annexure F		14-15
9	Unpriced Bid	Yes/No	7
10	Declaration of the tenderer Annexure E	Yes/No	13

Seal and Sigh of the Contractor/Firm

ANNEXURE – E

Enq No – WE&CS/EMX/2021/ENQ/05-R

**Declaration of the official of the tenderer to whom all the references shall
be made**

Name of Official :-

Experience :-

Contact No :-

Email ID :-

ID No:-

(along with photo copy of ID)

I, hereby, declare that the above information is true to the best of my knowledge.

GST COMPLIANCE
ANNEXURE -F
WE&CS/EMX/2021/ENQ/05 R

1. Bidder has to give his undertaking that GST portion of the invoice shall be released only upon:-
 - 1.1 All invoices raised by contractor/Vendor must be GST Compliant Tax invoices as per GST invoice rules.
 - 1.2 Contractor declaring such invoice in his GSTR-1 and
 - 1.3 Receipt of goods/service and Tax Invoice by BHEL and
 - 1.4 Confirmation of payment of GST thereon by contractor on GSTN portal.
 - 1.5 Contractor has to give an undertaking to BHEL that they have declared invoice in his return and paying GST within timeline prescribed for availing ITC by BHEL.

Payment to contractor for GST portion will be released only after compliance of above activity and on availment of ITC by BHEL.

2. Bidder has to ensure and give an undertaking that in case tax credit is delayed/ denied to BHEL due to non/delayed receipt of service/goods and /or tax invoice or expiry of the timeline prescribed in tax laws for availing such ITC, or any other reasons not attributable to BHEL, tax amount shall be recoverable from the contractor along with interest levied/ leviable on BHEL.
3. Bidder has to give an undertaking that in case he delays in declaring such invoice in his return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law, GST amount paid by BHEL towards such ITC reversal as per GST Law shall be recoverable from them along with interest levied/ leviable from BHEL. Hence payment of GST portion along with interest portion will be payable only after the last date/chance for availing ITC.
4. Contractor has to submit monthly reconciliation statement to ensure minimum mismatches and avoid delay in availment of ITC by BHEL.

5. Reverse Charge under GST

- 5.1 In respect of goods, reverse charge liability to pay GST shall arise at the earliest of date of receipt of goods or date of payment to supplier or date of immediately following 30 days from the date of issue of invoice by the supplier.
- 5.2 In respect of services, reverse charge liability shall arise at the earliest of date of payment to service provider or 60 days from the date of issue of invoice by service provider.
- 5.3 Any GST liability arising on BHEL under reverse charge before actual receipt of goods and/or invoice thereof would be subject to recovery of interest leviable for the period between the date of such liability and actual date of eligibility of ITC based on receipt of goods, receipt of invoices and other condition specified in GST Law.

Anti Profiteering

6. Bidder has to give an undertaking that any reduction in the rate of GST and/or benefits of ITC under the provision of GST. Law shall be passed on to BHEL by way to commensurate reduction in price of goods/services.

This may be due to

- Any reduction in the rate of GST or the benefits of ITC accrue to vendor/contractor.

Availability of ITC for interstate supplies under GST which are not available in existing law(like CST) or ITC reversal under the existing law for stock transfer or on account of common credit etc.

- Any element of taxes like Excise, service Tax, VAT, CST, Entry Tax etc embedded into price of goods or service under contract/work order/PO placed under the existing law.
- The above shall be taken into account for working out the benefits to be passed on to BHEL.
- A self-certified detailed declaration on anti profiteering shall be submitted by bidder along with invoice in the prescribed format.

7. Penalty /LD shall be charged as per the NIT condition, GST applicable on the same shall be charged extra.

8. GSTN, SAC and rate of tax may be confirmed.



Works Engineering & Central Services Tender

Enquiry No. WE&CS/EMX/2020-21/ENQ/05-R

ANNEXURE-G

Compensation in cases of death/ permanent incapacitation :-

Compensation in cases of death/permanent incapacitation of person due to unintended/unforeseen occurrences during the manufacturing/ operation and works incidental thereto at BHEL factories/ offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, serving, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works /during working at BHEL Units! Offices/ townships and premises! Project Sites.

BHEL shall recover the amount of compensation paid to victim(s) by BHEL towards loss of life/ permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employees as detailed below.

- a)** Victim: Any person who suffers permanent disablement or dies in an accident as defined below.
- b)** Accident: Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious occurrence caused during the manufacturing/operation and works incidental thereto at BHEL factories/ offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, serving, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works /during working at BHEL/Units/Offices/townships and premises/Project Sites.
- c)** Compensation in respect of each of the victims:-
 - (i) In the event of death or permanent disability resulting from Loss of both limbs: Rs. 10,00,000/- (Rs. Ten Lakh)
 - (ii) In the event of other permanent disability: Rs. 7,00,000/- (Rs. Seven Lakh)
- d)** Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to Section 2 (I) of the Employee's Compensation Act, 1923."

Signature of Contractor



**BHARAT HEAVY ELECTRICALS LIMITED,
BHOPAL**

Page 1 of 3

Works Engineering & Central Services Tender

Enquiry No. WE&CS/EMX/2020-21/ENQ/05-R

ANNEXURE:H

INSTRUCTIONS TO

CONTRACTORS STATUTORY COMPLIANCES TO BE

ENSURED

1. BHEL shall have the privity of the contract with the contractor only and will give instructions to the contractor or his authorized representative. BHEL will have nothing to do or be concerned with the employment of employees working for the contractor. The relationship between BHEL and the Contractor will be that of independent entities and nothing herein contained will amount to joint venture, partnership or an employer-employee relationship.
2. The contractor shall maintain regular contact with the designated employee(s) of BHEL and will interact on matters relating to the work awarded under this contract.
3. Contractor will ensure that the job is executed through his employees on his rolls and under no circumstances the contractor will deploy any casual employee to carry out the job nor shall sub-contract the job without prior written permission.
4. Contractor shall observe Provisions of the Factories Act in respect of working hours, holidays, rest intervals, leave and overtime to his employee. No work shall be done on second/third shift, overtime, Sundays or on other declared holidays without written permission.
5. Contractor shall obtain Police Verification of all his workers.
6. Contractor shall submit following Certificate for each contract separately.

***“It is certified that PF/ESI challans of the amount
(in words.....) pertains to my workers, whose
names are appearing in the wage sheet of the month20..... and these workers are
engaged in (type of work)
against work order no. in
(name of department).*”**

Signature of Contractor



Works Engineering & Central Services
Tender Enquiry No. WE&CS/EMX/2020-
21/ENQ/05-R

ANNEXURE-H

STATUTORY INSTRUCTIONS TO
CONTRACTOR

1.0 STATUTORY REGISTRATIONS AND CLEARANCES

Contractor shall commence the work only after obtaining :

- Labour Licence
- Provident fund code no.
- ESI code no
- Registration no.

Notice of commencement in Form 6-A & Maintain Register of workers in form 13.

2.0 CONTRACTOR SHALL ENSURE FOLLOWING WHILE EXECUTING CONTRACT

1. Employment card as per rule no 76 of Contract Labour (Regulation & Abolition) MP rules, 1973
2. Appointment letter to his employees.
3. Annual leave with wages including EL, CL, National Holiday & Festival holiday.
4. Leave record register.
5. Shall engage only adult workers who have attained the age of 18.
6. Work to be done on second/third shift, overtime, Sundays or on other declared holidays with written permission.
7. Obtain insurance cover for his employees/equipments, tools etc & third party insurance coverage at his own cost.
8. Remit Provident fund contributions in prescribed 3A & 6A forms
9. ESI contributions in Form 6
10. Submit challans of PF & ESI contributions every month.
11. Provide Personal protective equipments for his employees
12. Distribute wage slip each month to his employees
13. Ensure payment of Statutory Minimum Wages as well as additional wages recommended by BHEL through bank account only.
14. Submit employee and employer contribution as per Shram Kalyan Nidhi Adhiniyam 1982.

3.0 PAYMENT OF WAGES ACT

1. Those engaging 100 or more workman, should submit or copy of standing orders.
2. Shall comply with the provisions of Factories Act.

4.0 ON COMPLETION OF WORK

Submit PF & inspection report

Signature of Contractor



Works Engineering & Central Services Tender

Enquiry No. WE&CS/EMX/2020-21/ENQ/05-R

ANNEXURE H

INSTRUCTIONS TO CONTRACTORS

Check List for WO Bill/PAYMENT V-01

वर्क कॉन्ट्रैक्ट हेतु चेक लिस्ट

क्र:	माह:	दिनांक:
1	विभाग:	
2	वर्क कॉन्ट्रैक्ट संख्या:	
3	ठेकेदार का नाम:	
4	कार्य का प्रकार:	
5	वर्क आर्डर का मूल्य:	
6	गत माह के दौरान कॉन्ट्रैक्टर द्वारा नियोजित अधिकतम संख्या (क) कुशल कर्मकार (ख) अर्धकुशल कर्मकार (ग) अकुशल कर्मकार कुल संख्या:	
7	ठेकेदार के लायसेंस अनुसार श्रमिकों की संख्या:	
8	ठेकेदार का पीएफ पंजीयन क्र:	
9	ठेकेदार द्वारा पीएफ के भुगतान के चालान की प्रति संलग्न है: (टिक करें)	हाँ/नहीं
10	पिछले माह के दौरान पीएफ में किये गए कुल भुगतान एवं उसके अंतर्गत श्रमिकों की संख्या:	
11	ठेकेदार का ईएसआई पंजीयन क्र:	
12	ठेकेदार द्वारा ईएसआई के भुगतान के चालान की प्रति संलग्न है: (टिक करें)	हाँ/नहीं
13	पिछले माह के दौरान ईएसआई में किये गए कुल भुगतान एवं उसके अंतर्गत श्रमिकों की संख्या:	
14	वेतन शीट (वेज शीट) जिसमें भुगतान दर, उपस्थिति, कुल भुगतान, पीएफ एवं ईएसआई आदि के मद में की गई कटौती एवं प्रत्येक ठेका श्रमिक को दिए गए कुल वेतन की जानकारी संलग्न है: (टिक करें)	हाँ/नहीं
15	क्या सभी ठेका श्रमिकों को सुरक्षा उपकरण जैसे- यूनिफार्म, जूते, हेलमेट प्रदान किये गए हैं: (टिक करें)	हाँ/नहीं प्रथम बिल के साथ सुरक्षा उपकरण प्रदाय की हस्ताक्षरित कॉपी लगाये।
16	क्या नियोजित किये गए ठेका श्रमिकों का नियोजन वर्क आर्डर के अनुसार है उनकी योग्यता, दक्षता एवं अनुभव (टिक करें)	हाँ/नहीं
17	फॉर्म 7 की प्रति कार्य आदेश प्राप्ति एवं समाप्ति पर 15 दिनों के अंदर जमा करना अनिवार्य है अन्यथा बिल स्वीकार नहीं किये जायेंगे।	हाँ/नहीं यदि हाँ तो कॉपी लगाये।
18	क्या प्रधानमंत्री रोजगार प्रोत्साहन योजना (PMRPY) के तहत ठेकेदार द्वारा कोई लाभ लिया जा रहा है	हाँ/नहीं (यदि हाँ है तो विवरण दें)
19	किसी भी गलत सत्यापन के लिये ठेकेदार स्वयं जिम्मेदार होगा और इस सम्बंध में BHEL को हुई हानि की भरपाई करेगा	
20	मेरे द्वारा सभी वैधानिक प्रावधानों का अनुपालन किया जायेगा एवं ऐसा न करने पर मेरे विरुद्ध उचित कार्यवाही की जा सकती है।	

प्रमाणित किया जाता है कि वेज शीट (Wages Sheet) के अनुसार, ठेका श्रमिकों को मजदूरी का भुगतान नगद/चेक द्वारा मेरे समक्ष किया गया।

(ठेकेदार के हस्ताक्षर)

ठेका देने वाले कार्यपालक (Contracting Executive) के हस्ताक्षर

संबंधित अपर महाप्रबंधक के प्रतिहस्ताक्षर

Signature of Contractor

**BHARAT HEAVY ELECTRICALS LIMITED,
BHOPAL**

Works Engineering & Central Services Tender

Enquiry No. WE&CS/EMX/2020-21/ENQ/05-R

ANNEXURE I

GENERAL TERMS AND CONDITIONS

1. DEFINITIONS

- a) “Company” shall mean Bharat Heavy Electrical Limited Bhopal, a company incorporated under the companies Act’ 1956, and having its registered office at BHEL House, Siri Fort, New Delhi – 110045 here in after referred to as BHEL and includes a duly authorized representative of the company or any other person empowered in this behalf by the company to discharge all or any of its functions.
- b) “Accepting Authority” shall mean the Head of the WE&CS – Mechanical Section or any other person authorized by him.
- c) “Contract” shall mean the notice inviting Tender and acceptance thereof & formal agreement if any, executed between Bharat Heavy Electricals Ltd. Bhopal & contractor together with documents referred to therein including these conditions, & any special conditions, specifications, designs, drawings etc. These documents taken shall be deemed to form one contract and shall be complementary to one another.
- d) “Contractor” shall mean the individual or firm or company whether incorporated or not, undertaking the work & shall include legal representatives of such individual or persons composing such firm or incorporated company or successors of such person, as the case may be and permitted of such individual or firm or company.
- e) “Contract sum” shall mean the lump sum for which the tender is accepted in the case of lump sum contract and in the case of item rate the total cost of the works arrived after extension of quantities shown in schedule of quantities by the item rates quoted by the tenderer for various item.
- f) “Day” shall mean a day of 24 hours from midnight to mid night, irrespective of the number of hours worked in that day.
- g) A week shall mean seven days without regard to the number of hours worked in any day in the week.
- h) “Work” shall mean work to be executed in accordance with contract or part(s) thereof as the case may be and shall include all extra, additional, altered or substituted Work or temporary & urgent work as required for performance of contract.
- i) “Engineer-in-Charge” shall mean the Engineering officer appointed by the Accepting Authority, who shall direct, supervise & be in-charge of work for purpose of contract

2. CONTRACT DOCUMENTS

The contractor shall be furnished free of charge, two Certified true copies of the contract documents. He shall keep one copy of this document on the site in good order, and the same shall as all, reasonable times, be available or inspection and use by the Engineer-in-charge, his representatives or by other Inspecting Officers.

- a) None of the documents shall be used by contractor for any purpose other than that of this contract.

- b) The contractor shall take necessary steps to ensure that all persons employed on any work in connection with this contract have noticed that Indian Official Secrets Act, 1923, applies to them and shall continue so to apply even after the execution of such work under the contract.

3. WORK TO BE CARRIED OUT

The detail scope of work (Annexure- C) is provided with contract document. Scope to provide tools and tackles required to carry out work will be as per scope of work.

4. INSPECTION OF WORK BEFORE SUBMISSION OF TENDER

The contractor shall examine the quantum of work and shall satisfy himself before submitting his tender. He shall himself assess the requirement of materials, contingencies and other circumstance which may affect or influence his tender, no extra charges on any misunderstanding or otherwise shall be allowed.

5. SUFFICIENCY OF THE TENDERERS

The contractor shall be deemed to have satisfied himself before tendering as to correctness and sufficiency of his tender, the work and prices. This shall except as otherwise provided all obligation under the contracts all matters and things necessary for the proper completion and maintenance of the works.

6. DISCREPANCIES AND ADJUSTMENT OF ERRORS

The several documents forming the contract are to be taken as mutually explanatory of one another. If there are varying or conflicting provisions made in any document forming part of contract, the accepting authority shall be the deciding authority with regard to the intention of the document. Any error in description, quantity or rate or any omission these form shall not initiate the contract or release the contractor from execution of whole or any part of work comprised. These and according to drawings & specification or from any of his obligation under the contract.

7. EARNEST MONEY DEPOSIT

- a) Earnest Money is to be paid by each Tenderer. The rate of earnest Money deposit shall be as per mentioned in NIT.
- b) Mode of Deposit :
- i) Through Online deposit only . (before tender opening).
In addition to above, the EMD amount in excess of ₹ 200,000/- (Two Lakhs) may also be accepted in the form of Bank Guarantee. The Bank Guarantee in such cases shall be valid for at least six months.
- c) EMD can also be deposited in electronic mode and the procedure of depositing EMD is as follows:
- i. For depositing amount online, depositor has to visit SB-Collect through Online E-Payment option available on Internet (www.bhelbpl.co.in under caption new link). After reading the instruction for depositing the amount, open SBI's SB-Collect site. Please select State of Corporation as "Madhya Pradesh" and type of Corporation as "Industry" and then click on "Go" appears on the screen. Now select "Bharat Heavy Electricals, Bhopal" from the dropdown table appears against "Industry Name" and click Submit. Now select category from the dropdown table appears against "Select category" under which you need to deposit amount in favour of BHEL, Bhopal.
- ii. EMD and Tender Fee may please be deposit together under EMD module where the EMD & Tender Fee both are applicable.
- iii. After the successful payment, DU no. shall be generated by the banking system.
- iv. After depositing the amount, Depositor has to fill Deposit slip available on Internet (www.bhelbpl.co.in under caption new link) by selecting required Enquiry number. Tender Fee and EMD may please be enter separately.
- v. As and when credit received in BHEL account, automatic mail will be sent to the depositor.
- vi. After submission of deposit slip, a control number will be generated through system which can be used for getting print out from system.

- 7.1 EMD by the Tenderer will be forfeited as per tender documents. If:**
- i) After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates.**
 - ii) The tenderer does not commence the work within the period as per LOI /Contract. In case the LOI / Contract is silent in this regard, then within 15 days after award of contract.**
- 7.2 EMD shall not carry any interest.**

8. SECURITY DEPOSIT (SD)

- 8.1 The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.**
- 8.2 The Security Deposit will be collected before start of the work by the contractor.**
- 8.3 Security Deposit may be furnished in any one of the following forms:-**
- 8.3.1 Cash (As permissible under the extant Income Tax Act)**
 - 8.3.2 Local cheques of scheduled bank (subject to realization)/ pay order/ demand draft/ electronic fund transfer in favour of BHEL**
 - 8.3.3 Bank guarantee from Scheduled banks/ Public finance institutions as defined in companies act. Bank guarantee format should have the approval of BHEL.**
 - 8.3.4 Fixed deposit slip issued by Scheduled banks/ Public finance institutions as defined in companies act. (FDR should be in the name of the contractor, a/c BHEL).**
 - 8.3.5 Securities available in Indian post offices such as national saving certificates, Kisan Vikas patras etc. (held in the name of contractor furnishing the security and duly endorsed / hypothecated/ pledged, applicable , in favour of BHEL.**

(Note:- BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or any matter connected therewith)
- 8.4 Security Deposit can also be recovered from the running bills. However in such cases at least 50% of the SD should be collected before start of work and the balance 50% may be recovered from the running bills.**
- 8.5 EMD of the successful tenderer shall be converted & adjusted against the SD.**
- 8.6 The Security Deposit shall not carry any interest.**
- 8.7 Deducted Security Deposit will be refunded to the tenderer after the completion of the work. In the meantime any discrepancy is found in the work the SD can be detained for further period or may be forfeited. This Security Deposit shall be liable to be returned to the contractor after termination of the contract or at the end of it, subject to deduction on account of company dues, non-deposit of statutory dues etc. no interest shall be payable on S D.**
- 8.8. Electronic transfer: The procedure of depositing SD is as follows:**
- i. For depositing amount online, depositor has to visit SB-Collect through Online E-Payment option available on Internet (www.bhelbpl.co.in under caption new link). After reading the instruction for depositing the amount, visit SBI's SB-Collect site. Please select State of Corporation as "Madhya Pradesh" and type of Corporation as "Industry" and then click on "Go" appears on the screen. Now select "Bharat Heavy Electricals, Bhopal" from the dropdown table appears against "Industry Name" and click Submit. Now select category from the dropdown table appears against "Select category" under which you need to deposit amount with BHEL, Bhopal.**

- ii. After the successful payment DU no. shall be generated from the banking system.
- iii. After depositing the amount, Depositor has to fill Deposit slip available on Internet (www.bhelbpl.co.in under caption new link) by selecting required Enquiry number.
- iv. As and when credit received in BHEL account, automatic mail will be sent to the depositor.
- v. After submitting the deposit slip a control number will be generated through system which can be used for getting print out from system.

(Note: In case of (a) small value contracts not exceeding 20 lakhs or (b) SAS jobs, work can be started before the required Security Deposit is collected. However, payment can be released only after collection/ recovery of initial 50% Security Deposit).

9. TIME AND EXTENSION FOR DELAY

The time allowed for execution, which shall be mutually agreed between BHEL and contractor, and mentioned in Work Order, along with these conditions shall be of the essence of the contract. The execution of work shall commence immediately and not later than 15th day after the date on which the Engineer-in-charge issues written order to commence work or from date of handing over the plant whichever is later unless specified otherwise elsewhere. If contractor commits default in commencing the execution of work as aforesaid, Company/Corporation shall without prejudice to any other right or remedy be at liberty to cancel the order and forfeit the earnest money/ security Deposit.

- 9.1 As soon as possible after the contract is awarded, the Engineer-in-charge and the contractor shall agree upon a time and progress chart. The chart shall be prepared in direct relation to the time stated in the contract document for completion of work.**

It shall indicate forecast of dates of commencement & completion of various activities to be done for completion of work as per contract. This may be amended as necessary by agreement between Engineer-in-charge & contractor within limitations of time imposed in contract document & further to ensure good progress during execution of work.

- 9.2 If the work is delayed by :**

- a) Force majeure, or
- b) Serious loss or damage by fire, or
- c) Delay on the part of other contractor or company/ corporation in executing work not forming part of contractor.
- d) Non-availability / release of the machines which is in the responsibility of company / corporation or,
- e) Any other case, which is in the absolute discretion of the accepting authority and is beyond contractor's control.

Then upon the happening of any such delay, contractor shall immediately give notice thereof in writing to the Engineer-in-charge but shall never lose constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-charge to proceed with the work.

- 9.3 Request for extension of time to be eligible for consideration shall be made by the contractor in writing within seven days of the happening of the event causing delay. The contractor may also, if practicable, indicate in such a request the period for which the extension is required.**
- 9.4 The accepting authority may give a fair and reasonable extension of time for completion work. Such extension shall be communicated to contractor by Engineer-in-Charge in writing within the month of the date of the receipt of such request.**

10. INSPECTION AND APPROVAL

- a) All work embracing more than one process shall be subject to Examination and approval at each stage thereof and the contractor shall give due notice to the Engineer-in-charge or his authorized representative when each stage is ready.
- b) No work shall be covered up or put out of view without the approval of Engineer-in-charge or his representative and the contractor shall afford full opportunity for examination of any work, which is about to be covered up or put out of view. In the event of the failure of the contractor to do as aforesaid, if required by Engineer-in-charge he shall uncover such work at contractor's own expenses.
- c) Company officer concerned with the contract shall have powers at any time to inspect and examine any part of the work and the contractor shall give such facilities as may be required for such inspection and examination.

11. COMPENSATION OF DELAY

- a) If the contractor fails to maintain fulfill schedule as per work order and fails to start the work as per schedule date given by BHEL and fails to maintain the required progress in work as per terms of Work Order, he shall without prejudice to any other right or remedy of company/ corporation on account of such breach, pay as agreed compensation amount calculated as stipulated below:
- b) 0.5% (Half) percent per week of contract value.
- c) Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% of the total contract value.

12. CONTRACTOR'S LABOUR / WORKER WHILE WORKING INSIDE

- a) The contractor shall ensure sufficient staff of the quality to ensure work-man-ship of the degree specified in the contract and to the satisfaction of the Engineer-in-charge. Contractor shall not employ indirectly or through sub-contractor any staff what-so-ever. Written consent of the contractor in this behalf has to be incorporated in to the offer, or otherwise the Contract is liable to be rejected.
- b) Contractor shall furnish to Engineer-in-charge a complete list of persons engaged on the work giving the following details.

a) Name	(b) Age	(c) Trade
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Change-over, if any, shall be furnished by the contractor to the Engineer-in-charge.
- c) Contractor shall comply with Contractor's Obligations & Statutory Compliances for work contract as per Annexure-IV & it shall be the part of agreement of this contract.

13. NUISANCE

Contractor shall not any time do, cause or permit any nuisance on the work site or do anything shall cause unnecessary disturbance or inconvenience to other workers.

14. GENERAL TERMS

- a) BHEL shall have the privacy of the contract with the contractor only and will give instructions to the contractor or his authorized representative. BHEL will have nothing to do or be concerned with the employment of employees working for the contractor. The relationship between BHEL and the contractor will be that of independent entities and nothing herein contained will amount to joint venture, partnership or an employer-employee relationship.
- b) The contractor shall maintain regular contact with the designated employee(s) of BHEL and will interact on matters relating to the work awarded under this contract.

15. TERMS OF PAYMENT

Payment to the contractor will be on quarterly basis as per actual attendance of manpower deployed under works contract within 60 days after submission of bills. (In case of MSME it will be 45 days). Contractor shall submit running bills on the basis of actual attendance of manpower deployed. Penalty, if any, shall be deducted from running bills by engineer in-charge

16. DEFECTS LIABILITY PERIOD – GUARANTEE

Not Applicable.

17. RIGHTS & OBLIGATION OF BHEL

- a) In case the contractor does not carry out the Contractual/Statutory obligations or the services rendered by him are found to be unsatisfactory, BHEL shall bring the same to his notice and he will be obliged to discharge the obligations and rectify the deficiency/anomaly within three days time failing which, BHEL reserves the right to terminate the contract without assigning any reason whatsoever. In such an event, no damages will be payable for short closure of the contract.
- b) If the Contractor commits default in complying with any of the terms conditions of the contract and does not remedy it or take effective steps to remedy in within three days after a notice in writing is given by Engineer-in-charge failing which BHEL reserves the right to terminate the contract without giving any reasons thereof.
- c) Cancellation of contract may be either for whole or part of contract at BHEL's option. In event of termination of contract in whole or part BHEL may procure upon such terms and in such manner as deemed appropriate, supplies or services similar to those so terminated and contractor shall be liable to BHEL for any excess costs for such similar supplies or services provided that the contractor shall continue the performance of this contract to extent not terminated under provision of this clause.
- d) The decision of BHEL regarding interpretation of any terms and conditions set forth in the Agreement shall be final and binding on the contractor. The award of the arbitrator shall be final and binding on both the Parties. The venue of the Arbitration shall be Bhopal in India.
- e) The Award to be given by the Arbitration shall be a speaking award. All questions, disputes, differences arising under, out of or in connection with this contract shall be to the exclusive jurisdiction of Bhopal Courts.

18. TAXES

Goods and Service Tax (GST) or any other new tax introduced by GOI shall be considered as applicable. Any loss/delay of tax credit to BHEL shall be recovered from contractor if the reason for the same is attributable to contractor. Income Tax deduction at source will be as applicable from time to time.

19. ARBITRATION & LAW

Except as provided elsewhere in this contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference ; arising out of the formation breach, termination, validity or execution of the contract; or , the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the contract ; or , in any manner touching upon the Contract, then, either Party may , by a notice in writing to the other Party refer such dispute or difference to the sole arbitration of an arbitrator appointed by Head of the BHEL Unit/Region/Division issuing the contract. The Arbitrator shall pass a reasoned award and the award of the arbitrator shall be final and binding upon the Parties. Subject as

aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Bhopal. The cost of arbitration shall be borne as per the award of the Arbitrator. Subject to the arbitration in terms of clause as mentioned above, the courts at Bhopal shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract. Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

20. CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018

The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding (delete whichever is inapplicable), which the Parties are unable to settle mutually), arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

Notes:

1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.
2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Annexure-----
-- to this GCC.

The Annexure -----together with it's appendices will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in these GCC.


ANNEXURE - I I

LIST OF MACHINES PROPOSED TO BE COVERED UNDER CONTRACT

S.NO	DIV.	W.C.	M/C NO	MACHINE DESCRIPTION	BLK	BAY	C/N	SYSTEM DETAILS
1	BCM		6/B/2264	SYNTHESIS CAPACITOR WINDING				PLC PANEL, MMI
2	CIM		11/B/2231	RF INDUCTION HEATOER	8		N	RF CONTROL PANEL
3	CIM	32	11/A/2118	NUCHEM MULTIDAY-LIGHT PRESS	8	3	N	HEATING SOURCE & PLC PANEL
4	CIM	39	11/A/2125	SCHUMANN HOT & COLD PRESS	8	4	N	PLC & MMI PANEL
5	CIM	55	11/A/2173	NEW MDL PRESS	8	3	N	HEATING SOURCE & PLC PANEL
6	CIM	33	11/A/2248	NUCHEM HEAT SOURCE 100T PRESS	8	4	N	HEATING SOURCE PANEL
7	FMM		01/B/2160	SCHLATTER RADIATOR LINE	1B	2	C	BOSCH WELDING CONTROLLER & PLC PANEL
8	FPM		01/A/2086	BUTLER PLANER	1A	13	N	DC DRIVE & PLC PANEL
9	FPM		01/B	ELECTRO— PERMANENT MAGNET	1A	3	N	PLC PANEL
10	FWM		01/B/2214	ELECTROSLAG WELDING	1	5	N	WELDING POWER SOURCE & DC DRIVE PANEL
11	FWM		01/B/2298	ESAB NARROW GAP WELDING	1	8	C	WELDING POWER SOURCE, DC DRIVES AUTOMATION JOINT/EDGE PANEL TRACKING SYSTEM
12	FYM	32	12/B	PILLAR INDUCTION FURNACE	5		N	MF FURNACE CONTROL PANEL
13	FYM		12/B/2090	ABB INDUCTION FURNACE	5	1	C	MF FURNACE CONTROL PANEL
14	HRP	1	03/A/0003	6FT-RICHARDS VERT. BORING	2	8	N	AC DRIVE & PLC PANEL, DRO
15	HRP	1	03/A/0006	RICHARDS VERT. BORING	2	8	N	DRO
16	HRP	1	03/A/0007	RICHARDS VERT. BORING	2	6	N	AC DRIVE & PLC PANEL, DRO
17	HRP		03/A/0009	RICHARDS VERT. BORING	2	6	N	DC DRIVE & PLC PANEL, DRO
18	HRP		03/A/0010	RICHARDS VERT. BORING	2	6	N	DC DRIVE & PLC PANEL, DRO
19	HRP		03/A/0018	ASQUITH RADIAL ARM DRILLING	2	6	N	AC DRIVE PANEL
20	HRP		03/A/0021	BUTLER PLANNER	2	6	N	DC DRIVE PANEL, DRO
21	HRP		03/A/0022	BUTLER PLANER	2	6	N	DC DRIVE PANEL, DRO
22	HRP		03/A/0023	ASQUITH HORZ. FLOOR BORER	2	6	N	DRO
23	HRP		03/A/0050	PLANO MILLER	2	7	N	DC DRIVE PANEL, DRO
24	HRP		03/A/0091	CRAVEN LATHE	2	6	C	DC DRIVE PANEL, DRO
25	HRP	29	03/A/2030	HOMMA VERT. BORER	2	6	C	AC SERVO DRIVES, DC DRIVE & PLC PANEL DRO
26	HRP		03/A/2037	SKODA RAM BORER	2	7	C	AC SERVO DRIVES, DC DRIVE & PLC PANEL DRO
27	HRP		03/A/2047	CRAVEN LATHE	2	8	N	DC DRIVE PANEL, DRO
28	HRP		03/A/205S	HOMMA PLANO MIRROR	2	7	N	AC SERVO DRIVES, DC DRIVE PANEL, DRO
29	HRP		03/A/2042	WELMECH OVEN	2	8	N	BURNER CONTROLS, PLC & MMI PANEL
30	HRP		04/A/2051	BUTLER ELGAMIL	2	8	N	DC DRIVE PANEL, DRO
31	HRP			TEST PLANT- PLC SYSTEM & CONTROL DESKS	2		C	PLC & MMI, INDUSTRIAL PC'S
32	IMM	2	04/A/2041	REFAMET VERT. BORING	2	5	N	AC DRIVES PANEL, DRO
33	IMM	1	04/A/2045	VERT. BORING	2	5	N	DRO
34	IMM	8	04/A/20S0	S & W KEY SEATING	2	5	N	DC DRIVE PANEL
35	IMM	28	04/A/2054	O & M VERTICAL BORING	2	5	N	DC DRIVE & DC SERVO DRIVE PANEL, DRO
36	IMM			TEST PLANT- 2MVA SET/1750KVA	2		C	DC DRIVE PANEL, CONTROL DESK
37	PRM		13/B/2009	HOMMA GRINDER			N	DC DRIVE PANEL
38	PRM		13/B/2019	BURR GRINDING M/C (OLD)	10	2	N	AC DRIVE PANEL
39	STM	6	20/A/0003	MIB HORZ. BORING	6	5	C	DC DRIVES & PLC PANEL, MMI DRO
40	STM	5	20/A/0005	RICHARDS HORZ. BORING	6	4	N	DC DRIVES & PLC PANEL, DRO
41	STM	3	20/A/0011	RICHARDS VERT. BORING	6	4	C	DC DRIVES & PLC PANEL, DRO
42	STM	12	20/A/0012	K&W CROSS RAIL DRILLING	6	5	N	DC DRIVES & PLC PANEL
43	STM	10	20/A/0030	CRAVEN LATHE	6	4	N	DC DRIVES PANEL, DRO
44	STM	10	20/A/0033	CRAVEN LATHE	6	4	N	DC DRIVES PANEL, DRO
45	STM	15	20/A/0058	KENDAL & GENT PLANO MILLING	6	2	N	DC DRIVES PANEL, DRO
46	STM	5	20/A/0061	RICHARDS HORI. BORING	6	4	N	DC DRIVES & PLC PANEL, DRO

47	STM	1	20/A/0067	RICHARDS DOUBLERAM BORING	6	3	N	DRO
48	STM	1	20/A/0068	RICHARDSVERT.BORING	6	3	N	AC DRIVE PANEL,DRO
49	STM	1	20/A/0069	BERTHEIZVERT.BORING	6	4	N	AC DRIVE PANEL,DRO
50	STM	8	20/A/0121	LANGLATHE	6	3	N	DRCI
51	STM	8	20/A/0124	LANG SURFACING & BORING LATHE	6	3	N	DRO
52	STM		20/A/0133	HERBERTMILLING	6	2	N	DC DRIVE PANEL,DRO
53	STM	4	20/A/0147	RICHARDSHORI.BORING	6	4	N	AC DRIVE PANEL,DRO
54	STM	4	20/A/0148	RICHARDSHORI.BORING & FACING	6	4	N	AC DRIVE PANEL,DRO
55	STM	6	20/A/0300	MIBMILLING& BORING	6	5	N	DC DRIVE & PLC PANEL,MMI,DRO
56	STM	10	20/A/0302	BERTHEIZVERT.BORING	6	4	C	DC DRIVE PANEL,DRO
57	STM	4	20/A/0352	RICHARDS HORI.BORING & FACING	6	4	N	DC DRIVE PANEL,DRO
58	STM	26	20/A/2001	INNOCENTITAPE CONTROL DRILLING	6	5	C	DC DRIVE PANEL
59	STM	26	20/A/2002	INNOCENTHORI.MILLING&BORING	6	5	C	DRO
60	STM	1	20/A/2016	RANCHIDDOUBLECOLUMN PLANING	6	3	N	DRO
61	STM	1	20/A/2018	RICHARDSVERT.BORER	6	3	N	DC DRIVE PANEL,DRO
62	STM		20/A/2048	HMTTHORI.BORER	6	3	N	DC DRIVE PANEL,DRO
63	STM	15	20/A/2087	HOMMAPLANOMILLING	6	3	N	PC,PLC,SCADA
64	STM		20/A/2111	RICHARDSHORI.BORER	6	3	N	DC DRIVE PANEL
65	SWM		09/B/2140	ELECTROPLATING PLANT	4		C	DC DRIVE PANEL
66	SWM		09/B/2169	PLANOMILLERM/C	4	2	N	DC DRIVE PANEL,DRO
67	SWM		09/B/2170	PLANOMILLERM/C	4	2	N	DC DRIVE PANEL,DRO
68	TAM	39	26/A/2017	DUPLEXBORING(W& B)	2	3	N	DC DRIVE PANEL,DRO
69	TAM	39	26/A/2018	VERT.BORING & TURNING(W&B)	2	3	N	DC DRIVE PANEL,DRO
70	TAM	39	26/A/2028	RICHARDSVERT.BORING	2	3	N	DC DRIVE PANEL,DRO
71	TAM	39	26/A/2033	RICHARDSVERT.BORING	2	3	N	DC DRIVE PANEL DRO
72	TAM	39	26/A/2035	HORZ. FACING & BORING	2	3	N	DRO
73	TAM	39	26/A/2039	RANCHICENTERLATHE	2	3	N	PC,PLC PANEL,SCADA
74	TAM		26/B/	V.P.I. PLANT(IMPRESX)	2	3	C	DC DRIVE PANEL
75	TAM		26/B/2017	COMMUTATORSEASONING M/C	2	2	N	DC DRIVE PANEL
76	TAM		TAM TEST	TAMTESTBED	2	3	N	DC DRIVE PANEL, PLC
77	TGM		14/A/	NIHON-KIKAI GEAR HOBGING M/C	10		N	DC DRIVE PANEL
78	TGM		14/A/	SUMMERSKILL PLANER	10		N	DC DRIVE PANEL
79	TGM		14/A/0077	RICHARDS HORI.BORER	10		N	DC DRIVE PANEL, DRO
80	TGM	39	14/A/0082	JIG BORINGM/C	10		N	DRO
81	TGM	39	14/A/0083	JIG BORINGM/C	10		N	DRO
82	TGM	39	14/A/0084	JIGBORING M/C	10		N	DRO
83	TGM	39	14/A/0085	JIG BORINGM/C	10		N	DRO
84	TGM	42	14/A/2046	HOFLERGEARGRINDING M/C	10		N	DC DRIVE, SERVO DRIVE, PLC PANEL
85	TGM		14/A/2052	WMW GEARHOBGING M/C	10		C	DC DRIVE PANEL
86	TGM	42	14/A/2061	WMW GEARHOBGING M/C	10		N	DC DRIVE PANEL
87	TGM	42	14/A/2062	WMW GEARHOBGING M/C	10		N	DC DRIVE PANEL
88	TGM	42	14/A/2069	RUSSIANGEARGRINDING M/C	10		N	DC DRIVE PANEL
89	TGM	42	14/A/2071	RUSSIAN GEARGRINDING M/C	10		N	DC DRIVE PANEL
90	TGM		14/A/2087	KLINGELNBERG GEAR TESTING M/C	10		N	DC DRIVE & PLC PANEL, PC
91	TRM	14	06/A/0016	HOZ. PLAIN MILLERM3H	3		N	DC DRIVE PANEL
92	TRM	14	06/A/0017	HOZ. PLAIN MILLERM3H	3		N	DC DRIVE PANEL
93	TRM	38	06/A/0122	SLITTINGM/C	3		N	DC DRIVE PANEL
94	TRM	37	06/A/2019	SLITTING & REWINDING M/C	3		N	DC DRIVE PANEL
95	TRM	37	06/A/2041	SHIELD RING MILLING M/C	3		N	DC DRIVE PANEL
96	TRM	40	06/B/2150	ABB-20TVERTICALWDG M/C	3		C	DC DRIVE PANEL
97	TRM		06/B/2150	VPDPLANT	3		N	PLC PANEL, PC, SCADA
98	TXM	30	05/A/0005	DRAWCUTSHAPER	2	1	N	DC DRIVE PANEL
99	TXM		05/A/0011	POLEDPAD M/C(CONVERTED)	9	1	N	DC DRIVE PANEL, DRO
100	TXM	20	05/A/0059	COMM.SEASONING PLANT	9	2	N	DC DRIVE PANEL
101	TXM	1	05/A/0070	VERT.BORING(RICHARDS)	2	1	N	DC DRIVE PANEL, DRO
102	TXM	1	05/A/0108	VERT.BORING(RICHARDS)	2	1	N	DC DRIVE PANEL, DRO
103	TXM	1	05/A/0109	VERT.BORING(RICHARDS)	2	1	N	DC DRIVE PANEL, DRO
104	TXM	1	05/A/0110	VERT.BORING(RICHARDS)	2	1	N	DC DRIVE PANEL DRO
105	TXM	32	05/A/2034	BUTLERELGAMIL MILLING & BORING	2	1	N	AC DC, SERVO DRIVES, PLC, PANEL, DRO
106	TXM		05/A/2049	CAM MICA UNDERCUTTING	9	2	N	DC DRIVE PANEL
107	TXM	29	05/A/2050	KEARNS RICHARDSHORI. BORING	2	1	C	DC DRIVE PANEL DRO
108	TXM	14	05/A/2066	VERT. MILLING	9	2	N	DC DRIVE PANEL, DRO
109	TXM	1	05/A/2085	VERT. BORING(KIRLOSKAR)	9	1	N	DC DRIVE PANEL, DRO
110	TXM	31	05/A/2104	COMEEX SPL PURP H/S INTL	9	1	N	DC DRIVES PANEL
111	TXM		05/B/0059	COMM. SEASONING PLANT	9	2	N	DC DRIVES PANEL

112	TXM		05/B/2153	HYT COMM. SEASONING PLANT	9		N	DC DRIVES PANEL
113	TXM		05/B/2154	HYT COMM. SEASONING PLANT	9		N	DC DRIVES PANEL
114	TXM		05/B/2170	HMT COMM. SEASONING PLANT	9		N	DC DRIVES PANEL
115	TXM		05/B/2171	HMT COMM. SEASONING PLANT	9		N	DC DRIVES PANEL
116	TXM		TXMTEST	TXMTESTBED	9		C	DC DRIVES & PLC PANEL
117	WTM	6	02/A/0028	ASQUITHHORI.BORER	1	2	N	DRO
118	WTM	6	02/A/0029	ASQUITH HORI.BORING/DRILLING	1	4	N	DRO
119	WTM	6	02/A/0030	ASQUITH FLOORBORING/DRILLING	1	2	N	PLC PANEL, DRO
120	WTM	6	02/A/0031	ASQUITHHORI.BORER	1	4	N	DRO
121	WTM	6	02/A/0032	ASQUITH HORI.FLOORBORER	1	2	N	DRO
122	WTM	5	02/A/0033	RICHARDSHORI.BORER	1	2	N	DC DRIVE PANEL, DRO
123	WTM	6	02/A/0034	RICHARDSHORI.BORER	1	2	N	AC DRIVES & PLC PANEL, DRO
124	WTM	5	02/A/0035	RICHARDSHORI.BORER	1	2	N	DC DRIVES PANEL, DRO
125	WTM	1	02/A/0037	RICHARDSVERT.BORING	1	2	N	DRO
126	WTM	1	02/A/0038	RICHARDSVERT.BORING	1	2	N	AC DRIVE PANEL, DRO
127	WTM	2	02/A/0040	RICHARDSVERT.BORING	1	2	N	AC DRIVE & DC DRIVE PANEL, DRO
128	WTM	2	02/A/0041	RICHARDSVERT.BORING	1	2	N	AC DRIVE & DC DRIVE PANEL, DRO
129	HCM	2	25/A/2005	VERTICALBORING	1	2	N	DRO
130	WTM	2	02/A/0046	CRAVENVERT.BORING	1	3	N	DC DRIVE ,SERVO DRIVE& PLC PANEL,MMI
131	WTM	3	02/A/0047	CRAVEN VERT. BORING	1	3	N	DC DRIVE , SERVODRIVE PANEL
132	WTM	3	02/A/0048	CRAVEN VERT. BORING	1	3	N	DC DRIVE PANEL,
133	WTM	14	02/A/0121	KENDAL & GENT VERT. MILLING	1	1	N	SERVO DRIVE PANEL
134	WTM		02/A/0145	ASQUITH HORI. BORING	1	4	N	DRO
135	WTM	31	02/A/048A	HOMMA COLUMN	1	3	C	AC DRIVE PANEL
136	WTM	4	06/A/0020	RICHARDS HORI. BORING	1	2	N	DC DRIVE & PLC PANEL, ORO
137	WTM	4	14/A/405	RICHARDS HORI. BORING	1	2	N	DC DRIVE PANEL, DRO
138	PRM	4	13/A/2027	NOTCHING MACHINE				SINGLE AXIS DRO
139	PRM	4	13/A/2035	NOTCHING MACHINE				SINGLE AXIS DRO
140	PRM	4	13/A/2037	NOTCHING MACHINE				SINGLE AXIS DRO
141	PRM	4	13/A/2038	NOTCHING MACHINE				SINGLE AXIS DRO
142	TSD		16/B/201	UNIVERSAL TESTING MACHINE		M.L.	N	SINGLE AXIS DRO.
143	TSD		16/B/0001	UNIVERSAL TESTING MACHINE		M.L.	N	SINGLE AXIS DRO.
144	TSD		16/B/0002	UNIVERSAL TESTING MACHINE		M.L.	N	SINGLE AXIS DRO
145	STM		20/A/0027	LATHE MACHINE			N	TWO AXES DRO
146	HCM		2S/A/2005	VERT. BORER			N	TWO AXES DRO
147	NTXM		S/A/2081	VERT. BORER			N	TWO AXES DRO
148	HVOF		2/B/2040	HVOF Plant			C	All panels


 Sr. Engr (EMX)
 BHEL, Bhopal

ANNEXURE - II -A

LIST OF PROCESS PLANT INSTRUMENT

S No	Deptt.	Equipment Description	Instrument Name	Type Dig/An	Make	Quantity
1	TRM	Oven (TRM DEPL)	Digital Controller	Digital	201/SHIVA	1
2	TRM	Oven (TRM DEPL)	Digital Controller	Digital	1000140 Radix	1
3	TRM	Oven (TRM DEPL)	Thermocouple	K Type		2
4	TRM	Oven (TRM DEPL)	Temp. Transmitter	Digital	790 &792, Honeywell	2
5	TRM	Oven (TRM DEPL)	RTD	PT100		4
6	TRM	Oven (TRM DEPL)	Digital Temp. controller	Digital	Shiva UPI2203	1
7	TRM	Oven (TRM DEPL)	Temp. Transmitter	Digital	790 &792, Honeywell	2
8	TRM	Oven (TRM DEPL)	RTD	PT100		4
9	TRM	Oven (CORE/PUNCH)	Temp. Recoder	Digital	Honeywell (5Ch) 812474	1
10	TRM	Oven (CORE/PUNCH)	Digital Temp.Indicator Range: 0 to 600 ° C	Digital	209/Shiva	1
11	TRM	Oven (CORE/PUNCH)	Thermocouple	K Type		4
12	TRM	Oven (CORE/PUNCH)	RTD	PT100		1
13	TRM	Oven (CORE/PUNCH)	Digital temp.Controller	Digital	182329/CHINO	1
14	TRM	Oven (CORE/PUNCH)	Digital Controller	Digital	182327 / Radix	1
15	TRM	Oven (CORE/PUNCH)	Thermocouple	K Type		4
16	TRM	Oven (CORE/PUNCH)	Thermocouple	K Type		5
17	TRM	Oven (CORE/PUNCH)	Digital Controller	Digital	091DME5365 Radix	1
18	TRM	Oven (CORE/PUNCH)	Digital Controller	Digital	96592 Radix	1
19	TRM	Oven (CORE/PUNCH)	Thermocouple	K Type		2
20	TRM	Oven (CORE/PUNCH)	Digital Controller	Digital	6050022/Dighe electronics	1
21	TRM	Oven (CORE/PUNCH)	Digital Controller	Digital		1
22	TRM	Oven (CORE/PUNCH)	Thermocouple	K Type		2
23	TRM	Portable Vacuum Pump (CORE/PUNCH)	Dig.Temp.Controller	Digital	Electronics	1
24	TRM	Portable Vacuum Pump (CORE/PUNCH)	Digital/Analog Temp. Recorder	Digital	CHINO	1
25	TRM	OVEN (TRM DEPL)	Digital Controller	Digital	181369/RADIX	1

26	TRM	OVEN (TRM DEPL)	Dig.Temp.Controller	Digital	0610102 Mikro	1
27	TRM	OVEN (TRM DEPL)	Thermocouple	K Type		2
28	TRM	3 (TRM DEPL)	Digital Controller	Digital	MASIBUS	1
29	TRM	3 (TRM DEPL)	Temp. Transmitter	Digital	788 &793, Honeywell	2
30	TRM	3 (TRM DEPL)	RTD	PT100		4
31	TRM	Oven (CORE/PUNCH)	Dig.Temp. Recorder	Digital	Honeywell202/833Y878592400001 (5Ch)	1
32	TRM	Oven (CORE/PUNCH)	Thermocouple	K Type	K Type	5
33	TRM	Oven (TRM DEPL)	Digital Temp. Recorder	Digital	C4000000136487 HONEYWELL (5 Ch)	1
34	TRM	Oven (TRM DEPL)	Thermocouple	K Type	K Type	5
35	TRM	OIL TANK (test)	Digital Temperature Controller	Digital	2111136/TC96	1
36	TRM	OIL TANK (test)	Digital Temperature Controller	Digital	2111137/TC96	1
37	TRM	OIL TANK (test)	Thermocouple	K Type	K Type	2
38	TRM	Filtration Plant	Digital Tem.Controller	Digital	D-61887/ make: ESDF	1
39	TRM	Filtration Plant	Digital Tem.Controller Tank-2 Range:0 to 150 ° C	Digital	D-61891/ make: ESDF	1
40	TRM	Filtration Plant	Digital Tem.Controller Tank-1 Range:0 to 150 ° C	Digital	D-61771 / make: ESDF	1
41	TRM	Filtration Plant	Thermocouple	K Type	K Type	3
42	TRM	Filtration Plant	Digital Controller	Digital	911FECL65 MASIBUS	1
43	TRM	Filtration Plant	Digital Controller	Digital	6050027/Digi-electronics	1
44	TRM	Filtration Plant	Digital Controller	Digital		1
45	TRM	Filtration Plant	Thermocouple	K Type	K Type	2
46	TRM	Oven	Digital Temp. Controller	Digital	1205ME13190 MASIBUS	1
47	TRM	Oven	Digital Temp. Controller	Digital	157/ELECTRONICS	1
48	TRM	Oven	Thermocouple	K Type	K Type	2
49	TRM	Cold Storage	Digital Temp. Indicator	Digital		1
50	TRM	Cold Storage	Thermocouple	K Type		1
51	TRM	Cold Storage	Digital Temp. Indicator	Digital		1
52	TRM	Cold Storage	Thermocouple	K Type		1
53	TRM	Cold Storage	Digital Temp. Indicator	Digital		1

54	TRM	Cold Storage	Thermocouple	K Type		1
55	TRM	Oven	Temp. Recorder		Radix	1
56	TRM	Oven	Temp. Recorder		ChiNO LT 370	1
57	TRM		Digital Temp. Controller		Eurotherm	9
58	TRM					
1	TXM	Oven	Dig. Temp. Controller	Digital	ME	1
2	TXM	Oven	Dig. Temp. Controller	Digital	UNIK Temp	1
3	TXM	Oven	Digital Scanner	Digital		1
4	TXM	Oven	Blind Controller	Analogue	ME	1
5	TXM	Oven	Blind Controller	Analogue	ME	1
6	TXM	Oven	Dig. Temp. Controller	Digital	ME	1
7	TXM	Oven	Dig. Temp. Controller	Digital	Radix	1
8	TXM	Oven	Blind Controller	Analogue	ME	1
9	TXM	Oven	Blind Controller	Analogue	ME	1
10	TXM	Oven	Dig. Temp. Controller	Digital	Radix	1
11	TXM	Oven	Dig. Temp. Controller	Digital	Digicom	1
12	TXM	Oven	Blind Controller	Analogue	ME	1
13	TXM	Oven	Blind Controller	Analogue	ME	1
14	TXM	Oven	Blind Controller	Analogue	ME	1
15	TXM	Oven	Dig. Temp. Controller	Digital	Sietex	1
16	TXM	Oven	Dig. Temp. Controller	Digital	Century System	1
17	TXM	Oven	Dig. Temp. Controller	Digital	Century System	1
18	TXM	Oven	Dig. Temp. Controller	Digital	Century System	1
19	TXM	Oven	Blind Controller	Analogue	Century System	1
20	TXM	Oven	Blind Controller	Analogue	Century System	1
21	TXM	Oven	Dig. Temp. Controller	Digital	Century System	1
22	TXM	Oven	Dig. Temp. Controller	Digital	Century System	1
23	TXM	Oven	Blind Controller	Analogue	Century System	1
24	TXM	Oven	Blind Controller	Analogue	Century System	1
25	TXM	Oven	Dig. Temp. Controller	Digital	UNIK Temp	1
26	TXM	Oven	Dig. Temp. Controller	Digital	Century System	1
27	TXM	Oven	Blind Controller	Analogue	Century System	1
28	TXM	Oven	Blind Controller	Analogue	Century System	1
29	TXM	VPI PLANT	Dig. Temp. Controller	Digital	Micro	1
30	TXM	VPI PLANT	Dig. Temp. Controller	Digital	Micro	1
31	TXM	OVEN-3	Dig. Temp. Controller	Digital	Century System	1
32	TXM	OVEN	Dig. Temp. Controller	Digital	Century System	1
33	TXM	OVEN	Dig. Temp. Controller	Digital	PEPL	1
34	TXM	OVEN	Blind Temp. Controller	Analog	-	2
35	TXM	OVEN	Blind Temp. Controller	Analog	-	2
36	TXM	OVEN	Blind Temp. Controller	Analog	ME	1
37	TXM	Oven	Dig. Temp. Controller	Digital	Pedigree	1
38	TXM	Oven	Dig. Temp. Controller	Digital	Pedigree	1
39	TXM	Oven	Blind Temp. Controller	Analog	ME	1
40	TXM	Oven	Blind Temp. Controller	Analog	ME	1
41	TXM	Oven	Dig. Scanner	Digital	DTS	1
42	TXM	Oven	Dig. Temp. Controller	Digital	Me	1
43	TXM	Oven	Dig. Temp. Controller	Digital	Me	1
44	TXM	Oven	Blind Temp. Controller	Analog	Me	1
45	TXM	Oven	Blind Temp. Controller	Analog	Me	1
46	TXM	Oven	Dig. Scanner	Digital	DTS	1

47	TXM		Dig. Temp. Controller	Digital	Me	1
48	TXM		Dig. Temp. Controller	Digital	Me	1
49	TXM		Blind Temp. Controller	Analog	Me	1
50	TXM		Blind Temp. Controller	Analog	Me	1
51	TXM		Dig. Scanner	Digital	DTS	1
52	TXM	Oven	Dig. Temp. Controller	Digital	-	1
53	TXM	Oven	Dig. Temp. Controller	Digital	Century System	1
54	TXM	OVEN-1	Dig. Temp. Controller	Digital	Masibus	1
55	TXM	OVEN-1	Dig. Temp. Controller	Digital	Masibus	1
56	TXM	OVEN-2	Dig. Temp. Controller	Digital		1
57	TXM	OVEN-2	Dig. Temp. Controller	Digital	UNIK temp	1
58	TXM	OVEN-4	Dig. Temp. Controller	Digital	Viral	1
59	TXM	OVEN-4	Dig. Temp. Controller	Digital	Kent	1
60	TXM	OVEN-4	Dig. Temp. Controller	Digital	UNIK temp	1
61	TXM	OVEN-4	Dig. Temp. Controller	Digital	Century System	1
62	TXM	OVEN-4	Dig. Temp. Controller	Digital	-	1
63	TXM		Digital Scanner	Digital	Aplab	1
64	TXM	VPI Plant	Dig. Temp. Controller	Digital	Micro	2
65	TXM	OVEN-2	Dig. Temp. Controller	Digital	PEPL	1
66	TXM	OVEN-2	Blind Temp. Controller	Analog	ME	1
67	TXM	Bearing Assembly Area	Dig. Temp. Controller	Digital	Select	2
68	TXM	Bearing Assembly Area	Dig. Temp. Controller	Digital	Select	2
1	CIM	Cold Room 1	Dial Thermometer	Digital	-	1
2	CIM	Cold Room 2	Dial Thermometer	Digital	-	1
3	CIM	Cold Room 3	Dial Thermometer	Digital	-	1
4	CIM	Oven	Dig. Temp. Controller	Digital	Jivan, Electronics	1
5	CIM	Oven	Dig. Temp. Controller	Digital	Radix	1
6	CIM	Oven	Dig. Temp. Controller	Digital	Radix	1
7	CIM	Oven	Thermocouple	TC	-	4
8	CIM	Oven	Dig. Temp. Controller	Digital	Radix	1
9	CIM	Oven	Dig. Temp. Controller	Digital	Radix	1
10	CIM	Oven	Dig. Temp. Controller	Digital	Radix	1
11	CIM	Oven	Dig. Temp. Controller	Digital	Jivan, Electronics	1
12	CIM	Oven	Thermocouple	TC	-	4
13	CIM	Oven	Dig. Temp. Controller	Digital	Arun	1
14	CIM	Oven	Dig. Temp. Controller	Digital	Jivan, Electronics	1
15	CIM	Oven	Dig. Temp. Controller	Digital	Jivan, Electronics	1
16	CIM	Oven	Dig. Temp. Controller	Digital	Jivan, Electronics	1
17	CIM	Oven	Thermocouple	TC	-	4
18	CIM	Oven	Dig. Temp. Controller	Digital	Radix	1
19	CIM	Oven	Dig. Temp. Controller	Digital	Radix	1
20	CIM	Oven	Dig. Temp. Controller	Digital	Yokogawa	1
21	CIM	Oven	Temp. Recorder	Analog	Chino	5
22	CIM	Oven	Dig. Temp. Controller	Digital	Arun	1
23	CIM	Oven	Thermocouple	-	-	1

24	CIM	Oven	Dig. Temp. Controller	Digital	Yokogawa	1
25	CIM	Oven	Thermocouple	Analog	-	2
26	CIM	Oven	Thermocouple	-	-	1
27	CIM	Oven	Dig. Temp. Controller	Digital	Yokogawa	1
28	CIM	Oven	Thermocouple	-	-	2
29	CIM	Oven	Thermocouple	-	-	2
30	CIM	Press M/c.	Thermocouple	-	-	5
31	CIM	Press M/c.	Dig. Temp. Controller	Digital	Neutronics	1
32	CIM	Press M/c.	Blind Temp. Controller	Analog	Neutronics	1
33	CIM	Press M/c.	Blind Temp. Controller	Analog	Neutronics	1
34	CIM	Press M/c.	Thermocouple	-	-	5
35	CIM	Oven	Dig. Temp. Controller	Digital	Masibus	1
36	CIM	Oven	Blind Temp. Controller	Analog	Radix	1
37	CIM	Oven	Thermocouple	-	-	4
38	CIM	Oven	Dig. Temp. Controller	Digital	Radix	1
39	CIM	Oven	Blind Temp. Controller	Analog	Neutronics	1
40	CIM	Oven	Dig. Temp. Controller	Digital	Masibus	1
41	CIM	Oven	Dig. Temp. Controller	Digital	Masibus	1
42	CIM	Oven	Dig. Temp. Controller	Digital	Yokogawa	1
43	CIM	Oven	Thermocouple	-	-	1
44	CIM	Furnace	Dig. Temp. Controller	Digital	Yokogawa	2
45	CIM	Furnace	Dig. Temp. Controller	Digital	Neutronics	1
46	CIM	Furnace	Dig. Temp. Controller	Digital	Masibus	1
47	CIM	Furnace	Dig. Temp. Controller	Digital	Yokogawa	1
48	CIM	Furnace	Dig. Temp. Controller	Digital	Yokogawa	1
49	CIM	Furnace	Digital Thermometer	Digital	Blue Star	1
50	CIM	Press M/c.	A/D Temp. Recorder	A/D	Chino	1
51	CIM	Press M/c.	Dig. Temp. Controller	Digital	Yokogawa	1
52	CIM	Oven	Dig. Temp. Controller	Digital	Yokogawa	1
53	CIM	Oven	Dig. Temp. Recorder	A & D	Bells	1
54	CIM	Oven	Circular Chart Recorder	Analog	Radix	1
55	CIM	Oven	Dig. Temp. Controller	Digital	Laxsons	1
56	CIM	Press M/c.	Blind Temp. Controller	Analog	Germany	1
57	CIM	Press M/c.	Blind Temp. Controller	Analog	Germany	1
58	CIM	Press M/c.	Blind Temp. Controller	Analog	Germany	1
59	CIM	Press M/c.	Blind Temp. Controller	Analog	Germany	1
60	CIM	Press M/c.	Blind Temp. Controller	Analog	Germany	1
61	CIM	Press M/c.	Blind Temp. Controller	Analog	Germany	1
62	CIM	Press M/c.	Blind Temp. Controller	Analog	Germany	1
63	CIM	Press M/c.	Blind Temp. Controller	Analog	Germany	1

64	CIM	Press M/c. (Rotor Section)	Dig. Temp. Controller	Digital	Eurotherm	1
65	CIM	Press M/c.	Dig. Temp. Controller	Digital	Eurotherm	1
66	CIM	Press M/c.	Dig. Temp. Recorder	Digital	Eurotherm	1
67	CIM	Press M/c.	Dig. Temp. Recorder	Digital	Eurotherm	1
68	CIM	Press M/c. (Turbo)	Dig. Temp. Controller	Digital	Radix	1
69	CIM	Press M/c. (Turbo)	Dig. Temp. Controller	Digital	Radix	1
70	CIM	Press M/c. (Turbo)	Dig. Temp. Controller	Digital	ME	1
71	CIM	Press M/c.	Dig. Temp. Controller	Digital	Radix	1
1	TGM	Solder Pot (Babbity)	Blind Temp. Controller	Analog	-	1
2	TGM	Solder Pot (Babbity)	Dig. Temp. Controller	Digital	Radix	1
3	TGM	Solder Pot (Babbity)	Dig. Temp. Controller	Digital	Radix	1
4	TGM	Solder Pot (Babbity)	Dig. Temp. Controller	Digital	Radix	1
5	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Chino	1
6	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Chino	1
7	TGM	Furnace (Heat Treatment)	Blind Temp. Controller	Analog	Chino	1
8	TGM	Furnace (Heat Treatment)	Blind Temp. Controller	Digital	Chino	1
9	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Masibus	1
10	TGM	Furnace (Heat Treatment)	Dig. Temp. Recorder	Digital	Sunpro Instruments Pvt. Ltd.	2
11	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Radix	1
12	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Radix	1
13	TGM	Furnace (Heat Treatment)	Dig. Temp. Recorder	Digital	Sunpro Instruments Pvt. Ltd.	2
14	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Masibus	1
15	TGM	Furnace (Heat Treatment)	Blind Temp. Controller	Analog	-	1
16	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	TOHO Electricals	1
17	TGM	Furnace (Heat Treatment)	Dig. Temp. Recorder	Digital	Sunpro Instruments Pvt. Ltd.	1
18	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Radix	1
19	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Radix	1
20	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Raskin	1
21	TGM	Furnace (Heat Treatment)	Dig. Temp. Recorder	Digital	Sunpro Instruments Pvt. Ltd.	3

22	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	TOHO Electricals	1
23	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Masibus	1
24	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Masibus	1
25	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Radix	1
26	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	TOHO Electricals	1
27	TGM	Furnace (Heat Treatment)	Blind Temp. Controller	Analog	ME	1
28	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	ME	1
29	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	ME	1
30	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	ME	1
31	TGM	Furnace (Heat Treatment)	Blind Temp. Controller	Digital	ME	1
32	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	TOHO Electricals	1
33	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
34	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
35	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
36	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
37	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
38	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
39	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
40	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
41	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
42	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
43	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
44	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
45	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
46	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
47	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1

48	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
49	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
50	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
51	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Eurotherm	1
52	TGM	Furnace (Heat Treatment)	Dig. Temp. Recorder	Digital	Eurotherm	1
53	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Radix	1
54	TGM	Furnace (Heat Treatment)	Dig. Temp. Recorder	Digital	Dig. Electricals	1
55	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Pedeg	1
56	TGM	Furnace (Heat Treatment)	Dig. Temp. Recorder	Analog	Dig. Electricals	1
57	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Yokogawa	1
58	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	TOHO Electricals	1
59	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	Radix	1
60	TGM	Furnace (Heat Treatment)	Dig. Temp. Recorder	Digital	Sunpro Instruments Pvt. Ltd.	1
61	TGM	Furnace (Heat Treatment)	Dig. Temp. Controller	Digital	TOHO Electricals	1
1	SCR	Oven (Sliving Area)	Dig. Temp. Controller	Digital	Masibus	1
2	SCR	Oven (Sliving Area)	Dig. Temp. Controller	Digital	Masibus	1
3	SCR	Oven (Sliving Area)	Dig. Temp. Controller	Digital	Masibus	1
4	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
5	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
6	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
7	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
8	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
9	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
10	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
11	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
12	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
13	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
14	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
15	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Radix	1
16	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
17	SCR	Moulding Press M/c.	Dig. Temp. Controller	Digital	Masibus	1
18	SCR	Oven (Boy East)	Dig. Temp. Controller	Digital	Honey Well	1
19	SCR	Oven	Dig. Temp. Recorder	Digital	Honey Well	1
20	SCR	Soak Degreasing	Temp. Controller	Digital	Masibus	1
21	SCR	Anodic cleaning	Temp. Controller	Digital	Masibus	1
22	SCR	Hot air Dryer	Temp. Controller	Digital	Masibus	1
23	SCR	Exhaust Blower	power meter	Digital	Masibus	1

24	SCR	Hot rinse	Temp. Controller	Digital	Masibus	1
25	SCR	Soak Degreasing	Temp. Controller	Digital	Masibus	1
26	SCR	Exhaust fan	power meter	Digital	Masibus	1
27	SCR	Hot air Dryer	Temp. Controller	Digital	Masibus	1
28	SCR	Soak Degreasing	Temp. Controller	Digital	Masibus	1
29	SCR	Cu tank	Temp. Controller	Digital	Masibus	1
30	SCR	Hot rinse I	Temp. Controller	Digital	Masibus	1
31	SCR	Hot rinse II	power meter	Digital	Masibus	1
32	SCR	Exhaust fan	power meter	Digital	Masibus	1
33	SCR	Main Exhaust fan	power meter	Digital	Masibus	1
34	SCR	Chemical filter plant	power meter	Digital	Masibus	1
35	SCR	ALK degreasing		Digital	Masibus	1
36	SCR	Descaling		Digital	Masibus	1
37	SCR	Derusting		Digital	Masibus	1
38	SCR	Phosphating		Digital	Masibus	1
39	SCR	Possivation		Digital	Masibus	1
40	SCR	Drying tank		Digital	Masibus	1
41	SCR	PCO	TIC	Digital		1
42	SCR	PHO	TIC	Digital		1
43	SCR	Flue gas	TIC	Digital		1
44	SCR	ph flue gas	TIC	Digital		1
1	TAM	VPI Plant (C15)	Dig. Temp. Controller	Digital	Chino	1
2	TAM	VPI Plant (C15)	Dig. Temp. Controller	Digital	Yokogawa	1
3	TAM	VPI Plant (C15)	Dig. Temp. Controller	Digital	Yokogawa	1
4	TAM	VPI Plant (C15)	Dig. Temp. Controller	Digital	Yokogawa	1
5	TAM	VPI Plant (C15)	Dig. Temp. Controller	Digital	Yokogawa	1
6	TAM	VPI Plant (C15)	Dig. Temp. Controller	Digital	Yokogawa	1
7	TAM	VPI Plant (C15)	Paperless Recorder 6 Chennels	Digital	Yokogawa	1
8	TAM	VPI Plant (C15)	Dig. Temp. Controller	Digital	Yokogawa	1
9	TAM	VPI Plant (C15)	Dig. Temp. Controller	Digital	Yokogawa	1
10	TAM	VPI Plant (C15)	Dig. Temp. Controller	Digital	Yokogawa	1
11	TAM	Oven	Dig. Temp. Controller	Digital	Yokogawa	1
12	TAM	Oven	Dig. Temp. Controller	Digital	PEPL	1
13	TAM	Oven	Dig. Temp. Recorder	A & D	Yokogawa	1
14	TAM	Oven (B41)	Dig. Temp. Controller	Digital	Yokogawa	1
15	TAM	Oven (B41)	Dial Thermometer	Analog	NEZ, Made in England	1
16	TAM	Oven	Dig. Temp. Controller	Digital	Yokogawa	1
17	TAM	Oven	Dig. Temp. Recorder	Digital	Yokogawa	1
1	IMM	Oven (Varnish Section)	Dig. Temp. Recorder	Digital	Eurotherm	1
2	IMM	Oven (Varnish Section)	Dig. Temp. Controller	Digital	Eurotherm	1
3	IMM	Oven (Varnish Section)	Dig. Temp. Controller	Digital	Eurotherm	1
4	IMM	Oven (Varnish Section)	Dig. Temp. Controller	Digital	Yokogawa	1
5	IMM	Oven (Varnish Section)	Dig. Temp. Controller	Digital	Yokogawa	1
6	IMM	Oven (Varnish Section)	Temp. Indicator	Digital	Yokogawa	1

7	IMM	Oven (Varnish Section)	Dig. Program Controller	Digital	Eurotherm	1
8	IMM	Oven (Varnish Section)	Dig. Temp. Controller	Digital	Eurotherm	1
9	IMM	Oven (Varnish Section)	Dig. Program Controller	Digital	Eurotherm	1
10	IMM	Oven (Varnish Section)	Dig. Temp. Controller	Digital	Eurotherm	1
11	IMM	Oven (Varnish Section)	Dig. Temp. Controller	Digital	Active 5000	1
12	IMM	Ovan (Core)	Dig. Progrm. Controller			1
13	IMM	Ovan (Core)	Dig. Progrm. Controller			1
14	IMM		Dig. Progrm. Controller			2
15	IMM		PID Controller			2
16	IMM		PID Recorder			1
17	IMM		Pre. & Temp. Indicator			2
1	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Jumo Dtron 304	1
2	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Jumo Dtron 304	1
3	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Jumo Lan	1
4	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Radix	1
5	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Radix	1
6	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Masibus	1
7	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Micro	1
8	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Radix	1
9	LEM	Oven (VPI Plant)	Dig. Temp. Recorder	A & D	Chino	1
10	LEM	Oven (VPI Plant)	Digital Indicator	Digital	Jumo	1
11	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	ELTA	1
12	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Yokogawa	1
13	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Radix	1
14	LEM	Oven (VPI Plant)	Dig. Temp. Recorder	A & D	Eurotherm	1
15	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Eurotherm	1
16	LEM	Oven (VPI Plant)	Dig. Temp. Controller	Digital	Yokogawa	1
17	LEM	Oven (Wdg Area)	Dig. Temp. Controller	Digital	Yokogawa	1
18	LEM	Oven (Wdg Area)	Dig. Temp. Controller	Digital	Yokogawa	1
19	LEM	Oven (Wdg Area)	Dig. Temp. Controller	Digital	Yokogawa	1
20	LEM	Oven (Wdg Area)	Dig. Temp. Controller	Digital	Eurotherm	1
21	LEM		Blind Temp. Controller	Analog	Radix	1
22	LEM		Digital Indicator	Digital	-	1
23	LEM		Digital Indicator	Digital	-	1
24	LEM		Digital Indicator	Digital	-	1
25	LEM		Blind Temp. Controller	Analog	Century System	1
26	LEM		Dig. Temp. Controller	Digital	Masibus	1
27	LEM		Dig. Temp. Controller	Digital	Masibus	1
28	LEM		Temp. Recorder	Analog	Chino	1
1	FBM	Furnace (X-Ray Pit Side)	Dig. Temp. Recorder	Digital	Chino	1
2	FBM	Furnace (X-Ray Pit Side)	Dig. Temp. Recorder	Digital	LEVI	1
3	FBM	Oven (Electrode Store)	Dig. Temp. Controller	Digital	Radix	1
4	FBM	Oven (Electrode Store)	Dig. Temp. Controller	Digital	Radix	1

5	FBM	Electrode Store	Dig. Temp. Controller	Digital	Radix	4
6	FBM	Electrode Store	Dig. Temp. Controller	Digital	Zenex	1
7	FBM	Electrode Store	Dig. Temp. Controller	Digital	Masibus	1
8	FBM	Painting Oven Area	Dig. Temp. Controller	Digital	Radix	1
9	FBM	Painting Oven Area	Dig. Temp. Controller	Digital	Radix	1
10	FBM	Burner	Dig. Temp. Controller	Digital	Eurotherm	1
11	FBM	Burner	Dig. Temp. Controller	Digital	Select	1
12	FBM	Burner	Dig. Temp. Recorder	Digital	Chino	1
13	FBM	Burner	Dig. Temp. Controller	Digital	Select	1
14	FBM	Burner	Dig. Temp. Recorder	Digital	Chino	1
15	FBM	Burner	Blind Temp. Controller	Analog	Radix	1
16	FBM	Burner	Dig. Temp. Recorder	Digital	Chino	1
17	FBM	Burner	Dig. Temp. Controller	Digital	Select	1
18	FBM	Burner	Dig. Temp. Controller	Digital	West	1
19	FBM	Burner	Dig. Temp. Controller	Digital	West	1
20	FBM	Electrode Heart Chamber Store	Dig. Temp. Controller	Digital	Jivan	1
21	FBM	Merogap welding Machine	Dig. Temp. Controller	Digital	Eurotherm	1
22	FBM	Merogap welding Machine	Dig. Temp. Controller	Digital	Select	1
23	FBM	Merogap welding Machine	Dig. Temp. Controller	Digital	ME	1
24	FBM	Merogap welding Machine	Dig. Temp. Controller	Digital	ME	1
25	FBM	Merogap welding Machine	Blind Temp. Controller	Analog	ME	1
26	FBM	Merogap welding Machine	Blind Temp. Controller	Analog	ME	1
1	STM	S R Furnace	Dig. Temp. Controller	Digital	M & M	1
2	STM	S R Furnace	Temp. Recorder	Analog	Sietex	1
3	STM	S R Furnace	Temp. Recorder	Analog	Chino	1
4	STM	Tool Store	Temp. Recorder	Analog	Chino	1
5	STM	Tool Store	Temp. Recorder	Analog	Chino	1
6	STM	Tool Store	Temp. Recorder	Analog	Chino	1
7	STM	Stalit Furnace	Dig. Temp. Controller	Digital	IRA Bangalore	1
1	BCM	Oven (Plant 5)	Dig. Temp. Controller	Digital	Simens	1
2	BCM	Oven (Plant 5)	Dig. Temp. Controller	Digital	Chino	1
3	BCM	Oven (Plant 5)	Dig. Temp. Controller	Digital	Simens	1
4	BCM	Oven (Plant 5)	Dig. Temp. Controller	Digital	Chino	1
5	BCM	Oven (Plant 3)	Dig. Temp. Controller	Digital	Simens	1
6	BCM	Oven (Plant 3)	Dig. Temp. Controller	Digital	Chino	1
7	BCM	Oven (Plant 6)	Digital Indicator	Digital	Simens	1
8	BCM	Oven (Plant 6)	Dig. Temp. Controller	Digital	Chino	1
9	BCM	Oven (Plant 6)	Dig. Temp. Controller	Digital	Chino	1
10	BCM	Oven (Plant 6)	Dig. Temp. Controller	Digital	Chino	1
11	BCM	Oven (Plant 2)	Dig. Temp. Controller	Digital	Masibus	1
12	BCM	Oven (Plant 2)	Digital Indicator	Digital	Simens	1
13	BCM	Oven (Plant 2)	Dig. Temp. Controller	Digital	Masibus	1
14	BCM	Oven (Plant 2)	Digital Indicator	Digital	Simens	1
15	BCM	Oven (Plant 1)	Dig. Temp. Controller	Digital	Radix	1

16	BCM	Oven (Plant 1)	Dig. Temp. Controller	Digital	Radix	1
17	BCM	Oven (Plant 1)	Dig. Temp. Controller	Digital	Electronix Device	1
18	BCM	Oven	Dig. Temp. Controller	Digital	Radix	1
19	BCM	Oven	Dig. Temp. Controller	Digital	Radix	1
20	BCM	Oven	Temp. Recorder	Digital	Chino	1
21	BCM	Oven	Dig. Temp. Controller	Digital	Radix	1
22	BCM	Oven	Dig. Temp. Controller	Digital	Radix	1
23	BCM	Oven	Dig. Temp. Controller	Digital	Radix	1
24	BCM		Dig. Temp. Controller	Digital	Chino	1
25	BCM		Dig. Temp. Controller	Digital	Radix	1
26	BCM		Dig. Temp. Controller	Digital	Radix	1
27	BCM		Dig. Temp. Controller	Digital	Radix	1
28	BCM		Dig. Temp. Controller	Digital	Radix	1
29	BCM		Dig. Temp. Controller	Digital	Radix	1
30	BCM		Dig. Temp. Controller	Digital	Radix	1
31	BCM		Dig. Temp. Controller	Digital	Masibus	1
32	BCM		Dig. Temp. Controller	Digital	Chino	1
33	BCM		Dig. Temp. Controller	Digital	Chino	1
34	BCM		Dig. Temp. Controller	Digital	Chino	1
35	BCM		Dig. Temp. Controller	Digital	Udian	1
36	BCM		Dig. Temp. Controller	Digital	Udian	1
37	BCM		Dig. Temp. Recorder	Digital	Honeywell	1
38	BCM		Dig. Temp. Controller	Digital	Radix	1
39	BCM		Dig. Temp. Controller	Digital	Pedigree	1
40	BCM		Dig. Temp. Controller	Digital	Chino	1
41	BCM		Dig. Temp. Controller	Digital	Chino	1
42	BCM		Dig. Temp. Controller	Digital	Radix	1
43	BCM		Dig. Temp. Controller	Digital	Radix	1
44	BCM		Dig. Indicator Scanner	Digital	Simens	1
45	BCM		Dig. Temp. Controller	Digital	Radix	1
46	BCM		Dig. Temp. Controller	Digital	Jivan	1
47	BCM		Dig. Temp. Controller	Digital	Jivan	1
48	BCM		Dig. Temp. Controller	Digital	Masibus	1
49	BCM		Dig. Temp. Recorder	Digital	Yokogawa	1
50	BCM	Rolling M/c	Dig. Temp. Controller	Digital	Chino	1
51	BCM	Rolling M/c	Dig. Temp. Controller	Digital	Chino	1
52	BCM	Rolling M/c	Dig. Temp. Controller	Digital	Chino	1
53	BCM	Rolling M/c	Dig. Temp. Controller	Digital	Chino	1
54	BCM	Rolling M/c	Dig. Temp. Recorder	Digital	Yokogawa	1
55	BCM	Rolling M/c	Dig. Temp. Controller	Digital	Radix	1
56	BCM	Rolling M/c	Dig. Temp. Controller	Digital	Radix	1
57	BCM	Rolling M/c	Dig. Temp. Controller	Digital	Masibus	1
58	BCM	Rolling M/c	Dig. Temp. Controller	Digital	Masibus	1
1	CPM	Oven V-1	Digital Indicator	Digital	Simens	1
2	CPM	Oven V-2	Digital Indicator	Digital	Simens	1
3	CPM	Oven V-3	Digital Indicator	Digital	Simens	1
4	CPM	Oven V-4	Digital Indicator	Digital	Simens	1
5	CPM	Oven V-5	Digital Indicator	Digital	Simens	1
6	CPM	Oven V-7	Digital Indicator	Digital	Simens	1
7	CPM	Oven V-8	Digital Indicator	Digital	Simens	1
8	CPM	Oven V-8	Digital Indicator	Digital	Radix	2
9	CPM	Oven	Dig. Temp. Controller	Digital	Radix	1

10	CPM	Oven	Dig. Temp. Controller	Digital	Chino	1
11	CPM	Oven	Dig. Temp. Controller	Digital	Radix	1
12	CPM	Oven	Dig. Temp. Controller	Digital	Chino	1
13	CPM	Oven	Dig. Temp. Controller	Digital	Pedigree	1
14	CPM		Dig. Temp. Controller	Digital		5
1	PRM	Varnish Plant	Dig. Temp. Controller	Digital	Neutronics	1
2	PRM	-	Dig. Temp. Controller	Digital	Neutronics	1
3	PRM	-	Dig. Temp. Controller	Digital	Honeywell	1
4	PRM		Temp. Recorder	Analog	Chino	1
5	PRM	Varnish Plant	Temp. Recorder	Analog	Chino	1
6	PRM	Varnish Plant	Blind Controller	Analog	Toshniwal	1
7	PRM	Varnish Plant	Circular Chart Recorder	Analog	JN Marshal	
1	TSD		Dig. Temp. Controller	Digital	Ether	1
2	TSD		Dig. Temp. Controller	Digital	Kasko Industry	1
3	TSD		Dig. Temp. Controller	Digital	H & B Germany	1
4	TSD		Dig. Temp. Controller	Digital	Mercury	1
5	TSD		Dig. Temp. Controller	Digital	Mercury	1
6	TSD	Process Lab	Digital Indicator	Digital	Jivan electric	1
7	TSD		Dig. Temp. Controller	Digital	Masibus	1
8	TSD		Dig. Hand Held thermometer	Digital	Arun Elec.	1
9	TSD		Dig. Hand Held thermometer	Digital	Arun Elec.	1
10	TSD		Dig. Hand Held thermometer	Digital	Arun Elec.	1
11	TSD		Dig. Temp. Controller	Digital	M & M	1
12	TSD		Dig. Hand Held thermometer	Digital	WAHL USA	1
13	TSD		Dig. Temp. Controller	Digital	Masibus	1
14	TSD		Dig. Temp. Controller	Digital	Jivan electric	1
15	TSD		Dig. Temp. Controller	Digital	Jivan electric	1
16	TSD		Dig. Temp. Controller	Digital	Jivan electric	1
17	TSD		Dig. Temp. Controller	Digital	Jivan electric	1
18	TSD		Dig. Temp. Controller	Digital	CS	1
19	TSD		Dig. Temp. Controller	Digital	CS	1
20	TSD		Dig. Hand Held thermometer	Digital	WAHL USA	1
21	TSD		Dig. Temp. Controller	Digital	Jivan electric	1
22	TSD	Chemical lab	Dig. Temp. Controller	Digital	Audio Tronics	1
23	TSD		Dig. Temp. Controller	Digital	For tech	1
24	TSD		Dig. Temp. Controller	Digital	DBK	1
25	TSD		Dig. Temp. Controller	Digital	Radix	1
26	TSD		Dig. Temp. Controller	Digital	Nevtronics	1
27	TSD		Dig. Temp. Controller	Digital	Jivan electric	1
28	TSD		Dig. Temp. Controller	Digital	Graver	1
29	TSD		Dig. Temp. Controller	Digital	Isotech	1
30	TSD		Dig. Temp. Controller	Digital	ME	1
31	TSD		Dig. Temp. Controller	Digital	Graver	1
32	TSD		Dig. Temp. Controller	Digital	CHINO	1
33	TSD		Dig. Temp. Controller	Digital	OCH-85	1
34	TSD		Dig. Temp. Controller	Digital	Radix	1
35	TSD		Dig. Temp. Controller	Digital	Chino	1

36	TSD		Dig. Temp. Controller	Digital	Eurotherm	1
37	TSD		Dig. Temp. Controller	Digital	Isotech	1
38	TSD		Dig. Temp. Controller	Digital	Select	1
39	TSD		Dig. Temp. Controller	Digital	UC Series	1
40	TSD		Dig. Temp. Controller	Digital	Masibus	1
41	TSD		Dig. Temp. Controller	Digital	Masibus	1
42	TSD		Dig. Temp. Controller	Digital	Masibus	1
43	TSD		Dig. Indicator with Probe	Digital	Broke Field	1
44	TSD		Blind Controller	Analog	-	1
45	TSD		Blind Controller	Analog	CS Madical	1
46	TSD		Oil Bath	Digital	Insref	1
47	TSD		Oil Bath	Digital	Insref	1
1	FYM	Holding Furnace	Dig. Temp. Controller	Digital	Selec	1
2	FYM	Heat Treatment Furnace (Old)	Dig. Temp. Controller	Digital	Honywell	2
3	FYM	Heat Treatment Furnace (New)	Dig. Temp. Controller	Digital	Honywell	2
4	FYM	Shell Moulding	Dig. Temp. Controller	Digital	Radix	1
5	FYM	GI Plant	Dig. Temp. Controller	Digital	Chhino	1
6	FYM	Arc Furnace	Dig. Temp. Indicator	Digital	Ajay Syscon	1
7	FYM	Induction Melting Furnace	Dig. Temp. Indicator	Digital	Syscon	1
8	FYM	Annelling Furnace	Dig. Recorder	Digital	Eurotherm	1
9	FYM	Annelling Furnace	Dig. Recorder	Digital	CHINO	1
1	GPX		PRESSURE TRANSMETER		ABB	6
2	GPX		CHARTLESS RECORDER	20 CHANNEL	YOKOGAWA	1
3	GPX		FLOW METER		YOKOGAWA	1
4	GPX		TEMPERATURE CONTROLLER		RADIX	1
5	GPX		TEMPERATURE CONTROLLER	16 CHANNEL	MASIBUS	2
6	GPX		TEMPERATURE CONTROLLER		RADIX TC96	2
7	GPX		INDICATOR WITH CONTROLLER		SWITZER	1
8	GPX		INDICATOR WITH CONTROLLER		RADIX	2
9	GPX		PRESSURE TRANSMETER		WIKA	1
10	GPX		PRESSURE TRANSMETER		ZUMO	4
11	GPX		FLOW METER		FORBES MARSHALL	2
12	GPX		FLOW METER		E&H	2
13	GPX		FLOW METER		HONEYWELL	2

ANNEXURE- II B

DEPARTMENT WISE LIST OF PROCESS PLANT INSTRUMENTS

Sr. No.	Description of Instruments	Qty.
A	TXM	
1	Controller : Blind, Digital, PID, Analog, Dial Type	69
2	Recorder: Chart, Circular, Chartless etc.	0
3	Scanner :	5
4	RTD/TC	75
B	CIM	
1	Controller : Blind, Digital, PID, Analog, Dial Type	71
2	Recorder: Chart, Circular, Chartless etc.	10
3	RTD/TC	131
C	TRM	
1	Controller : Blind, Digital, PID, Analog, Dial Type	34
2	Recorder: Chart, Circular, Chartless etc.	6
3	RTD/TC	70
4	Pressure Transmitter	5
D	SCR	
1	Controller : Blind, Digital, PID, Analog, Dial Type	27
2	Recorder: Chart, Circular, Chartless etc.	1
3	RTD/TC	33
4	Power Meter	6
E	TSD	
1	Controller : Blind, Digital, PID, Analog, Dial Type	50
2	Recorder: Chart, Circular, Chartless etc.	0
3	Indicator	3
4	RTD/TC	50
F	GPX	
1	Controller : Blind, Digital, PID, Analog, Dial Type	7
2	Recorder: Chart, Circular, Chartless etc.	1
3	RTD/TC	8
4	Pressure Transmitter	11
5	Pressure Switch	14
6	Solenoid Valve	12
G	STM	
1	Temp.Controller	3
2	Temp.Recorder	4
3	RTD/TC	27
H	BCM	
1	Controller : Blind, Digital, PID, Analog, Dial Type	46
2	Recorder: Chart, Circular, Chartless etc.	6
3	Indicator	4
4	scanner	1
5	RTD/TC	83

I	CPM	
	1Temp.Controller	5
	2Digi.INDI	10
	3RTD/TC	5
J	LEM	
	1Controller : Blind, Digital, PID, Analog, Dial Type	22
	2Recorder: Chart, Circular, Chartless etc.	4
	3Indicator	2
	4RTD/TC	48
K	FBM	
	1Controller : Blind, Digital, PID, Analog, Dial Type	26
	2Recorder: Chart, Circular, Chartless etc.	5
	3RTD/TC	56
L	PRM	
	1Controller : Blind, Digital, PID, Analog, Dial Type	4
	2Recorder: Chart, Circular, Chartless etc.	3
	3RTD/TC	22
M	IMM	
	1Controller : Blind, Digital, PID, Analog, Dial Type	14
	2Recorder: Chart, Circular, Chartless etc.	4
	3Indicator	5
	4RTD/TC	43
N	TGM	
	1Controller : Blind, Digital, PID, Analog, Dial Type	54
	2Recorder: Chart, Circular, Chartless etc.	8
	3RTD/TC	102
O	TAM	
	1Controller : Blind, Digital, PID, Analog, Dial Type	13
	2Recorder: Chart, Circular, Chartless etc.	2
	3RTD/TC	25
P	FYM	
	1Controller : Blind, Digital, PID, Analog, Dial Type	7
	2Recorder: Chart, Circular, Chartless etc.	2
	3RTD/TC	19
	TOTAL NO. OF INSTRUMENTS	1383

ANNEXURE – II- C

LIST OF ELECTRONIC BATTERY CHARGER

S. No.	Description	Qty
1	Transline Make Auto Float/ Boost Battery Charger 30VDC/30A Model :TBCS 3030	25 Nos.
2	Transline Make Digital Boost/Float SMPS Battery Charger 48VDC/60A Model :TBCS 4860	18 Nos.