

**TENDER DOCUMENT FOR FABRICATION, PAINTING,
SUPPLY & TRANSPORTATION OF STEEL CRATES TO
BHEL-RANIPET FOR TRANSPORTATION OF FINISHED
GOODS TO 2x660MW MAITREE, BANGLADESH PROJECT
WITH VENDOR MATERIAL (OVM)**

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WORKS CONTRACT MANAGEMENT DEPARTMENT

REGISTERED POST WITH ACK.DUE

<u>NOTICE INVITING TENDER</u>	
Tender Notice No	9890052E, DT: 01.01.2020
Name of work	Fabrication, Inspection, Painting & Transportation of Steel Crates to BHEL, Ranipet for transportation of Finished goods to 2x660MW Maitree Bangladesh project with Vendor material (OVM).
Type of tender	Open tender (Two part bid).
Period of contract	One month
Last date & Time for Receipt of the Tender	08.01.2020 at 14.00 hrs
Date of Technical bid Opening	08.01.2020 at 14.30 hrs onwards.
<i>(Please obtain updated information from the BHEL website about the latest applicable dates & other changes if any in the tender contents)</i>	
Date of Price Bid Opening	Bidders whose technical bids are found acceptable will be intimated separately about the status of their offers and the date of opening of Price Bid.
Place of submission of Tender	Tender Box placed in WCM Department (Engg. Building – Ground Floor (West side) , BHEL –BAP- Ranipet – 632 406.
Address on the Sealed Tender Cover to be:	SENIOR ENGINEER / WCM DEPARTMENT, ENGG. BUILDING – GROUND FLOOR (WEST SIDE), BHARAT HEAVY ELECTRICALS LIMITED, RANIPET , VELLORE DISTRICT, TAMIL NADU– 632 406.
Venue of the Tender Opening	WCM DEPARTMENT
<u>Note:</u> 1. The Tender documents can be down loaded from BHEL website (http://www.bhel.com/tender/list_tender.php) and Govt. tender web site: http://tenders.gov.in/ and also in Central Public Procurement Portal (CPP) website: http://eprocure.gov.in/epublish/app 2. Interested bidders may alternately collect hard copy of tender specification documents at free of cost from WCM Dept. / BHEL / Ranipet on all working days (between 10.00 to 15.00 hrs) . 3. BHEL reserves the right to accept or reject any or all tenders without assigning any reasons whatsoever. Also BHEL reserves the right to reject any tender on the basis of unsatisfactory performance of the bidder in any ongoing job or any similar job in the past. 4. All corrigenda, addenda, amendments, clarifications etc. to tender specification will be hosted in the web pages (www.bhel.com > Tender notifications > view corrigendum) only and not in the news papers. Bidders shall keep themselves updated with all such developments.	

Bharat Heavy Electricals Limited
Boiler Auxiliary Plant, Ranipet- 632406
Section – I –Notice Inviting Tender

BHEL Invites offers from Various Suppliers for entering into contract for fabrication, painting and supply & transportation of Export Quality Steel Crates to BHEL Ranipet with **Vendor material as per BHEL Drawings, Quality documents and Technical Specifications.**

Instructions for offer submission:

- All documents as listed in the index sheet (Section-I to VIII and Annexure A-G).
- Vendors are advised to go through all the documents, Terms & Conditions detailed under Sections I to VIII and Annexures A to G carefully before submitting their offer.
- **Below mentioned documents will form part of the Techno-commercial Bid:**
 - Section II : Salient features & General Conditions of Contract
 - Section III : Rate schedule details and Bill of material
 - Section IV : Terms and Conditions
 - Section V : List of Raw material suppliers and consumable suppliers
 - Section VI : List of typical drawings
 - Section VII : Bill of quantity with material Specification
 - Section VIII : Quality documents
 - Annexure A : Bank Guarantee Format
 - Annexure B : Certification for MSE
 - Annexure C : Non-disclosure Agreement (NDA)
 - Annexure E : Declaration by the bidder
 - Annexure F : Details of Extra Rate
- Vendor is required to give their acceptance against Section I to VIII and Annexure A to F by signing all tender documents along with necessary supporting documents, wherever asked for, in the enquiry. Price bid of Vendors submitting the above mentioned documents only will be considered for further evaluation.

Corrigendum:

Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Revisions, etc. to Tender Specifications will be hosted in BHEL portal www.bhel.com. These will not be published elsewhere.

The bidder along with its associate/ collaborators/ sub- contractors/ sub-vendors/ consultants/ service provider shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.

Fraud prevention policy and List of Nodal Officers shall be hosted on BHEL website, vendor portals of Units/ Regions intranet.

For any clarification required in this regard, the Bidders may contact:

Sr. Engineer (or) Dy. Manager / WCM,
WCM Department, BHEL-Ranipet.
Phone: 04172- 283043 /4698.
E-mail: arunkumar@bhel.in / dmpcsekhar@bhel.in,

AGM/ WCM & Shipping
BHEL-Ranipet
jmganvir@bhel.in, 04172-284686

SECTION-IA

QUALIFICATION REQUIREMENTS (QR):

S.NO.	DESCRIPTION	BHEL REQUIREMENT	BIDDER'S CONFIRMATION
1	Eligibility	a. Should have Min one year experience in General Fabrication. b. Certificates for Procedure Qualification Record (PQR) & welder's qualification records for similar work as per ASME Sec-IX to be furnished along with the offer.	
2	Document "Copies" to be submitted with tender.	a) LOA's of the works completed/ being executed.	
		b) Work Completion certificates/ Inspection report for the LOA's referred.	
Note: 1. Those who are unable to comply the above points / unable to provide any of the above documents shall be technically rejected and the price bid of the rejected offers will not be opened. 2. Vendor may visit the Plant before submitting the offer to know about the usage of the job and any information / clarification needed. 3. BHEL reserves its right to reject the tender on account of unsatisfactory past performance by the bidder in other projects awarded under different enquiry. 4. The work executed in the own name of the bidder only will be considered for similar works executed for meeting the eligibility criteria. 5. Offers of the Contractors/Suppliers, against whom, any unit of BHEL had initiated process for banning or already banned will summarily be rejected. 6. Offers of the Contractors/Suppliers, against whom, any unit of BHEL had initiated process for "Suspension of Business dealings" or already done will not be accepted. 7. The offer of the bidders who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com.			

Section II – Salient Features of NIT

1.0 BID EVALUATION: -

- 1.1 “Bids” shall be submitted in two parts namely (1) **Techno Commercial Bid** and (2) **Price Bid**.
- 1.2 Bids shall consist of all the documents as specified under Sl.No.1.6 of this Section. Offers to be submitted with necessary supporting documents, wherever asked for, in the enquiry.
- 1.3 This tender is for entering into a contract with BHEL for **Fabrication, painting and supply of Steel Crates to BHEL, Ranipet with Vendor’s material** for Maitree Bangladesh project.
- 1.4 Documents as per Sl.no.1.6 forms Part of Techno-Commercial evaluation forms Part I and Price bid as detailed in Sl.no.2.0 forms Part-II in NIT.
- 1.5 Vendors shall ensure all the documents are uploaded as per instructions below.
- 1.6 Techno-commercial bids/Part-1 offer shall comprise of following documents dully signed, with seal, and filled with required details by authorized person. Following documents form part of the Techno-commercial bid/PART-I offer.

Section/Annexure	Remark
Section II : Salient features and General Instructions	Firm shall read all terms and conditions techno-commercial bid carefully. Firm shall accept the terms and conditions of Section II to VIII and Annexure A to F in Part I offer. Vendor to agree to the terms and conditions as such without taking any deviations.
Section III : Rate Schedule	
Section IV : Terms & conditions of tender	
Section V : List of raw material and consumable suppliers	
Section VI : List of Indicative drawings	
Section VII : Bill of Material details	
Section VIII : Quality work instructions	
Annexure A : Bank Guarantee Format	
Annexure B : MSE Certificate	Firm shall completely fill the documents and authorized signatory shall sign the document with company seal wherever applicable. Vendor to agree to the terms and conditions as such without any deviations.
Annexure C : Non-disclosure Agreement	
Annexure E : Declaration by the Bidder	
Annexure F : Applicable Rates for surface preparation & painting	

Apart from the above, all other Sections & Annexures of this tender shall be deemed to form an integral part of the Contract.

1.7 All tender documents should be duly signed by the authorized signatory on behalf of the contractor. Tenders must be submitted in sealed covers and should be addressed to Sr. Engineer/ WCM, BHEL/BAP/RANIPET-632406, with full name and address of the tenderer and the name of the work being super scribed on the cover. Late offers & incomplete offers shall become liable for rejection.

1.8 The tender shall be submitted as given below.

- Cover-1 shall contain the techno-commercial bid (Page 1 to 42) and all relevant documents.
- Cover-2 shall contain only the price bid.(Part II Page 43)

Each of the above covers shall be super scribed with tender number, respective cover content detail as Technical bid, Price bid and with full name and address of the tenderer.

Finally, all the above two covers shall be put in one single large cover and super scribed with the tender number, due date, name of the work and with full name and address of the tenderer.

2.0 PRICE BIDS:

- 2.1 The rates in price bid shall be quoted in per MT basis only.
- 2.2 The rates quoted in price bid shall be filled by Vendor in figures. Vendor should write & match the price quoted in words and figures before submission of price bid to BHEL.
- 2.3 Price bid of Vendors who have been placed under interim suspension/ put under hold/ banned by BHEL will not be considered for evaluation.
- 2.4 Vendors shall quote their rate as per the format given in the BHEL price bid format only.
- 2.5 Vendors shall write their price (in words & figures) against each Rate Schedule. In case of mismatch in quoted price as given in figures and words, the price mentioned in words will be taken as final quoted price.

3.0 TENDER DUE DATE:

- 3.1 The completed offers should be submitted on or before **14:00hrs on 08.01.2020**. No offer will be entertained after the expiry of stipulated time/date. All the received offers shall be opened at **14:30 hrs on 08.01.2020** (on the same day).
- 3.2 Tenders not submitted in the prescribed forms or incomplete Tenders are liable for rejection.

4.0 EVALUATION OF TECHNO COMMERCIAL BID:

- 4.1 Only those firms who have submitted the offer as per BHEL tender conditions and submission of completely filled documents as mentioned in sl.no.1.6, shall be considered for evaluation and further processing. Vendors failing to submit the documents listed under clause no.1.6 with required data and in required format will not be considered for price bid (Part-2) opening.
- 4.2 Offers of vendors which are not techno-commercially qualified in PART-1 will be rejected and the same will be communicated to respective vendors with reasons for rejection.
- 4.4 **Offers with deviations in payment terms shall be rejected. No advance payment or LC payment shall be accepted, and offers with such payment terms shall be rejected.**
- 4.5 The offer submitted by vendor shall be subjected to evaluation as per the Eligibility of rate schedules and submission of required documents. Clarification required from vendors by BHEL, if any shall be furnished by vendors within the time specified and delayed responses beyond the stipulated time lines are liable to be rejected. Results of the evaluation process shall be intimated to all the vendors who have submitted the required documents as per terms and conditions stipulated in the tender documents.

5.0 SUSPENSION OF BUSINESS DEALINGS

- 5.1 It may please be noted that guidelines with respect to suspension of business dealings may undergo change from time to time and the latest one shall be followed. Offers of Vendors who have been banned or put under hold will not be considered for evaluation.
- 5.2 Offers of Vendors who engage the services of Vendors banned by BHEL shall be rejected. The list of banned firms is available on BHEL web site (www.bhel.com ---> Tender Notification - List of Banned Firms). Abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' has now been uploaded on www.bhel.com on "supplier registration page" at the following link: http://www.bhel.com/vender_registration/pdf/Suspension-of-Business-Dealings-with-Supplier-issued-Sept13_abridged.pdf. The bidders will be governed by Suspension of Business Dealings guidelines, BHEL.

Section III – List of Rate schedules and Quantum of Materials

SL No	Description	QTY	Painting area per Item in Sq. Mtrs.	Total weight in MT	Indicative Material grade
1	OPEN STEEL CRATE 12.5X2.5X2.0M CAPACITY 25MT	48	200	138	Refer indicative drawings
2	OPEN STEEL CRATE 12.5X2.5X2.5M CAPACITY 25MT	100	200	308.50	Refer indicative drawings
		148		446.50	

SECTION IV

Terms and Conditions

1.0 QUANTUM OF WORK:

- 1.1 The total tentative quantum envisaged for ordering through this Rate Contract is around **148 Nos.** with a total weight of **446.50 MT** involving products specified in the above Section-III for Maitree project.
- 1.2 The entire quantum of work has been split into **2 Main rate** schedules with surface preparation (power tool cleaning) & painting cost shall be paid extra over and above the fabrication rate. The rate schedule wise weight breakup and bill of material are given in Section III & VII. The quantity indicated are tentative and may vary during the execution of the contract. **BHEL reserves the right to amend the quantity as per their requirement at any stage during ordering / execution stage of the contract.**

2.0 SCOPE OF WORK:

The broad scope of work in respect of all the rate schedules includes:

- 2.1 Procurement of all raw materials and consumables like electrodes etc., from BHEL approved sources as per Section V, as per the raw material Specifications / Quality documents as per Section VIII and quantities as per Drawings / GMS (Group Manufacture specification) issued by BHEL as per PO.
- 2.2 Fabrication of components as per BHEL drawings & contract agreement. To understand the nature, type & quantum of work content, a set of drawings are attached under Section VI.
- 2.3 Fabrication of components shall also be according to the drawings/Quality Plan (QP)/ Quality Work Instructions (QWI) / customer approved quality plans as listed under Section VIII.
- 2.4 Supplier to furnish raw material TC's along with the supply.
- 2.5 Surface preparation & Painting as per the quality documents as detailed in Section VIII.
- 2.6 Procurement of all materials, consumables etc. required for the completion and the dispatch of the jobs shall be as per Section V.
- 2.7 All handling charges till completion of fabrication & dispatch up to destination is in **Vendor's scope.**
- 2.8 All costs towards testing & inspection including customer/BHEL/BHEL nominated agency as per BHEL's QP/PO /Drawings and customer CHP, till obtaining of MDCC (wherever applicable).
- 2.9 Transportation of finished components up to BHEL / Ranipet and obtaining of acknowledgement from BHEL/Ranipet Shipping Dept.
- 2.10 The typical list of raw materials involved product / rate schedule wise is provided under Section VI for the information of vendors.
- 2.11 For the extra rate schedules refer "Annexure F".
- 2.12 The scope of work is further detailed in subsequent clauses.
- 2.13 For unloading of jobs at BHEL, Ranipet, crane facility will be arranged by BHEL at free of cost.

2.14 DETAILED SCOPE OF SUPPLY: The detailed scope includes,

- 2.14.1 Procurement of Raw materials and consumables, fabrication, painting & supply.
- 2.14.2 Dimensional inspection & MTC review as per BHEL drawings by BHEL/BHEL authorized representative. Only Class-I type measuring tapes & calibrated instruments shall be used for inspection.

- 2.14.3 Supplier to ensure dispatch of the items safely at the BHEL premises. Any requirement for safe handling & dispatches are in vendor's scope. No visual damage or paint peel off on the supplied items is acceptable.
- 2.14.4 Required equipment's for handling of raw materials, finished goods & transportation shall be arranged by Vendor.
- 2.14.5 Providing the necessary facilities, instruments, etc. for carrying out the inspection by BHEL/ BHEL nominated agency as per BHEL's Drawings is in Vendor scope.
- 2.14 **PAINING & MARKING:** The finished product shall be cleaned and painted as per following details with paints procured from BHEL approved paint manufacturers list vide Section "V".

SI. No	Description	No. of coats	Scope	Total DTF
1.	<u>Outer Width Side of the steel Box*</u> Red oxide zinc phosphate primer (Alkyd Base) to ISI12744 DFT=30µm per coat	1 Coat	Done at fabrication unit Paint: Fab. Vendor scope	1(30)+2(20) =70µm
	Synthetic Enamel (long oil Alkyd) to IS 2932 Yellow shade No:356 of IS 5 DFT-20 microns/coat	2 Coats	Done at fabrication unit Paint: Fab. Vendor scope	
2.	<u>Left over sides of the steel Box</u> Red oxide zinc phosphate primer (Alkyd Base) to ISI12744 DFT=30µm per coat	2 Coats	Done at fabrication unit Paint: Fab. Vendor scope	2(30) =60µm

- 2.14.1 All surfaces to be painted will be thoroughly cleaned of all grease, oil, paint residues, welding splashes, loose mill scale, dust, rust and any other foreign matter. Mechanical cleaning by power tool and scrapping with steel wire brushes will be adopted to clear the surfaces. However, in certain locations where power tool cleaning cannot be carried out, sand scrapping may be permitted with steel wire brushes and/or abrasive paper. Cleaning with solvents will be resorted to only in such areas where other methods specified above have not achieved the desired results. Cleaning with solvents will be adopted only after written approval of BHEL. Sharp edges have to be rounded off. Contaminations caused by salts, acids and alkali solutions shall be eliminated by rinsing with water up to a pH value of 6-8. Soluble salt contamination is to be tested using the Weber Reilly test method (or similar approved) and pH is to be tested using universal indicator paper strips prior.
- 2.14.2 Identification of Structures shall be hand punched and stenciled. Vendor Code number alone shall be punched using letter punch and bordered suitably for identification. Machined surfaces and wherever the contact surfaces for bolting are made shall be protected with rust preventive oil. Weldable areas are to be applied with weldable primer. All painting works shall be part of Subcontractor responsibility, including cost of paints. However extra rates are applicable as per extra rate schedules. However, in case any complaint is received from BHEL shipping/Logistics regarding poor quality of product including painting issues, the concerned vendors shall be asked to rectify within a short time or else BHEL may arrange rectification through alternate agencies and recover from the vendor for all the connected expenditure involved in repair / rework. Vendors shall not absolve their responsibility even beyond normal warranty period, irrespective of the fact that the product had been inspected by BHEL/QC/AIA. If a proper painting process is followed, the painting should withstand for 5 to 8 years even if exposed to severe / corrosive atmosphere and hence vendors cannot absolve their responsibility even beyond normal warranty period, irrespective of the fact that the product had been inspected by BHEL/QC/AIA. In order to avoid such penalties, the vendors are advised to follow the established process of painting.

- 2.14.3 Two coats of yellow paint on both sides of the Crates (i.e. Width sides of the Crates).
- 2.14.4 Four lifting lugs should be painted with yellow colour.
- 2.14.5 Chain markings and Centre of Gravity marking should be provided on both sides of the Crates i.e Lifting Lug sides –length wise.
- 2.14.6 Stenciling has to be done on both sides of the Crates i.e on the width side of the crates where painting with yellow color is carried out. Content to be stenciled is as given below:

**“BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (Pvt.) LIMITED,
2X660 MW MAITREE SUPER THERMAL POWER PROJECT,
BANGLADESH EPC CONTRACTOR - BHARAT HEAVY ELECTRICALS
LIMITED, INDIA**

**DESTINATION:
SITE INCHARGE**

**2x660 MW MAITREE SUPER THERMAL POWER PROJECT,
PO-KALEKKHARBER, UNION- RAJNAGAR, UPAJILA-
RAMPAL, DIST: BAGERHAT-9343, BANGLADESH
CONTACT NO.: +8801678582823**

**PACKAGE NUMBER:
BHEL/MTR/BD/TRY/FBO/
NET WEIGHT:
GROSS WEIGHT:
DIMENSIONS (L x B x H):**

**CONTRACT NO. BIFPCL/EPC-MAIN PLANT/2016/01
PURCHASER: BIFPCL, BANGLADESH”**

- 2.14.7 Stenciling of BHEL emblem and Arrow mark has to be done on both sides of the Crates.
- 2.14.8 As per drawing, Top side connecting channels should be tack welded.
- 2.14.9 Closing sheets should be kept below the crate during transportation to avoid bending.

B. RAW MATERIAL PROCUREMENT:

- 2.15 Raw materials are to be procured from the BHEL approved sources or respective material specification as indicated in the **Section – VII**. Raw materials can also be procured from other sources as per guidelines SIP:NP:14/00 (Refer Section VIII) or from BRAMAS (An association of industry cluster of Trichy) as per the applicable procedure– CIP 653/01 (Refer Section VIII).
- 2.16 Raw materials and paints are to be procured with relevant Test Certificate (TC) and these have to be submitted/produced certified copy of the manufacturer during inspection.
- 2.17 The system for storing and issuing materials shall be available with vendor for easy traceability.
- 2.18 Periodic audit of system of purchasing, storing and issue, etc. will have to be carried out by the vendors. BHEL will also audit the same.
- 2.19 For raw material substitutions requested by vendor if there is increase in weight, no cost escalation will be considered. Drawings/GMS shall not be revised.
- 2.20 Price Variation clause is applicable as per Clause ‘6’ is applicable for this Tender.

C. TRANSPORTATION:

- 2.21 The quoted rates for each of the Main rate schedules shall be on **“FOR BHEL Ranipet/Shipping basis”** including the cost of transportation, on **per MT basis**, for direct dispatch to BHEL, Ranipet.

- 2.22 The fabrication rates quoted for voluminous products shall include the relevant transport charges up to BHEL Ranipet considering “Volume load”. **All the consignments are envisaged for dispatch to BHEL Ranipet directly from vendor’s works. Vendors to quote accordingly.**

D. DELIVERY PERIOD:

- 2.23 Timely delivery is the essence of the Contract. BHEL has full right to divert the items to other suppliers for the vendors who are not meeting delivery schedule.
- 2.24 Vendors are expected to deliver finished goods rate schedule wise as given below:

Table-1

Sl.no.	Rate Schedule	Bidder	1 st lot	2 nd lot	3 rd lot	Remarks
1 & 2	CRATES	L1	20	25	29	1 st lot within 2-weeks, 2 nd lot within 3-weeks & 3 rd lot within 4 weeks from the date of release of PO.
		L2	15	15	7	
		L3	15	15	7	

- 2.25 The quantum ordered in a particular rate schedule will vary subject to availability of load with BHEL, tender ranking, Supplier performance rating of Vendor, spare capacity available with Vendor and previous pending BHEL order with Vendor. However, the ordered quantum per purchase order will not be less than the minimum quantum mentioned in Table-1.
- 2.26 Vendor is expected to procure the required raw materials at the earliest from the date of purchase order placement to execute the quantum envisaged in the purchase order.
- 2.27 Requirement of any particular schedule if needed will be conveyed to Vendor at least 10-days in advance & it’s the responsibility of the vendor to supply the particular type of crates on urgent basis as per requirement conveyed by BHEL.
- 2.28 Staggered requirement (if any) shall be informed separately from time to time to the vendor by BHEL after placement of PO. The finished components have to be dispatched as per the dispatch priority issued by BHEL.
- 2.29 In case the particular type of crate is not required immediately, BHEL will have right to ask the vendor to hold the items till further clearance within the period of the contract.
- 2.30 Vendors have to arrange for dispatch of the finished goods either in Trucks or Trailer/ Hydraulic axles for safe delivery through their transport carriers. Safe delivery of the goods to BHEL-Ranipet is in the scope of the vendor. Any Deviation/ discrepancy of the materials received at BHEL Ranipet, if any shall have to be rectified or replaced by vendor. If the same is not rectified/replaced by the concerned vendor, the same will be rectified /replaced by BHEL and the cost incurred shall be recovered from the vendor.
- 2.31 Loading of finished goods on Truck / Trailer including packing, lashing wherever required for safe transportation is in the scope of the vendor.
- 2.32 Transit insurance is in the scope of Contractor only.
- 2.33 As soon as the dispatches are made, vendors have to submit DC and GST Invoice to BHEL.
- 2.34 Original BHEL Ranipet acknowledgement along with IR, DC, GST invoice and system generated online invoice (if any) along with other annexures also to be furnished to BHEL for processing the invoice.
- 2.35 Vendor should get their clarifications (wrt. Engg. drawings, Material substitutions, quality procedural clarifications) resolved at the earliest from the receipt of Drawing / PO. Any delays in on vendors part for raising query will have to be accommodated by the vendor within the PO delivery date.

- 2.36 The weights in Group Manufacturing Specification (GMS) shall be the basis for calculating the total requirement of raw materials for fabrication. However, vendor shall correlate all the drawings & GMS and take into consideration a suitable process allowance over and above this, for procurement of raw materials. For the purpose of billing as well as transport, the weight of GMS shall be the basis. Changes in the weight due to material substitution will be carried out by temporary DCN & GMS / PO will not be revised on account of this. However, weight changes due to design change shall be compensated by PO amendment, based on vendor request.

3.0 EXTRA RATE SCHEDULES

- 3.1 Extra rate schedule for painting including Stenciling have been identified. This Extra rate is prefixed as indicated in Annexure F, shall be payable over & above the basic fabrication rates (finalized for Main fabrication schedules), wherever applicable. Accepting the Pre-fixed rates mentioned in Extra rate schedule is mandatory. The applicability of extra rate schedules shall be indicated in P.O.:

Table-2

Sl.No.	EXTRA RATE SCHEDULE	EXTRA RATE SCHEDULE DESCRIPTION
1	SPRS	PAINTING including Stenciling charges

- 3.2 During PO generation, the painting cost will be calculated by system, based on the surface area, painting scheme, Painting correction factor & individual component weight.

4.0 GST Compliance in respect of ensuring Input Tax Credit (ITC):

- 4.1 Supplier shall mention their GSTN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.
- 4.2 All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
- 4.3 A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL.
- 4.4 All documents like Test Certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so.
- 4.5 In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL.
- 4.6 For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty (if any) will be deducted/recovered for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.

- 4.7 Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number.
- 4.8 In case any changes in taxes and duties as per Gov. Notification (including GST), the same shall be applicable from time to time.
- 4.9 Duplicate copy of the Invoice meant for the transporter should accompany the material as stipulated under CE Rules 52A and 172C OR 57CE.

5.0 INSPECTION:

- 5.1 Inspection shall be by BHEL and / or by BHEL appointed agency or persons authorized by BHEL. Vendor shall provide all facilities, calibrated instruments and standard gauges required for inspection free of cost.
- 5.2 The works are deemed to have been completed and accepted, only after the inspector / Agency/Agencies accept/approve the Inspection Report (IR).
- 5.3 Nevertheless, inspection and acceptance of the component does not absolve the responsibility of the vendors against any manufacturing defects noticed later.
- 5.4 BHEL representative from unit or CQ is authorized to carry out audits along with TPIA at Vendor's works before clearing the items for dispatch wherever required.

6.0 PRICE VARIATION CLAUSE (PVC): Not applicable

7.0 Evaluation of Price bids:

- 7.1 The Price bid shall be valid for 3 months from the date of Part I opening.
- 7.2 Price quoted by vendors for Rate schedules in which they are not eligible will not be considered.
- 7.3 Rate Schedule wise rates (on per MT basis) shall be evaluated on "Landed cost to BHEL" basis as per the following formula –
 - **Landed cost = (Total cost (including material cost, Fabrication cost, transportation PER MT)) + Applicable Taxes net of ITC (GST-ITC)**
- 7.4 Taxes shall be paid extra over the "**FOR BHEL Ranipet /Shipping basis**" rates quoted.
- 7.5 The vendors quoting the lowest rates as per the above formula will be the successful bidder for the respective Rate schedules.
- 7.6 Wherever there is tie in L1 rate, revised offer shall be obtained from tied lowest bidders. In case of further tie in L1 rate, lot shall be made to find L1.
- 7.7 After counter offer acceptance, if there is tie for ranking position other than L1, then Lot shall be done to break the tie. Based on the outcome of Lot subsequent ranking will be revised. Load distribution shall be based on revised ranking.
- 7.8 The LOT process to break tie in tender ranking will be based DIP system. Final revised ranking shall be worked out based on the result of tie-breaking.
- 7.9 L1 rate of respective rate schedule shall be counter offered to eligible Vendors as per below mentioned procedure for counter offering.
- 7.10 Ordering on the successful bidder/s is/are proposed depending on the monthly spare capacity, pending orders of BHEL with vendor at the time of loading, quality and delivery performance of the vendor for each Schedule.
- 7.11 BHEL reserves the right to conduct Reverse auction.

8.0 COUNTER OFFERING PROCESS:

- 8.1 Number of Vendors to be considered for Counter offering process shall depend on the number of Vendors who have quoted in respective rate schedules. **The contract will be awarded to maximum 3 No. of vendors** in the ratio 50:25:25 of each rate schedule.
L1 bidder for each schedule will be given a load of 50%. Balance 50% will be counter offered to L2 and above vendors in seriatim basis. In case, L2 & above bidders do not accept counter offer for the balance load, that load will also be given to L1 bidder.
- 8.2 Post price bid opening, if the rates (as per the landed cost formula) quoted by the lowest bidder in one or more rate schedules is not acceptable to BHEL, then Lowest Bidder(s) (L1 Vendor in respective rate schedules) will be called for price negotiation process.
- 8.3 BHEL reserves the right to distribute the work to one or more vendors. As the quantum to be completed is high and delivery requirements are concurrent for Maitree project, BHEL shall counter offer the finalised L1 Rates (on Landed Cost basis) for Individual Rate schedules, to all other eligible, quoted vendors as per tender ranking.
- 8.4 Vendors may kindly note that the Counter-offer rates (finalized L1 Rates) shall be offered only to the vendors eligible for that Rate schedule.
- 8.5 Based on acceptance of counter offered L1 rate in various rate schedules by Vendor for each Rate Schedule, a Contract will be entered between Vendor and BHEL.
- 8.6 Delivery dates in the PO to be released will be decided by BHEL based on customer Contract requirement.
- 8.7 BHEL also reserve the right to re-float or cancel the entire enquiry proceedings partly or fully in case the negotiated rates are not within BHEL's estimation.
- 8.8 Performance monitoring of the supplier will be carried out periodically. This will be one of the main criteria for ordering.

9.0 VALIDITY

- 9.1 The contract agreement signed between respective Vendor and BHEL shall be valid for ordering up to a period of 3 months from the date of approval for ordering obtained from competent authority. However, validity of the Agreement is subject to further extension with mutual consent of Vendors.
- 9.2 Validity of price bids will be 3 **months from the** date of Techno-commercial/Part-1 bid opening.
- 9.3 BHEL reserves the right to reduce the contract period (pre-close the contract), with 15 days' notice period depends on the requirement / without assigning any reason. Security Deposit will be refunded,
 if the contract is pre-closed for non-requirement of vehicle by BHEL.

10.0 ELIMINATION

- 10.1 Details of Vendors to be eliminated are as follows:
- Rate Schedules for which the number of technically qualified bids received is between **1 to 10 vendors**—the Highest bidder H1 will not be considered for Counter offer.
- Rate Schedules for which the number of technically qualified bid received is between **11 to 20 vendors**— H1, H2 will not be considered for Counter offer.
- Rate Schedules for which the number of technically qualified bid received is between **21 to 40 vendors**— H1 to H5 will not be considered for Counter offer.
- Rate Schedules for which the number of technically qualified bid received is between **41 to 100 vendors**—H1 to H10 will not be considered for Counter offer.
- Rate Schedules for which the number of technically qualified bid received is more than 100 vendors – 15% of the highest bidder will not be considered for Counter offer.
- If more than one vendor falls under H1, H2 or H3 etc., all the vendors shall be eliminated.

11.0 LOAD DISTRIBUTION:

- 11.1 Load distribution shall depend on the number of counter offer accepted vendors for each Rate schedule.
- 11.2 Load distribution in respective rate schedules is as follows:
Table-3

L1 bidder for each schedule will be given a load of 50%.

****Above mentioned quantum shall be awarded subject to availability of load with BHEL and based on the performance of the contractor including delivery.**

- 11.3 Balance load in each Rate schedule will be distributed among Vendors accepting the counter offered rate in respective rate schedule subject to availability of load with BHEL, tender ranking, Supplier performance rating of Vendor, spare capacity available with Vendor and previous pending BHEL order with Vendor.
- 11.4 Inability of Vendors to fabricate minimum quantity mentioned in Table-3 within the validity of the contract due to any reasons not pertaining to BHEL will be termed as Vendors failure to execute the contract. Suitable action against Vendors will be taken as per BHEL corporate procedures and Vendors pending payments shall be withheld and/or their BG may be invoked to cover the liabilities of BHEL towards risk purchase, if any. In such case, the liability of Vendors w.r.to risk purchase shall be limited to the quantity mentioned in above table.
- 11.5 In the event of L1 rates counter offered are not accepted by any other eligible subcontractors, the entire order quantity for the particular RS shall be offered to L1 subcontractor. In such case, the liability of L1 subcontractor w.r.to risk purchase shall be limited to the quantity accepted by the Vendors or the minimum quantity mentioned in Table-3, whichever is more.
- 11.6 If Eligible contractors, as per Tender ranking in respective rate schedules, are ready to accept more than the minimum quantity as specified above, the same shall be loaded on them considering the availability of load, load in hand, potential to execute etc. In such case, the liability of contractor w.r.to risk purchase shall be limited to the quantity accepted by the Subcontractors or the quantity mentioned in Table-3, whichever is more.

12.0 PURCHASE ORDER CANCELLATION

- 12.1 Vendors will have to acknowledge the PO within 7 days from the date of release of PO, otherwise BHEL has the right to cancel the PO. If VENDOR does not respond/acknowledge the PO, then it will be deemed that Vendor has accepted the purchase order.
- 12.2 After PO acknowledgment if vendor gives request for cancellation of PO within a month, loading will be suspended for next 2 months.
- 12.3 In case of full PO cancellation: If vendor gives the request for PO cancellation after one month of PO but before PO delivery date, loading will be suspended for further 3 months.
- 12.4 In case of partial PO cancellation within PO delivery date, Loading will be stopped for 4 months.
- 12.5 Cancellation of partial/full PO after PO delivery date - LD/Penalty will be recovered for the delayed period on entire PO value and further, loading will be stopped for 4 months. Delayed period will be from the PO date to PO cancellation date. BHEL has the right to get the left items ordered elsewhere with notice to the vendor; at the risk and cost of the vendor and the additional expenditure / difference in Cost, if any, including consequential cost shall be recovered from the defaulted vendor.

12.6 Vendor is expected to procure the required raw materials within 20 days from the date of purchase order placement to execute the quantum envisaged in the purchase order. BHEL has the right to divert/cancel the order if the vendor has not procured raw materials as mentioned above. Purchase order placed on steel mills and with proper payment voucher/proof will be considered for not cancelling the PO by BHEL. The submission of data by vendor for DB clearance by BHEL/QC shall be the proof of procurement. This is to avoid delay in project schedule due to delay in raw material procurement by vendors.

12.7 If a Vendor rejects a PO/does not respond for PO acceptance (within seven days) consecutively three times or more, then Vendor will not be eligible loading in all the rate schedules for 6 months.

13.0 QUALITY / TECHNICAL REQUIREMENTS:

13.1 Supply of the components should strictly conform to dimensions and tolerances indicated in the Drawings.

13.2 Welding to be carried out as per ASME Sec-IX

13.3 Electrodes shall be as Drawings/approved vendors.

13.4 Adequate facilities like welding equipment's, baking oven, handling facilities and measuring instruments duly calibrated as called for by us must be available. All the above equipment's must be under working condition and the same is to be made available to BHEL Officials or their authorized agents if requested for verification.

14.0 PROGRESS REPORT:

14.1 The vendor shall mail their completion plan and progress report from time to time as and when required by BHEL.

14.2 The submission, receipt and acceptance of such reports shall not prejudice the rights of BHEL, under the contract nor shall operate as estoppels against BHEL, merely by reason of the fact that they have not taken notice of or objected to any information contained in such reports. Action as deemed fit would be taken if the progress of work is not satisfactory.

15.0 MSE PREFERENCE & DOCUMENTS:

15.1 In line with Gazette notification issued by Ministry of Micro small and medium enterprises on MSE suppliers, the following special provisions shall be applicable.

- i. 20% of the tendered value is earmarked for MSE suppliers in this tender.
- ii. If L1 vendor (or) Counter offer accepted vendor/s is from a Micro / Small enterprise which put together covers 20% of the total tendered value, the 20% earmarking provision is not applicable.
- iii. Out of the 20% tendered value reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC / ST entrepreneurs. In event of failure of such Micro and Small enterprises to participate in the tender process or meet the tender requirements and the L1 price, the 4% sub-target for procurement ear-marked MSE owned by SC / ST entrepreneurs shall be met with other MSE enterprise/s.
- iv. In case MSE vendor participating in the tender quotes within the price band of L1 + 15%, they will be allowed to supply the portion of the requirement subject to acceptance of L1 price by MSE vendor. In case of more than one such MSE, the supply shall be shared proportionately, provided the available quantum is splittable.
- v. In case the available quantum is non- splittable/ not envisaged for splitting as per tender, and if a non-MSME vendor becomes L1, and MSME vendor also participates in the tender, the MSME vendor will be given preference for ordering the available quantum provided the MSME vendor quoted price is within L1 + 15%, and if the MSME vendor accepts the L1 rate.

- vi. MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate or Udyog Aadhar Memorandum (UAM) along with CA certificate (Format enclosed as Annexure B where the deemed validity of EM II is over) applicable for the relevant year (latest audited). Date to be reckoned for determining the deemed validity will be the last date of technical bid submission (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefits shall be applicable for the enquiry if any deficiency in the above required documents is not submitted before the price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazette officer. This provision for MSE will apply subject to the condition that the participating MSE meets the tender requirements.
- vii. In case of any change in the MSE status of the bidder, it shall be the responsibility of the bidder to notify the change as a part of the bid document. If at a later date it comes to the knowledge of BHEL, that the change in the status has not been intimated by the bidder and the order is obtained under the premise of an MSE then BHEL would cancel the pending order against this tender and take necessary steps for suspension of the business dealing with the bidder as per the procurement policy of BHEL.
- viii. In case after the bid opening it is seen that no MSE has become L1, then depending on the nature of the item, if it is not possible to split the tendered items / quantities on account of reasons like customer contract requirements of supplying one make for a given project or technical reasons like tendered items being a system, tendered quantity being low etc., then BHEL would not counter offer the L1 prices even though there may be MSE bidders within the +15% band of L1.

15.2 Definitions of MSEs owned by SC/ST is under:

- i. In case of proprietorship firm, proprietor must be SC/ST.
- ii. In case of partnership firm, the SC/ST partners must be holding at least 51% shares in the unit.
- iii. In case of private limited companies, at least 51% share must be held by SC/ST promoters.
- iv. The caste/Tribe/Community certificate issued by the following authorities in the prescribed form for SCs/STs can be considered.

15.3 Authorized to Issue SC/ST certificate:

- I. District Magistrate/Additional District Magistrate/Collector/Deputy commissioner/ Additional Deputy Commissioner /Deputy collector/1st class stipendiary magistrate/ Sub divisional Magistrate/ Taluka Magistrate/Executive magistrate/Extra Assistant commissioner.
 - II. Chief Presidency magistrate/Additional chief presidency magistrate/Presidency magistrate.
 - III. Revenue Officer not below the rank of tehsildar.
 - IV. Sub-Divisional officer of the area where the individual and / or his family normally resides.
- To avail the benefits of MSE under SC/ST category, the related documents as stated above should be submitted along with tender documents.

16.0 PAYMENT TERMS:

- 16.1 100% Payment shall be made through electronic mode by EFT/RTGS within 30 days from the date of submission of bills along with the other relevant documents for the items received by BHEL, Ranipet. The bills to be submitted to Shipping dept. of BHEL for onward processing & clearance. All billing documents shall be furnished in original only.

The bills shall only be submitted after supply of Min. 10 Nos. crates against each schedule. The last bill will be for the balance PO quantity.

- 16.2 Vendor should ensure that the following documents are submitted for bill processing to avoid any delay in processing of payment.

OVM – Ranipet Dispatch

- a. Invoice – duly signed by vendor with seal
- b. Invoice Annexures - duly signed by vendor with seal
- c. GST Invoice – Original for RECEIPT and Duplicate for transporter copies - In vendor letter head (Values to be checked with B2B tax invoice template)
- d. Original IRs – with relevant painting/SB remarks and ODC details (if applicable) - duly signed by BHEL QC inspector and vendor with seal
- e. Original DCs – duly signed by vendor with seal
- f. Original LR

- 16.3 The concessions/ subsidies as applicable to MSE vendors as per Govt. guidelines subject shall be Extended to eligible MSE vendors subject to submission of valid documents.

17.0 LIQUIDATED DAMAGES / PENALTY:

- 17.1 If staggered delivery is indicated in the PO, LD will be levied on the undelivered portion. Liquidated damages at the rate of 0.5% of the undelivered portion value of the Purchase order item value for each week or part thereof beyond the specified delivery period of 4-weeks will be levied subject to a maximum of 10% of total PO Value (max 11.8% of PO value i.e. 10% plus applicable GST of 18%) without prejudice to any other relief or compensation to BHEL, under any other condition of the contract and applicable laws.
- 17.3 GST at prevailing rate is applicable on LD amount. Credit note will be issued by the vendor indicating the respective supply invoice.
- 17.4 Delivery Extensions shall not be entertained for normal cases unless there are delays which have justifiable reasons not attributable to Vendor. In case of amendment in PO, LD will be calculated as per the amended PO.
- 17.5 Invoices received without any request for delivery extension and or without proper justification, LD will be automatically deducted.
- 17.6 In such cases where the reasons for delay (before PO delivery date) are attributable to BHEL, the vendors are expected to send a request for delivery extension (within PO delivery date) along with supporting documents & justification, indicating the number of days/ date till which extension is required. (Beyond this date, extension shall not be made). Also Vendor has to opt 'YES' for delivery extension required in B2B. In case of no response it will assumed that delivery extension is not required.
- 17.7 Delivery extension if any, should be obtained before Invoice creation in B2B. Once bill has been submitted & posted, deferred payment amount (max 11.8 % of PO value) will be withheld until full PO completion & delivery extension completion. Any financial implication on account of delayed delivery shall be borne by the Vendor.
- 17.8 In case of any revision/ amendment of PO, the LD shall be linked to the amended/revised PO value.
- 17.9 The defaulted vendor shall be liable for any loss, which BHEL may sustain by reason of such risk purchases in addition to liquidated damages as mentioned above.
- 17.10 In case of LD recovery, the applicable GST shall also be recovered from the suppliers.

18.0 ACTION AND COMPENSATION IN CASE OF BAD WORKMANSHIP:

- 18.1 If any work has been executed with unsound, imperfect or bad workmanship or with materials of

inferior quality, the fabricator shall on demand in writing from BHEL specifying the work, materials/articles complained of, notwithstanding that the same may have been passed, certified and paid for, forthwith, rectify the work so specified in whole or in part as the case may require, at their own cost and in the event of his failure to do so within reasonable period, BHEL will rectify or remove and re-execute the work at the risk and expense of the vendor.

- 18.2 BHEL will have general supervision and direction over the work. BHEL has the authority to stop the work, whenever such stoppage may be necessary to ensure the proper execution of the contract.
- 18.3 BHEL shall also have the authority to reject all the work, which does not conform to the specification, to direct the application of forces to any portion of the work as, in their judgment is required, and order the force increased or diminished and to decide on matters which arise in the execution of the work.
- 18.4 BHEL reserves the right to suspend the work or part thereof at any time and no claim whatsoever on this account will be entertained. In case of any dispute, the fabricator may appeal to BHEL whose decision shall be final and binding.

19.0 SUBLETTING:

- 19.1 The vendor shall not sublet or assign this work or any part thereof without the prior written permission of BHEL. In the event of the vendor subletting or assigning this work or any part thereof without such permission, BHEL shall be entitled to cancel the Order and execute the same elsewhere at the risk and cost of the vendor and the vendor shall be liable for any loss or damage which BHEL may sustain in consequence of such event. Further BHEL has the right to cancel the PO's placed on such vendor/s and suspend the business dealings with such vendor/s as per the policy of BHEL. The vendors who are falling under highest bidder category shall not be considered.

20.0 VENDOR PERFORMANCE RATING:

- 20.1 Quality, right at the first time and delivery in time are the essence of the contract.
- 20.2 Based on the site feedback on the quality of the finished goods received, delivery performance and service rendered; a General Feedback on the Performance will be sent to vendors or hosted in B2B system. Vendors are required to take note of the deviations enumerated in this and improve their performance in subsequent dispatches. Vendors, whose performance is poor continuously, are liable to be delisted and no orders shall be placed on them.

21.0 LOADING FOR URGENTLY REQUIRED ITEMS:

- 21.1 On many occasion the items covered under the Rate contract becomes critical due to various reasons like loss/shortage /damage during erection at site or emergency requirement of spares or due to cancelation of POs placed on other vendor due to delivery delays etc. In order to cater to such urgent requirements of customer or site, this tender and subsequent Rate Contract envisages loading of urgently required items as per a transparent system explained below:
- 21.2 Whenever an urgent requirement arises, the list of such items with rate schedule, quantity, required delivery date in no. of days along with relevant GMS/material lists, painting scheme will be intimated. Number of days given in the urgent required items will be based on the site / customer requirement. The number of days given will vary from PO to PO. This is to avoid the unrealistic quotation of vendors.
- 21.3 The vendors quoting lesser delivery date than the prescribed number of days given by BHEL, shall not have any special preference. BHEL specified delivery period will be considered.

- 21.4 The vendors eligible for the products/rate schedule alone are eligible to quote. Wherever applicable, only those vendors approved by BIFPCL for Maitree project shall be allowed to participate in the urgent loading.
- 21.5 Offers should be submitted within the time limit specified by BHEL. Delayed offer shall not be considered.
- 21.6 The vendor who have pending POs with delivery overdue and or those do not have valid BG on the date of “invitation of bids” shall not be eligible to quote.
- 21.7 The “delivery bids” submitted through the system shall be opened on the specified date /time (in the presence of vendors) and the vendor/vendors who have accepted our delivery dates shall be considered for ordering based on the tender ranking, pending load and vendor’s capacity. In such cases, PO delivery will be the delivery quoted by the respective vendors.
- 21.8 In case all vendors give the delivery dates beyond BHEL specified delivery dates, the best delivery date of the vendors will be considered based on best delivery date, the tender ranking, pending load and vendor’s capacity.
- 21.9 The ordering “through urgent load portal” does not affect the regular loading on the same vendors. Thus the quantity loaded through urgent loading portal is an incentive for the performing vendors.
- 21.10 In case of Urgent Loading, delivery beyond the PO delivery date shall attract LD applicable as per NIT. If vendor unable to execute the urgent load PO within the delivery date, the loading of urgent POs on the vendor will be in hold for 90 days from the failed PO delivery date for urgent portal. This is to deter the vendors quoting unrealistic delivery and thus depriving the opportunity for genuine vendors.
- 21.11 All others terms and condition including the rate /MT shall be same as the rate contract. Destination shall be BHEL, Ranipet.
- 21.12 A system is designed to automatically block the vendors having “POs with delivery order due” from bidding under Urgent Load Portal. However, in case the “delivery overdue PO” is due to reasons attributable to BHEL, the concerned vendors shall inform the same to BHEL to remove the block.
- 21.13 When the quantity involved is considerable, BHEL specifies the delivery requirement and all the eligible vendors are allowed to quote the quantity they can execute within the BHEL specified delivery. Based on the quantum demanded by the vendors, the available load is distributed to all or as many vendors as possible. While distributing the load, the vendor having least pending orders will be given preference, besides considering their tender ranking, capacity of the vendor & past delivery performance. Vendor having pending POs with overdue delivery shall not be considered for subsequent ordering till the overdue PO is completed. All conditions of urgent portal will be applicable for this clause also.

22.0 CONFIDENTIALITY OBLIGATION:

- 22.1 All the documents of BHEL (inclusive of Drawings, GMS and Standards) made available to the vendor should be kept in strict confidence and under no circumstance be made available to others or allow others to make use of them. Such documents should be returned to BHEL after completion of the work ordered and also as and when BHEL demands.
- 22.2 The above **CONFIDENTIALITY** **CLAUSE** is binding on the employees of the vendors also. Any contravention will be viewed very seriously and may include cancelling the contract or legal action on the vendor.

23.0 RISK PURCHASE /PENALTIES /ABNORMALLY LOW BID:

- 23.1 In case any Vendor does not execute the orders within the PO delivery or mutually agreed extended delivery date, BHEL may cancel the PO partially or completely. Completely or partial cancelled quantum will be executed through other eligible Vendors at the Risk and cost of the Vendor, who has failed to execute the purchase order. Expenditure involved, if any will be recovered from the bills or from any amount due to the Vendor, who has failed to execute the purchase order/contract.
- 23.2 Vendors are cautioned that, withdrawal after price bid opening or after contract signing or PO/LOI acceptance will be construed as tampering with BHEL's tender process. Suitable action for suspension of further business with the vendor may be taken as per BHEL corporate procedures.
- 23.3 Vendors pending payments shall be withheld and/or their BG may be invoked to cover the liabilities of BHEL towards risk purchase, if any.
- 23.4 The supplier shall be liable for any loss which BHEL may sustain by reason of such risk purchases in addition to liquidated damages as detailed under LD clause.
- 23.5 It may please be noted that guidelines/rules in respect of suspension of business dealings', 'Vendor evaluation format' etc. may undergo change from time to time and the latest one shall be followed.
- 23.6 Abridged version of extant 'Guidelines for suspension of business dealings with suppliers/ contractors' has now been uploaded on www.bhel.com on "supplier registration page" at the following link: http://www.bhel.com/vender_registration/vender.php (Guidelines for suspension of business dealings with suppliers/ contractors).
- 23.7 A bid may be considered as abnormally low bid if (i) the bid price by the L-1 is lower by 30% (or more) than the indent estimate against Open tender and (ii) the difference between L-1 and L-2 bid price is more than 10% of the estimate. BHEL reserve the right to reject such abnormally low bids.**

24.0 VENDOR INFORMATION SYSTEM (VIS) COMMUNICATION:

- 24.1 BHEL will establish communication with our Vendors through **Vendor Information system**. Most of the mass communications are sent through VIS and hence vendors are advised to access VIS regularly.
- 24.2 Vendors are required to have Internet connectivity.
- 24.3 Vendors are required to access our web site on a regular basis.
- 24.4 Before commencing the job, latest GMS, Quality Plan applicable to the project or PO is to be ascertained, through the VIS portal. All the Quality records are to be referred from VIS portal.

25.0 OTHER CONDITIONS:

- 25.1 Partnership firms should have the latest Form-A (Rule 5) Declaration issued by Registrar of Firms and the copy of the same should be produced at the time of signing of the Contract.
- 25.2 BHEL, Ranipet never enters in to any agreement or never gives any undertaking or Power of Attorney to any Bank/s in relation to the Bill discounting facilities availed/ to be availed by its various vendors. BHEL, Ranipet has no obligation what so ever, directly or indirectly, to any Bank/s in relation to the Bills received by BHEL, Ranipet excepting payment of the same as authorized by the vendors at the time of entering into the contract, subject to the conditions for honoring the Bills provided in the contract and BHEL does not recognize any charge on the proceeds of the Bill. If any Bank initiates any legal action against fabricator/s in relation such facilities and includes BHEL a party in the said dispute, all legal expenses, cost and any other losses thereof shall be recovered from the concerned vendors.
- 25.3 All the Statutory Obligations such as ESI, PF, Labour Acts, Factories Act, GST, etc. will have to be taken care of by the vendor. BHEL will have no liability on them. Notwithstanding the above, if any demand notice is served by the concerned Statutory Authorities for recovery of any of their

dues on BHEL, the same would be paid with notice to the vendor and recovered from any pending / future bills.

- 25.4 All Safety Precautions and use of Safety Equipment's are to be followed while carrying out the fabrication and Dispatch of the same. The vendor must have proper tools and handling equipment's. There should always be a responsible person available to oversee the operation and compliance of safety regulation etc. If any non-compliance with respect to proper safety conditions/requirements, BHEL may withhold visit/inspection, instruct stoppage of work till such time the desired safety requirements/conditions are met with.
- 25.5 Non-Disclosure Agreement (NDA) forms part and parcel of the Contract. Non-submission of NDA will disqualify the firm. Format of the agreement is part of the techno-commercial bid. The same has to be downloaded from EPS and to be uploaded by subcontractors in EPS during submission of Bid as a confirmation to accept the provisions of Non-Disclosure Agreement (NDA).
- 25.6 Vendors are required to equip themselves with communication facilities like Telephone, internet and e-mail, etc. BHEL will have the right not to consider those vendors who do not equip themselves with these facilities.
- 25.7 The vendor shall be responsible for mismatch of components if any noticed at site during erection. Any rework shall be carried out by vendor at their cost and risk including transport, if necessary.
- 25.8 All clarifications pertaining to techno-commercial conditions of the tender shall be sought before submitting the offer. No claim for increase in rates will be entertained by BHEL.
- 25.9 **DEFINITIONS:** Throughout these conditions and in the specifications, **“THE CONTRACTEE” means the Bharat Heavy Electricals Limited**, acting through the Additional General Manager/WCM & Shipping, Ranipet unless the context otherwise provides **“THE CONTRACTOR/VENDOR ”** means the person, firm, vendor or company with whom the Purchase Order under this contract is placed and shall be deemed to include the Contractor's successors (approved by the Contractee) representatives, heirs, executors and administrators as the case may be unless excluded by the terms of the Contract. **“DRAWINGS”** means the drawings exhibited or provided for the guidance of the Contractor by the Contractee.
- 25.10 **EXECUTION:** The whole contract is to be executed in the most approved substantial and workman like manner to the entire satisfaction of the Contractee, or the Inspecting Officer who shall have power to reject any of the Structural which he may disapprove; and his decision thereon and any question as to the true intent and meaning of the specifications of drawing or of the work necessary for the proper completion of the contract, shall be final and conclusive. The contractee may require alteration if any to be made during the progress of work and should these alterations be such that either party to the contract considers as an alteration involving change in cost such alteration shall not be carried out until amended cost have been submitted by contractor and accepted by the Contractee. Should the Contractor proceed to work without obtaining the consent of the Contractee in writing to an amended cost of work the Contractor shall be deemed to have agreed to execute the work at such charges as may be considered reasonable by the Contractee.
- 25.11 **FORCE MAJEURE:** If any time during the continuance of this Contract the performance in whole or part by either part of any obligation under this contract shall be prevented or delayed by reasons of war, hostilities, acts of public enemy, civil commotions, sabotage, fires, floods, explosions, epidemic quarantine restrictions or acts of God (herein referred to as events), provided the notice of the happenings of any such events is given by either party to other party within 21 (Twenty one) days from the date of occurrence thereof, either party shall by reason of such event not be entitled to terminate this contract, nor shall either party have any claim for damages against the other in respect of such non-performance and delay in performance and delivery under the contract shall be

resumed as soon as possible after such event has come to an end or ceased to exist and the decision of the Contractee as to whether such event has come to an end or has ceased exist shall be final and conclusive. If the performance in whole or part of any obligation under this contract is prevented or delayed by reason of any such event, claims for extension of time shall be granted for periods considered reasonable by the Contractee subject to prompt notification by the Contractor to the Contractee of the particulars of the events and supply to the Contractee if required of any supporting evidence. Any waiver of time in respect of partial instalment shall not be deemed to be a waiver of time in respect of remaining work schedules.

25.12 TERMINATION OF CONTRACT/RISK PURCHASE: If as a result of difficulty in procurement of materials which is justified with proper documentary evidence and BHEL's concurrence or due to force majeure reasons or any other reasons whatsoever the contractor is unable to keep the delivery Schedule of the Contractee, the Contractee to the extent considered necessary may grant extension of time. Should there be delay in work, beyond the extended date of delivery, it shall be open to the Contractee to terminate the contract in part or full and make other arrangements for executing work elsewhere at the cost and risk of the Contractor. Any cost implication towards such alternate procurement shall be recovered from the Contractor.

25.13 INTERPRETATION: The Contractee shall decide any dispute or difference of opinion in respect of the interpretation, effect or application of this particular condition of the Contract or the amount recoverable hereunder from the contractor and the decision shall be final and conclusive.

25.14 BOOK EXAMINATION CLAUSE: The Contractor shall whenever required produce or cause to be produced for examination by any Officer of the Contractee authorized in that behalf, any cost or other account book or account voucher, receipt letter, memorandum, paper or writing or any copy extract from any such document and also furnish information and returns verified in such a manner as may be required in any way relating to the execution of this contract or relevant for verifying or ascertaining the cost of execution of this contract (the decision of such officer of the Contractee on this question or relevancy of any documents, information or return being final and binding on the Parties). The obligation imposed by this clause is without prejudice to the any other obligation under the contract / purchase order or under any statutes/ rules or orders binding the contractor. The contractor shall if the authorized officer or the Contractee so required (whether before or after the prices have been finally fixed), afford facilities to the officer of the Contractee concerned to visit the contractors works for the purpose of examining the process of manufacture and estimate or ascertaining the cost for production of the articles, if any portion of the work be carried out by a sub-contractor of any subsidiary of an allied firm or company, the authorized officer of the Contractee shall have power to secure the books of such sub-contractor, or any subsidiary or allied firm or company shall be open to his inspection.

25.15 SET OFF CLAUSES: "BHEL shall have the right to recover any money which in the sole opinion or BHEL is due from the Contractor from any money due to the Contractor under this Contract or any other contract or from the Security Deposit furnished by the Contractor under this Contract or any other contract".

"Notwithstanding anything to the contrary, including, but not limited to, provisions relating to extension of time and compensation/or delay, time shall be the essence of the Contract."

Notwithstanding anything contained herein, the payment shall be subject to the deduction of any amount for which the vendor is liable directly or indirectly under this contract or any other contract of the vendor or any other vendor's contract where the proprietor/any of the partners /directors of the present vendor is/are proprietor/director/s /partner/s, in respect of which BHEL, Ranipet is a Contractee".

25.16 **LAWS GOVERNING THE CONTRACT:** The Laws of Government of India in force shall govern the Contract. Irrespective of the place of the execution of the Contract /place of payment under the contract, the contract shall be deemed to have been made at the place at which the acceptance of the offer has been issued.

25.17 **JURISDICTION OF THE COURT:** The Courts at Ranipet, Tamil Nadu alone shall have jurisdiction to decide any dispute arising out of or in respect of the contract.

26. **GENERAL TERMS AND CONDITIONS OF REVERSE AUCTION**

BHEL reserves the right to go for reverse auctioning among the technically qualified bidders who have been sort listed after technical bid evaluation. “BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno commercial evaluation. All bidders to give their acceptance for participation in RA. **Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.**

In case BHEL decides to go for Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit “online sealed bid” in the Reverse Auction. Non-submission of "online sealed bid" by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.”

The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid. The envelope sealed price bid of successful L1 bidder in RA shall also be opened after RA and the order will be placed on lower of the two bids.

If it is found that L1 bidder has quoted higher in online sealed bid in comparison to envelope sealed bid, the bidder will be issued a warning letter to this effect. However, if the bidder repeats again it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors.

TERMS & CONDITIONS OF REVERSE AUCTION

Against these works at BHEL, Ranipet shop floors may resort to “REVERSE AUCTION PROCEDURE” i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

- a. The proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- b. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit “online sealed bid” in the Reverse Auction. Non-submission of “online sealed bid” by the bidder for any of the eligible items for which techno-commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
- c. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
- d. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
- e. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
- f. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
- g. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will

help to arrive at “Total Cost to BHEL” like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, GST and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.

- h. Reverse auction will be conducted on scheduled date & time.
- i. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
- j. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
- k. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL’s standard practice.
- l. Bidders shall be required to read the “Terms and Conditions” section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the “Business Rules of Reverse Auction”, which will be communicated before the Reverse Auction.
- m. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action *as per extant BHEL guidelines*, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
- n. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
- o. In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process. In case of tie for H1 bid (identical online sealed bids), 15 minutes additional time shall be provided and all the participating bidders shall be informed by mail/ message on bidding screen to enable bidders submit revised online sealed bids so as to break the tie.
- p. BHEL reserves the right to negotiate with the L1 tenderer emerged out of Reverse Auction if the L1 amount is more than the estimated amount.
- q. For more details, please visit our BHEL website <http://www.bhel.com> (Revision of ‘Guidelines for Reverse Auction’, issued on 26.09.2016.)

27. Arbitration:

- i) All disputes between the parties to the Contract, arising out of or relation to the Contract shall after written notice by either party to the Contract to the other party be referred and resolved by an Arbitrator nominated by the Unit Head of BHEL, Ranipet
- ii) The venue of Arbitration shall be Ranipet, Tamil Nadu. The arbitrator may hold meetings for convenience in such a place or places discretion.
- iii) The award of the Arbitrator shall be final, conclusive and binding on both parties to the Contract.
- iv) The Contractor shall, not with standing any disagreement, dispute, protest, request for arbitration, court or other proceedings, continue to perform the Services in accordance with the determinations, instructions and clarifications of BHEL.

Subject to the above, the appropriate court in Ranipet shall have the exclusive jurisdiction over any disputing arising out of or in connection with this Contract.

28. Discrepancy in “words “ & “ Figures “:

- a) If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly.
- b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and

- c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (a) and (b) above.
- d) If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored.

29. GUARANTEE OF FABRICATION AND PAINTING :

The contractor shall warrant that the conversion work comply fully with the drawings and other Technical conditions. If the jobs are found defective owing to faulty workmanship/Incomplete work within a period of **Two months** from the date of dispatch from the contractor's works, the contractor shall make good of it/replace the same free of cost. Alternatively, the rework/replacement charges will be recovered from the contractor.

30. **PERFORMANCE GUARANTEE:** 2% of contract value will be kept under hold towards security deposit for the guarantee period. The 2% value of the contract will be collected from the 1st running bill of the vendor through the bills submitted by them. This 2% contract value kept as a security deposit will be released only after expiry of guaranty period & production of no-due certificate from executing agency. The successful bidders, may also submit this Security Deposit amount in terms of FDR or BG to avoid deduction through first running bill.

31. RETURN OF SD :

If the Contractor performs and completes the work in all respects to the entire satisfaction of BHEL and presents an absolute **"No Demand Certificate"** in the prescribed form and returns properties belonging to BHEL handed over, lent or hired by him for carrying out the said works, Security Deposit will be released to the Contractor after deducting all cost of expenses or other amounts that are to be paid to BHEL under this or other contracts entered into with the Contractor. It may be noted that in no case the Security Deposit shall be refunded/released prior to passing of final bill.

For and on behalf of
AGM / WCM & Shipping
BAP, Bharat Heavy Electricals Limited, Ranipet-6

SECTION VII

BILL OF MATERIALS FOR STEEL CRATES

S.No.	Schedule	Material description	Specification	Unit	Qty	Indicative %
1	STEEL OPEN CRATES 1-35-390-30655 (End cover on both sides)	ISA 50x50x6	IS2062Fe410A	MT	0.309	10.75%
		ISA 65x65x6	IS2062Fe410A	MT	0.0617	2.15%
		ISMC 125x65	IS2062Fe410A	MT	0.5838	20.31%
		ISMC 250	IS2062Fe410A	MT	0.8563	29.78%
		ISMC 150	IS2062Fe410A	MT	0.9392	32.67%
		PLATE 10	IS2062Fe410A	MT	0.0212	0.74%
		SHEET 1.2	IS1079Fe330	MT	0.0894	3.11%
		TUBE DIA 73x9.53	IS106GrB	MT	0.0145	0.50%
		Total weight of each steel open crate			2.8751	100.00%

S.No.	Schedule	Material description	Specification	Unit	Qty	Indicative %
2	STEEL OPEN CRATES 1-35-390-30656 (End cover on both sides)	ISA 50x50x6	IS2062Fe410A	MT	0.3371	10.93%
		ISA 65x65x6	IS2062Fe410A	MT	0.0693	2.25%
		ISMC 125x65	IS2062Fe410A	MT	0.5838	18.92%
		ISMC 250	IS2062Fe410A	MT	0.8563	27.76%
		ISMC 150	IS2062Fe410A	MT	1.0904	35.35%
		PLATE 10	IS2062Fe410A	MT	0.0212	0.69%
		SHEET 1.2	IS2062E350	MT	0.1132	3.67%
		TUBE DIA 73x9.53	ASTMA53GRB	MT	0.0137	0.44%
		Total weight of each steel open crate			3.085	100.00%

Note: 1. Based on requirement, drawings may be revised and payment will be made on actual MT basis of particular rate schedule.

Annexure A

BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____¹ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) with its registered office at _____² hereinafter referred to as the 'Vendor / Contractor / Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (Rupees -----)/FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

We,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs --⁶ (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.

We thebank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

WeBANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier's liabilities.

This Guarantee shall remain in force upto and including.....⁷ and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the⁸ we shall be discharged from all liabilities under this guarantee thereafter.

We, BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁶
- b) This Guarantee shall be valid up to⁷
- c) Unless the Bank is served a written claim or demand on or before⁸ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ DATE OF EXPIRY OF CLAIM PERIOD

ANNEXURE B

CERTIFICATE FOR MSE

Certificate by Chartered Accountant on letter head

This is to Certify that M/S
 (hereinafter referred to as 'company') having its registered office at
 is registered under MSMED Act 2006, (Entrepreneur
 Memorandum No (Part-II) dtd:.....,
 Category: (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006 :
 Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:
 Rs.....Lacs

(Strike off whichever is not applicable)

The above investment of Rs.....Lacs is within permissible limit of Rs.....Lacs forMicro / Small (Strike off which is not applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) (Strike off which is not applicable) and the date of graduation of such enterprise from its original category is (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

 BHEL - Ranipet	THIRD PARTY NON-DISCLOSURE AGREEMENT	
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ANNEXURE-C

THIRD PARTY NON-DISCLOSURE AGREEMENT

I, _____, on behalf of the _____ (Name of Company), acknowledge that the information received or generated, directly or indirectly, while working with BHEL, Ranipet on contract is confidential and that the nature of the business of the BHEL, Ranipet is such that the following conditions are reasonable, and therefore:

I warrant and agree as follows:

I, or any other personnel employed or engaged by our company, agree not to disclose, directly or indirectly, any information related to the BHEL, Ranipet Without restricting the generality of the foregoing, it is agreed that we will not disclose such information consisting but not necessarily limited to:

- Technical information: Methods, drawings, processes, formulae, compositions, systems, techniques, inventions, computer programs/data/configuration and research projects.
- Business information: Customer lists, project schedules, pricing data, estimates, financial or marketing data,

On conclusion of contract, I, or any other personnel employed or engaged by our company shall return to BHEL, Ranipet all documents and property of BHEL, Ranipet, including: drawings, blueprints, reports, manuals, computer programs/data/configuration, and all other materials and all copies thereof relating in any way to BHEL, Ranipet 's business, or in any way obtained by me during the course of contract. I further agree that I, or any other persons employed or engaged by our company shall not retain copies, notes or abstracts of the foregoing.

This obligation of confidence shall continue after the conclusion of the contract also.

I acknowledge that the aforesaid restrictions are necessary and fundamental to the business of the BHEL, Ranipet and are reasonable given the nature of the business carried on by the BHEL, Ranipet I agree that this agreement shall be governed by and construed in accordance with the laws of country.

I enter into this agreement totally voluntarily, with full knowledge of its meaning, and without duress.

Dated at _____, this ____ day of _____, 20__.

Name

Company

Signature

ANNEXURE E: Declaration by the Bidder

Vendor Name & Address:		Vendor Code (For BHEL Approved vendors):		
PART A				
SL No	Description	QTY	Total weight in MT	Rates quoted for procurement of raw materials, Fabrication, assembly along with Transportation/Freight Charges (in Rs./MT) up to BHEL RANIPET, with Vendor materials (Excluding taxes) (YES/NO)
1	OPEN STEEL CRATE 12.5X2.5X2.0M CAPACITY 25MT	48	138.00	
2	OPEN STEEL CRATE 12.5X2.5X2.5M CAPACITY 25MT	100	308.50	
Total		148	446.50	
PART B				
SL No	To be mentioned by Vendors	DATA [I]	Remark	
1	GST (in %) applicable over and above the quoted Rates	_____%	if not applicable, then Vendor may submit the required supporting document	
2	GST Registration No.		To be filled by Vendor. if not applicable, then Vendor may Submit the required supporting document	
3	SAC Code	_____	if not applicable, then Vendor may submit the required supporting document	
4	HSN Code	_____	if not applicable, then Vendor may submit the required supporting document	
VENDOR'S AUTHORISED SIGNATORY				

ANNEXURE E: Declaration by the Bidder

DECLARATION:	
1. I/ We declare that we have quoted rates taking into account the cost for procurement of raw material, components, Fabrication, transportation cost of sending finished components on 'FOR Destination' basis up to BHEL, Ranipet and other costs (as mentioned in Section IV). 2. I/We declare that I/We have read and understood all the terms & conditions specified under all Sections I to VIII and Annexures A to F forming part of the tender to be signed with BHEL and agree to abide by the terms & conditions. 3. It is confirmed that I/we have not taken any deviation to any of the terms & conditions as mentioned in the above section. 4. I/We accept the terms and conditions of Section II to VIII and Annexure A to F and upload the mandatory documents forming part of Techno-commercial/Part-I bid evaluation process as mentioned in Section II. 5. I / We has/have understood that it is mandatory to fill the required details in PART A & B and NO Corrections or Revisions in the quoted rates will be accepted after the Tender Opening Date. If the Vendor fails submit its offer with the details required in PART A & B then Vendor's offer is liable to be rejected and Vendor's offer will not be considered for price bid evaluation. 6. I / We have thoroughly read and understood about quoting abnormally low rates and consequences of doing so and clauses regarding Delivery, LD, etc. 7. I / We have not been presently put on hold, suspended, de-listed, banned or black listed by any of the BHEL units and EXIM Bank. 8. I/We understood that, by submitting the duly signed Annexures/ Sections against this tender enquiry, it is presumed by BHEL that our firm is accepting all tender terms & conditions including all the Annexures & Sections of this Tender enquiry.	
VENDOR CONTACT DETAILS (for any clarification regarding the tender clarification/correction/deviation)	
Name	
Mobile No. & email Id	
Design./Relationship with the firm	
VENDOR'S AUTHORISED SIGNATORY	

ANNEXURE F: Extra rate schedule for Surface cleaning by power tool, Painting and stenciling as per the scope of work specified in the tender

Sl. No	RS No.	BROAD DESCRIPTION	UOM	Rate / Unit in Rs.
1	501	Surface cleaning by power tool, Painting and stenciling as per the scope of work for Shipping Crates	SQM	46

Details to be filled by the Bidder

S.no.	Description	To be filled by Tenderer
1.	Name of the Tenderer	
2.	Address for Communication	
3.	Telephone , Mobile No & Mail Id.	
4.	Details of experience in Similar Work	
5.	Has the Firm/ Proprietor or partners or directors been convicted of any criminal offence by any competent court. If so furnish particulars.	
6.	Whether the firm is individual firm or Sole proprietorship firm or partnership firm or Hindu undivided Family or association of persons or Private Limited company or Public Limited company or any other please specify.	
7.	Whether the contractor has registered his workmen under employees State Insurance Act. If so, the Registration No. / Enrolment Number may be furnished.	
8.	PAN no and documentary proof (Photo copy has to be enclosed)	
9.	Registration under Tamil Nadu GST, GST No. (Photo copy has to be enclosed)	
10.	The GST heads under which the enlisting person registered with Excise Authorities and copy of GST registration certificate has to be enclosed	
11.	Whether the contractor has registered his workmen under Employees Provident Fund and Miscellaneous Provisions Act. (Photo copy is to be enclosed)	


ACCEPTANCE FOR ELECTRONIC FUND TRANSFER / RTGS TRANSFER

01	NAME & ADDRESS OF THE SUPPLIER / VENDOR PHONE NO. WITH STD CODE	PAN NO.
02	VENDOR CODE (as in WORK ORDER)	
03	Details of Bank Account:	
A)	NAME & ADDRESS OF THE BANK (WITH PIN CODE)	
B)	BANK TELEPHONE NUMBER (WITH STD CODE)	
C)	BANK BRANCH CODE:	
D)	MICR CODE	
E)	ACCOUNT NUMBER	
F)	TYPE OF ACCOUNT	CURRENT / OD / CASH CREDIT
G)	VENDOR NAME AS PER BANK RECORDS	
H)	BANK BRANCH RTGS IFSC CODE	
I)	BANK BRANCH NEFT IFSC CODE	
J)	VENDOR'S EMAIL ID (give two ids)	
K)	NAME OF AUTHORISED SIGNATORY	

CERTIFICATE

I / We hereby agree to receive the payments due from BHARAT HEAVY ELECTRICALS LIMITED, RANIPET by the National Electronic Funds Transfer and/or RTGS Transfer mode by credit to my / our above mentioned Bank Account. I / We also agree that payments made to the above mentioned Account is a valid discharge of the liability of Bharat Heavy Electricals Limited, Ranipet. I / we also agree to bear the applicable Bank Charges for the above mode of transfer.

AUTHORISED SIGNATORY OF VENDOR WITH SEAL

Banker's Certification

We confirm that we are enabled for receiving RTGS and NEFT credits and we further confirm that the account number of _____ (name of account holder), the signature of the authorized signatory and the MICR and IFSC codes of our Branch mentioned above are correct.

PLACE:

DATE:

(Manager / Officer's
Signature Under Bank stamp)
Authorisation No. _____

Note: This EFT Form is to be submitted duly filled in manually in all fields and duly signed by Authorised Signatory and certified by Banker.

ANNEXURE- G
(To be submitted in a separate Envelope)

PRICE BID

Sl. No.	Description	Rate per MT in Rs.(Numerical)	Rate per MT in Rs.(Words))
1	OPEN STEEL CRATE 12.5X2.5X2.0M CAPACITY 25MT	Rs. _____	(Rupees in words..... only)
2	OPEN STEEL CRATE 12.5X2.5X2.5M CAPACITY 25MT	Rs. _____	(Rupees in words..... only)

Note:

1. Rates quoted for procurement of raw materials, Fabrication, assembly, Inspection, Transportation / Freight etc. (in Rs. /MT) up to BHEL, Ranipet, with Vendor materials (Excluding taxes).
2. If Vendor has not quoted for any of the above Sl. nos. in Price bid, then Vendor will not be considered for Price bid opening process. Vendor's offer will not be considered for price bid evaluation.
3. The above rates are quoted after having fully read and understood the enquiry terms and conditions.

APPROVED SUPPLIER LIST FOR STEEL

Vendor No	Vendor Name	Mat Group	Material Group Description	PARTNER NAME	CITY	EMAIL	Specification	PHONE1	Size Detail
20665	INDUSTEEL BELGIUM	STBQ1	PLATES:CARBON STEEL	INDUSTEEL PLATES INDIA LTD.	01	verena.bikar@arcelormittal.com	SA299	32(0)71 44 1691	TH=4-105, L=12000,WD=900-4000(MM)
22885	HANWA CO.LTD.,	STBQ1	PLATES:CARBON STEEL	REN ENERGYS		yagi-Keishiro@hanwa.co.jp	SA299	81 3 3544 2890	TH=60-200,L=13000(MAX),WD=1000-4500(MM)
11910	STEEL AUTHORITY OF INDIA LTD	STBQ1	PLATES:CARBON STEEL		CH		SA299		UPTO 80 MM THICKNESS
15064	ESSAR STEEL INDIA LIMITED,	STBQ1	PLATES:CARBON STEEL	ESSAR STEEL INDIA LTD	TN	P.Giri@essar.com	SA299	044 25351271	UPTO 80 MM THICKNESS
15351	JINDAL STEEL AND POWER LTD.,	STBQ1	PLATES:CARBON STEEL		OR	dinesh.tripathi@angul.jspl.com	SA299	06761 -264191	UPTO 80 MM THICKNESS
20666	INDUSTEEL LOIRE	STBQ1	PLATES:CARBON STEEL				SA299		TH=105-200,L=11350,WD=900-4000(MM)
20449	SALZGITTER MANNESMANN,	STBQ1	PLATES:CARBON STEEL	STEELCOMM CORPORATION LLP		scc.mum@stahlcorpn.com	SA299		UPTO 110 MM THICKNESS
20269	DILLINGER INTERNATIONAL	STBQ1	PLATES:CARBON STEEL	JHAVERI STEEL		nicole.Finkelstein@export.dilling er.biz	SA299	1 71 92 04 69	TH=8-210,L=2000-18000,WD=900-5200(MM)
24080	SUNLION PIPING ENGINEERING CO LTD.	STBQ2	PLATES:CARBON STEEL	JIANGYIN XINGCHENG SPECIAL STEEL		alex.yu@sunlionpiping.com	SA515	86-21-6173571...	SA 515, 516 - MAX THICKNESS 80 MM
12439	JINDAL STEEL & POWER LIMITED,	STBQ2	PLATES:CARBON STEEL	JINDAL STEEL AND POWER LTD.,	TN		SA515		UP TO 75 MM THICKNESS
20665	INDUSTEEL BELGIUM	STBQ2	PLATES:CARBON STEEL	INDUSTEEL PLATES INDIA LTD.	01	verena.bikar@arcelormittal.com	SA515	32(0)71 44 1691	TH=4-105, L=12000(MAX),WD=900-4000(MM)
20449	SALZGITTER MANNESMANN,	STBQ2	PLATES:CARBON STEEL	STEELCOMM CORPORATION LLP		scc.mum@stahlcorpn.com	SA515		TH=6-116,L=4000-16000,WD=1500-3500(MM)
15064	ESSAR STEEL INDIA LIMITED,	STBQ2	PLATES:CARBON STEEL	ESSAR STEEL INDIA LTD	TN	P.Giri@essar.com	SA515	044 25351271	UPTO THICKNESS 85 MM
20269	DILLINGER INTERNATIONAL	STBQ2	PLATES:CARBON STEEL	JHAVERI STEEL		nicole.Finkelstein@export.dilling er.biz	SA515	1 71 92 04 69	TH=8-300,L=2000-18000,WD=900-5200(MM)
15351	JINDAL STEEL AND POWER LTD.,	STBQ2	PLATES:CARBON STEEL		OR	dinesh.tripathi@angul.jspl.com	SA515	06761 -264191	UPTO 100 MM
11910	STEEL AUTHORITY OF INDIA LTD	STBQ2	PLATES:CARBON STEEL	STEEL AUTHORITY OF INDIA LTD	CH		SA515		TH=10-80, L=10000(MAX), WD=1000-2500(MM)
20666	INDUSTEEL LOIRE	STBQ2	PLATES:CARBON STEEL				SA515		TH=105-200,L=11350(MAX),WD=900-4000(MM)
16622	KALYANI STEELS LTD	STCBM	Carbon Steel round	KALYANI STEELS LIMITED	MH		SA179,SA192,SA210 GR A1 & GRC,SA106 GR B & GRC		ALL RANGE
10277	ISMT LIMITED,	STCBM	Carbon Steel round		MH	sunilkumar.tonk@ismt.co.in	SA179,SA192,SA210 GR A1 & GRC,SA106 GR B & GRC	020-2663 0144	ALL RANGE
23445	DAYE SPECIAL STEEL CO.,LTD	STCBM	Carbon Steel round		170		SA179,SA192,SA210 GR A1 & GRC,SA106 GR B & GRC		ALL RANGE
16872	JSW STEEL LIMITED	STCBM	Carbon Steel round	JSW STEEL LIMITED,	TN	manikandan.vijayakumar@jsw.in	SA179,SA192,SA210 GR A1 & GRC,SA106 GR B & GRC	044 4015 9929	ALL RANGE
10261	STEEL AUTHORITY OF INDIA	STCBM	Carbon Steel round		TN	bmassr@sail-steel.com	SA179,SA192,SA210 GR A1 & GRC,SA106 GR B & GRC	044 2823 3582	DIA: 200 MM-SA192 GR A1, SA210GRC, API 5LGR X 60 WITH PRE DESPATCH INSPECTION FOR FIRST LOT
12439	JINDAL STEEL & POWER LIMITED,	STCBM	Carbon Steel round	JINDAL STEEL AND POWER LTD.,	TN		SA179,SA192,SA210 GR A1 & GRC,SA106 GR B & GRC		ALL RANGE
23646	QINGDAO INTERCONTINENTAL STEEL LTD.	STCS1	PLATES: STRUCTURALS	WEST WORLD SALES,		thomaszhu7@gmail.com	SA515,SA516,SA203,SA204,SA2 40,	865328 0922806	UPTO THCK:135 MM FOR GRADE S420N AND 155 MM FOR GRADE A36
20269	DILLINGER INTERNATIONAL	STCS1	PLATES: STRUCTURALS	JHAVERI STEEL		nicole.Finkelstein@export.dilling er.biz	SA515,SA516,SA203,SA204,SA2 40,	1 71 92 04 69	TH=8-180,L=2000-18000,WD=900-5200(MM)
11910	STEEL AUTHORITY OF INDIA LTD	STCS1	PLATES: STRUCTURALS		CH		SA515,SA516,SA203,SA204,SA2 40,		MAX THICK-80 MM, L=10000(MAX), WD=1000-2500(MM)

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Vendor No	Vendor Name	Mat Group	Material Group Description	PARTNER NAME	CITY	EMAIL	Specification	PHONE1	Size Detail
20449	SALZGITTER MANNESMANN,	STCS1	PLATES: STRUCTURALS	STEELCOMM CORPORATION LLP		scc.mum@stahlcorpnl.com	SA515,SA516,SA203,SA204,SA2 40,		TH=6-175,L=4000-16000,WD=1500-3500(MM)
22885	HANWA CO.LTD.,	STCS1	PLATES: STRUCTURALS	REN ENERGYS		yagi-Keishiro@hanwa.co.jp	SA515,SA516,SA203,SA204,SA2 40,	81 3 3544 2890	TH=60-200,L=13000(MAX),WD=1000-4500(MM)
15351	JINDAL STEEL AND POWER LTD.,	STCS1	PLATES: STRUCTURALS		OR	dinesh.tripathi@angul.jspl.com	SA515,SA516,SA203,SA204,SA2 40,	06761 -264191	BS EN 10025-3 S420N MAX PLATE THICKNESS 115 MM
15064	ESSAR STEEL INDIA LIMITED,	STCS1	PLATES: STRUCTURALS	ESSAR STEEL INDIA LTD	TN	P.Giri@essar.com	SA515,SA516,SA203,SA204,SA2 40,	044 25351271	BS EN 10025-3 S420N MAX THICKNESS 115 MM
23085	POSCO DAEWOO CORPORATION	STCS1	PLATES: STRUCTURALS	AFT INDIA			SA515,SA516,SA203,SA204,SA2 40,	82 2 759 2114	CS PLATES TO SPEC TO ASTM A36 (UPTO 155 MM)
11908	STEEL AUTHORITY OF INDIA LTD	STCSP	PLATES&SHEETS:CAR BON		BH		IS 277,513,1079,2002,2062, 3502		E250 - W= 1250-2500 , L =9500-12500-MAX THICK-80 MM AND E350 BR/B0-UP TO 16 MM THICK.
15351	JINDAL STEEL AND POWER LTD.,	STCSP	PLATES&SHEETS:CAR BON		OR	dinesh.tripathi@angul.jspl.com	IS 277,513,1079,2002,2062, 3502	06761 -264191	E250 - THICK:UPTO 120 MM, WDT:1500-5000 MM, LENGTH: 6000-14000 MM AND E350 BR/B0- UP TO 63 MM THICK.
15114	TATA STEEL LIMITED	STCSP	PLATES&SHEETS:CAR BON		TN	sujeeth@tatasteel.com	IS 277,513,1079,2002,2062, 3502	0 9043013448	E250 - UPTO 16 MM THICK, MAX WIDTH 1650 MM AND E350 BR/B0- UP TO 8 MM THICK.
11912	STEEL AUTHORITY OF INDIA LTD	STCSP	PLATES&SHEETS:CAR BON		OR		IS 277,513,1079,2002,2062, 3502		E250 - W= 1250-2500 , L =9500-12500-MAX THICK-80 MM AND E350 BR/B0-UP TO 63 MM THICK.
11910	STEEL AUTHORITY OF INDIA LTD	STCSP	PLATES&SHEETS:CAR BON		CH		IS 277,513,1079,2002,2062, 3502		E250- W= 1250-2500 , L =9500-12500-MAX THICK-UPTO 120 MM AND E350 BR/B0- UP TO 100 MM THICK.
18340	JSW STEEL LTD.,	STCSP	PLATES&SHEETS:CAR BON		MH		IS 277,513,1079,2002,2062, 3502		W= 900-2000 , L =6000-12000- THK 2-63 MM
15064	ESSAR STEEL INDIA LIMITED,	STCSP	PLATES&SHEETS:CAR BON	ESSAR STEEL INDIA LTD	TN	P.Giri@essar.com	IS 277,513,1079,2002,2062, 3502	044 25351271	E250 - W= 900-4950, L =6000-13000-THK UPTO 130 MM AND E350 BR/B0-UP TO 130 MM THICK.
14789	JSW STEEL LTD.	STCSP	PLATES&SHEETS:CAR BON		KA	govinda.swamy@jsw.in	IS 277,513,1079,2002,2062, 3502	044 2829 7830	TH=0.9 TO 25MM,L=12300(MAX),WD=1250 TO 2000MM
11958	UTTAM VALUE STEELS LTD	STCSP	PLATES&SHEETS:CAR BON		MH	anand.kumar@uttamvalue.com	IS 277,513,1079,2002,2062, 3502	044 2435 5424	E250 - W= 900-1250, L =6000-12500-THK 3.15-63 MM AND E350 BR/B0- UP TO 56 MM THICK.
12439	JINDAL STEEL & POWER LIMITED,	STCSP	PLATES&SHEETS:CAR BON	JINDAL STEEL AND POWER LTD.,	TN		IS 277,513,1079,2002,2062, 3502		E250 - W: 1500-3500 , L: 6000-12500-THK: UPTO 100 MM AND E350 BR/B0-UP TO 80 MM THICK.
10597	WELSPUN CORP LIMITED,	STCSP	PLATES&SHEETS:CAR BON		MH	dharmendra_singh@welspun.co m	IS 277,513,1079,2002,2062, 3502	022-6613 6256	GRADES IS 2062 E250 & E350-A&BR, THICKNESS UPTO 63 MM
11958	UTTAM VALUE STEELS LTD	STCTP	PLATES&SHEETS:CORS N		MH	anand.kumar@uttamvalue.com	CORETNA,SA588GRA	044 2435 5424	TH=0.6-16,L=2000-6000,WD=900-1250(MM)
14789	JSW STEEL LTD.	STCTP	PLATES&SHEETS:CORS N		KA	govinda.swamy@jsw.in	CORETNA,SA588GRA	044 2829 7830	1.6 MM TO 25 MM
10260	STEEL AUTHORITY OF INDIA LTD	STCTP	PLATES&SHEETS:CORS N		TN	aspres@eth.net	CORETNA,SA588GRA	0431 22415231	TH=0.6-16,L=2000-6000,WD=1000-2000(MM)
15928	STEEL AUTHORITY OF INDIA LTD.,	STLHS	Structural Heavy Sec		WB		IS2062GRA/BE250FE410W	0341 203506	A130-200, B400-600, C300-400MM
16312	JEEVAKA INDUSTRIES PVT LTD	STLHS	Structural Heavy Sec		TG	jeevakamail@gmail.com	IS2062GRA/BE250FE410W	040 23771692	ALL RANGE

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Vendor No	Vendor Name	Mat Group	Material Group Description	PARTNER NAME	CITY	EMAIL	Specification	PHONE1	Size Detail
19740	BEEKAY STRUCTURAL STEELS.,	STLHS	Structural Heavy Sec		AP	structural@eekaysteel.com	IS2062GRA/BE250FE410W	0891-6539029	A130-200, B400-600, C300-400MM
12439	JINDAL STEEL & POWER LIMITED,	STLHS	Structural Heavy Sec	JINDAL STEEL AND POWER LTD.,	TN		IS2062GRA/BE250FE410W		A130-200, B400-600, C300-400MM
18396	NOBLE TECH INDUSTRIES PVT. LIMITED,	STLHS	Structural Heavy Sec		TN	vkgstructurals@yahoo.co.in	IS2062GRA/BE250FE410W	044 2467 2501	A130-200, B400-600, C300-400MM
18185	SPLENDID METAL PRODUCTS LTD,	STLHS	Structural Heavy Sec		AP	simplexim@sujana.com	IS2062GRA/BE250FE410W	0891-2587900	A130-200, B400-600, C300-400MM
17555	MAHAMAYA STEEL INDUSTRIES,	STLHS	Structural Heavy Sec		CH	steel@rajeshtrips.com	IS2062GRA/BE250FE410W	0771 6450501	A130-200, B400-600, C300-400MM
10786	NANDAN STEELS & POWER LTD.,	STLHS	Structural Heavy Sec		CH	office@nandansteels.com	IS2062GRA/BE250FE410W	0771-4078000/19	A130-200, B400-600, C300-400MM
17017	VANDANA ISPAT LIMITED	STLHS	Structural Heavy Sec		CH	vandanaipat@gmail.com	IS2062GRA/BE250FE410W	0771 2535244	ANGLES:130-200 MM,BEAMS:400-500 MM, CHANNELS: 300-400 MM
13541	PRIME ISPAT LIMITED,	STLHS	Structural Heavy Sec		CH	pil@primeipat.com	IS2062GRA/BE250FE410W	0771-421 2345/00	A130-200, B400-600, C300-400MM
100140	MADHAV STELCO PVT. LTD	STLHS	Structural Heavy Sec		PB	arpit@madhavstelco.com	IS2062GRA/BE250FE410W	01765-305600	ANGLES:110 TO 200 MM, CHANNEL:300 MM
18320	C.G.ISPAT (P) LIMITED.,	STLHS	Structural Heavy Sec		CH	cgispat@yahoo.com	IS2062GRA/BE250FE410W	0771 2101738	ANGLES 130 TO 200 MM ,CHANNEL 300 TO 400 MM,BEAM 400 TO 600 MM.
14892	SHRI BAJRANG ALLOYS LTD.	STLHS	Structural Heavy Sec		CH	sales.sbal@goelmt.com	IS2062GRA/BE250FE410W	0771 428 8000	ANGLE - 110 TO 250MM, BEAM 400 TO 500 MM CHANNEL 300 TO 400 MM
11910	STEEL AUTHORITY OF INDIA LTD	STLHS	Structural Heavy Sec		CH		IS2062GRA/BE250FE410W		A130-200, B400-600, C300-400MM
15939	KHYATI ISPAT LTD	STLHS	Structural Heavy Sec		CH	khyati_ipat@yahoo.com	IS2062GRA/BE250FE410W	0771 232 5519	ANGLE/CHANNEL: UPTO 200MM/300MM
17787	MTC BUSINESS PVT LTD	STLHS	Structural Heavy Sec		TN	sachinparmaar@mtcgroup.in	IS2062GRA/BE250FE410W	044 40858687	ANGLE:130-200 MM, BEAMS:400-500 MM, CHANNEL:300-400 MM
11906	STEEL AUTHORITY OF INDIA LTD	STLHS	Structural Heavy Sec		WB		IS2062GRA/BE250FE410W		A130-200, B400-600, C300-400MM
13999	SKS ISPAT & POWER LTD,	STLHS	Structural Heavy Sec	SKS ISPAT & POWER LTD,	DL	rohitjaiswal@sksispat.com	IS2062GRA/BE250FE410W	011-25897779	A130-200, B400-600 C300-400MM
13338	RELIABLE SPONGE PVT.LTD.,	STLHS	Structural Heavy Sec		OR	mvsl.in@gmail.com	IS2062GRA/BE250FE410W	0661-2402344	A130-200, B400-600, C300-400MM
13474	K L STEELS (P) LTD,	STLHS	Structural Heavy Sec		UP		IS2062GRA/BE250FE410W	0120 419 8405...	A130-200, B400-600, C300-400MM
11540	RASHTRIYA ISPAT NIGAM LIMITED	STLLS	Structural Light Sec	RASHTRIYA ISPAT NIGAM LIMITED	TN	rinlbsochennai@yahoo.com	IS2062 GR.A E250FE410W	044 - 28240557	A40-65,B125-200,C75-150MM
18406	PUSHPAK STEEL INDUSTRIES PVT LTD.	STLLS	Structural Light Sec		MH	pushpaksteels@gmail.com	IS2062 GR.A E250FE410W	021 3566 8909	ANGLES UPTO 65 MM
18423	CHENNAI UNITED METAL INDUSTRIES	STLLS	Structural Light Sec		TN	chennaiumi@yahoo.com	IS2062 GR.A E250FE410W	0 74011 20334	ANGLES: 40 TO 65 MM
15897	MAHAVIR STEEL INDUSTRIES LTD.	STLLS	Structural Light Sec		MH	ranjeetchakra@rediffmail.com	IS2062 GR.A E250FE410W	022 6633 1210	ANGLES: 50-65 MM, BEAMS: 125-200 MM & CHANNELS: 75-100 MM
10786	NANDAN STEELS & POWER LTD.,	STLLS	Structural Light Sec		CH	office@nandansteels.com	IS2062 GR.A E250FE410W	0771-4078000/19	A40-65,B125-200,C75-150MM
100140	MADHAV STELCO PVT. LTD	STLLS	Structural Light Sec		PB	arpit@madhavstelco.com	IS2062 GR.A E250FE410W	01765-305600	ANGLES:40 TO 65 MM, CHANNEL:125 TO 150 MM, BEAM:150 TO 200 MM
18782	PMP IRON AND STEELS (INDIA) LTD	STLLS	Structural Light Sec		TN	pmpvenkat@gmail.com	IS2062 GR.A E250FE410W	04423745203	ANGLES 25X3 TO 65X6
15928	STEELAUTHORITY OF INDIA LTD.,	STLLS	Structural Light Sec		WB		IS2062 GR.A E250FE410W	0341 203506	A40-65,B125-200,C75-150MM

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Vendor No	Vendor Name	Mat Group	Material Group Description	PARTNER NAME	CITY	EMAIL	Specification	PHONE1	Size Detail
17787	MTC BUSINESS PVT LTD	STLLS	Structural Light Sec		TN	sachinparmaar@mtcgroup.in	IS2062 GR.A E250FE410W	044 40858687	(ANGLE:50-65 MM, BEAMS:125-200 MM, CHANNEL:75-150 MM)
17017	VANDANA ISPAT LIMITED	STLLS	Structural Light Sec		CH	vandanaispat@gmail.com	IS2062 GR.A E250FE410W	0771 2535244	BEAM:150-200 MM, CHANNELS: 125-150 MM
17624	GOYAL ENERGY & STEEL PVT LTD	STLLS	Structural Light Sec		CH	steelangle.gespl@yahoo.in	IS2062 GR.A E250FE410W	0771 409 1047	A: 40-65 MM & C: 75-100 MM
17019	VANDANA ROLLING MILLS LIMITED	STLLS	Structural Light Sec		CH	vandanaispat@gmail.com	IS2062 GR.A E250FE410W	0771 2535244	ANGLES:40-65 MM,BEAMS:125 MM, CHANNELS: 75 & 100 MM
14892	SHRI BAJRANG ALLOYS LTD.	STLLS	Structural Light Sec		CH	sales.sbal@goeltmt.com	IS2062 GR.A E250FE410W	0771 428 8000	BEAM 100 TO 200 MM CHANNEL 125 TO 150 MM
18320	C.G.ISPAT (P) LIMITED.,	STLLS	Structural Light Sec		CH	cgispat@yahoo.com	IS2062 GR.A E250FE410W	0771 2101738	CHANNEL 125 TO 150 MM, BEAM 125 TO 200 MM
19463	RAMSONS CASTINGS PVT LTD	STLLS	Structural Light Sec		MH	marketing@ramsons.co.in	IS2062 GR.A E250FE410W	07122435903	35 TO 65 MM IS 2062 - FE 410 GR A.
14673	FERROMET STEELS PVT. LTD.	STLLS	Structural Light Sec		TN	ferrometsteel@gmail.com	IS2062 GR.A E250FE410W	044 3790 9500	UPTO ANGLES 65MM
11906	STEEL AUTHORITY OF INDIA LTD	STLLS	Structural Light Sec		WB		IS2062 GR.A E250FE410W		A40-65,B125-200,C75-150MM
12439	JINDAL STEEL & POWER LIMITED,	STLLS	Structural Light Sec	JINDAL STEEL AND POWER LTD.,	TN		IS2062 GR.A E250FE410W		A40-65,B125-200,C75-150MM
13338	RELIABLE SPONGE PVT.LTD.,	STLLS	Structural Light Sec		OR	mvsl.in@gmail.com	IS2062 GR.A E250FE410W	0661-2402344	A40-65,B125-200,C75-150MM
13474	K L STEELS (P) LTD,	STLLS	Structural Light Sec		UP		IS2062 GR.A E250FE410W	0120 419 8405...	A40-65,B125-200,C75-150MM
15939	KHYATI ISPAT LTD	STLLS	Structural Light Sec		CH	khyati_ispat@yahoo.com	IS2062 GR.A E250FE410W	0771 232 5519	ANGLE/CHANNEL/BEAM: UPTO 65MM/150MM/200MM
19740	BEEKAY STRUCTURAL STEELS.,	STLLS	Structural Light Sec		AP	structural@eekaysteel.com	IS2062 GR.A E250FE410W	0891-6539029	A40-65,B125-200,C75-150MM
18396	NOBLE TECH INDUSTRIES PVT. LIMITED,	STLLS	Structural Light Sec		TN	vkgstructurals@yahoo.co.in	IS2062 GR.A E250FE410W	044 2467 2501	A40-65,B125-200,C75-150MM
18185	SPLENDID METAL PRODUCTS LTD,	STLLS	Structural Light Sec		AP	simplexim@sujana.com	IS2062 GR.A E250FE410W	0891-2587900	A40-65,B125-200,C75-150MM
17555	MAHAMAYA STEEL INDUSTRIES,	STLLS	Structural Light Sec		CH	steel@rajeshtrips.com	IS2062 GR.A E250FE410W	0771 6450501	A40-65,B125-200,C75-150MM
13999	SKS ISPAT & POWER LTD,	STLLS	Structural Light Sec	SKS ISPAT & POWER LTD,	DL	rohitjaiswal@sksispat.com	IS2062 GR.A E250FE410W	011-25897779	A40-65,B125-200,C75-150MM
11910	STEEL AUTHORITY OF INDIA LTD	STLLS	Structural Light Sec		CH		IS2062 GR.A E250FE410W		A40-65,B125-200,C75-150MM
14771	KANISHK STEEL INDUSTRIES Ltd.,	STLLS	Structural Light Sec		TN	obadarinath@gmail.com	IS2062 GR.A E250FE410W	044-42919700	A40-65,B125-200,C75-150MM
16312	JEEVAKA INDUSTRIES PVT LTD	STLLS	Structural Light Sec		TG	jeevakamail@gmail.com	IS2062 GR.A E250FE410W	040 23771692	ALL RANGE
13541	PRIME ISPAT LIMITED,	STLLS	Structural Light Sec		CH	pil@primeispat.com	IS2062 GR.A E250FE410W	0771-421 2345/00	A40-65,B125-200,C75-150MM
18423	CHENNAI UNITED METAL INDUSTRIES	STLMS	Structural MediumSec		TN	chennaiumi@yahoo.com	IS2062GRA/BE250FE410W	0 74011 20334	ANGLES: 75 TO 100 MM
13999	SKS ISPAT & POWER LTD,	STLMS	Structural MediumSec	SKS ISPAT & POWER LTD,	DL	rohitjaiswal@sksispat.com	IS2062GRA/BE250FE410W	011-25897779	A75-100, B250-350, C200-250MM
15897	MAHAVIR STEEL INDUSTRIES LTD.	STLMS	Structural MediumSec		MH	ranjeetchakra@rediffmail.com	IS2062GRA/BE250FE410W	022 6633 1210	ANGLES: 75-110 MM
13474	K L STEELS (P) LTD,	STLMS	Structural MediumSec		UP		IS2062GRA/BE250FE410W	0120 419 8405...	A75-100, B250-350, C200-250MM
11906	STEEL AUTHORITY OF INDIA LTD	STLMS	Structural MediumSec		WB		IS2062GRA/BE250FE410W		A75-100, B250-350, C200-250MM
11910	STEEL AUTHORITY OF INDIA LTD	STLMS	Structural MediumSec		CH		IS2062GRA/BE250FE410W		A75-100, B250-350, C200-250MM

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Vendor No	Vendor Name	Mat Group	Material Group Description	PARTNER NAME	CITY	EMAIL	Specification	PHONE1	Size Detail
17787	MTC BUSINESS PVT LTD	STLMS	Structural MediumSec		TN	sachinparmaar@mtcgroup.in	IS2062GRA/BE250FE410W	044 40858687	ANGLE:75-100 MM, BEAMS:250-350 MM, CHANNEL:200-250 MM
18406	PUSHPAK STEEL INDUSTRIES PVT LTD.	STLMS	Structural MediumSec		MH	pushpaksteels@gmail.com	IS2062GRA/BE250FE410W	021 3566 8909	ANGLES UPTO 75 MM
19740	BEEKAY STRUCTURAL STEELS.,	STLMS	Structural MediumSec		AP	structural@eekaysteel.com	IS2062GRA/BE250FE410W	0891-6539029	A75-100, B250-350, C200-250MM
17624	GOYAL ENERGY & STEEL PVT LTD	STLMS	Structural MediumSec		CH	steelangle.gespl@yahoo.in	IS2062GRA/BE250FE410W	0771 409 1047	A: 75-100 MM
18396	NOBLE TECH INDUSTRIES PVT. LIMITED,	STLMS	Structural MediumSec		TN	vkgstructurals@yahoo.co.in	IS2062GRA/BE250FE410W	044 2467 2501	A75-100, B250-350, C200-250MM
18320	C.G.ISPAT (P) LIMITED.,	STLMS	Structural MediumSec		CH	cgispat@yahoo.com	IS2062GRA/BE250FE410W	0771 2101738	A 80-100,B250-350,C200-250 MM
18185	SPLENDID METAL PRODUCTS LTD,	STLMS	Structural MediumSec		AP	simplexim@sujana.com	IS2062GRA/BE250FE410W	0891-2587900	A75-100, B250-350, C200-250MM
14892	SHRI BAJRANG ALLOYS LTD.	STLMS	Structural MediumSec		CH	sales.sbal@goeltmt.com	IS2062GRA/BE250FE410W	0771 428 8000	ANGLE -75 TO 100MM, BEAM 250 TO 350 MM CHANNEL 175 TO 250 MM
17555	MAHAMAYA STEEL INDUSTRIES,	STLMS	Structural MediumSec		CH	steel@rajeshtrips.com	IS2062GRA/BE250FE410W	0771 6450501	A75-100, B250-350, C200-250MM
13541	PRIME ISPAT LIMITED,	STLMS	Structural MediumSec		CH	pil@primeispat.com	IS2062GRA/BE250FE410W	0771-421 2345/00	A75-100, B250-350, C200-250MM
14771	KANISHK STEEL INDUSTRIES Ltd.,	STLMS	Structural MediumSec		TN	obadarinath@gmail.com	IS2062GRA/BE250FE410W	044-42919700	A75-100, B250-350, C200-250MM
17019	VANDANA ROLLING MILLS LIMITED	STLMS	Structural MediumSec		CH	vandanaispat@gmail.com	IS2062GRA/BE250FE410W	0771 2535244	ANGLES:75-90 MM
12439	JINDAL STEEL & POWER LIMITED,	STLMS	Structural MediumSec	JINDAL STEEL AND POWER LTD.,	TN		IS2062GRA/BE250FE410W		A75-100, B250-350, C200-250MM
17017	VANDANA ISPAT LIMITED	STLMS	Structural MediumSec		CH	vandanaispat@gmail.com	IS2062GRA/BE250FE410W	0771 2535244	ANGLES:100 MM,BEAMS:250-350 MM, CHANNELS: 200-250 MM
15939	KHYATI ISPAT LTD	STLMS	Structural MediumSec		CH	khyati_ispat@yahoo.com	IS2062GRA/BE250FE410W	0771 232 5519	ANGLE/CHANNEL/BREAM: UPTO 100MM/250MM/250MM
15928	STEELAUTHORITY OF INDIA LTD.,	STLMS	Structural MediumSec		WB		IS2062GRA/BE250FE410W	0341 203506	A75-100, B250-350, C200-250MM
13338	RELIABLE SPONGE PVT.LTD.,	STLMS	Structural MediumSec		OR	mvsl.in@gmail.com	IS2062GRA/BE250FE410W	0661-2402344	A75-100, B250-350, C200-250MM
100140	MADHAV STELCO PVT. LTD	STLMS	Structural MediumSec		PB	arpit@madhavstelco.com	IS2062GRA/BE250FE410W	01765-305600	ANGLES:70 TO 100 MM, CHANNEL:175 TO 250 MM, BEAM:250 MM
16312	JEEVAKA INDUSTRIES PVT LTD	STLMS	Structural MediumSec		TG	jeevakamail@gmail.com	IS2062GRA/BE250FE410W	040 23771692	ALL RANGE
11540	RASHTRIYA ISPAT NIGAM LIMITED	STLMS	Structural MediumSec	RASHTRIYA ISPAT NIGAM LIMITED	TN	rlnbsochenai@yahoo.com	IS2062GRA/BE250FE410W	044 - 28240557	A75-100, B250-350, C200-250MM
10786	NANDAN STEELS & POWER LTD.,	STLMS	Structural MediumSec		CH	office@nandansteels.com	IS2062GRA/BE250FE410W	0771-4078000/19	A75-100, B250-350, C200-250MM
13474	K L STEELS (P) LTD,	STLUB	Structurl UniverBeam		UP		IS2062GRA/BE250FE410W	0120 419 8405...	NPB 200 @ 25.09 KG/MTR, UB 254 @ 37 KG/MTR & UB 305 @ 46.11 KG/MTR
15928	STEELAUTHORITY OF INDIA LTD.,	STLUB	Structurl UniverBeam		WB		IS2062GRA/BE250FE410W	0341 203506	PARALLEL FLANGE BEAM OF SIZE NPB 400 MM, NPB 450 MM, NPB 500 MM AND NPB 600 MM.
12439	JINDAL STEEL & POWER LIMITED,	STLUB	Structurl UniverBeam	JINDAL STEEL AND POWER LTD.,	TN		IS2062GRA/BE250FE410W		UB 203-UB 600, WPLB 700& WPHB 700
23005	SIAM YAMATO STEEL CO. LTD.	STLUB	Structurl UniverBeam	MITSUI & CO. INDIA PVT. LTD.,		PONGKEEY@SYSSSTEEL.CO M	IS2062GRA/BE250FE410W	622 5862 7836	SIZE : UB 203-UB 600

APPROVED SUPPLIER LIST FOR STEEL

Vendor No	Vendor Name	Mat Group	Material Group Description	PARTNER NAME	CITY	EMAIL	Specification	PHONE1	Size Detail
15939	KHYATI ISPAT LTD	STLUB	Structurl UniverBeam		CH	khyati_ispat@yahoo.com	IS2062GRA/BE250FE410W	0771 232 5519	152X152, 100X116 & 203X152 MM
12857	SUNFLAG IRON & STEEL CO.LTD.,	STRD1	ROUNDS: CARBON STEEL		MH	muraliv@sunflagsteel.com	IS2062GRA,SA105,SA105GR2	044-24342262	DIA: 8 TO 180 MM, LENGTH: 6.1 MTRS.
10257	STAR WIRE(INDIA) LTD	STRD1	ROUNDS: CARBON STEEL		HR	powersectormktg@splsteel.com	IS2062GRA,SA105,SA105GR2	0129-5241263	DIA: 6 MM TO 400 MM, LENGTH: 4 TO 6 MTRS
16478	RMG ALLOY STEEL LIMITED	STRD1	ROUNDS: CARBON STEEL		MH	nitin_bhat@remi.welspun.com	IS2062GRA,SA105,SA105GR2	022 6133 6984	UPTO DIA 114.3 MM
10469	ARCVAC FORGECAST PRIVATE LIMITED,	STRD1	ROUNDS: CARBON STEEL		WB		IS2062GRA,SA105,SA105GR2		FORGED ROUNDS ONLY
10277	ISMT LIMITED,	STRD1	ROUNDS: CARBON STEEL		MH	sunilkumar.tonk@ismt.co.in	IS2062GRA,SA105,SA105GR2	020-2663 0144	DIA 6 - 200 MM, LENGTH 6.1 MTRS
10591	VIKRANT FORGE PRIVATE LIMITED,	STRD1	ROUNDS: CARBON STEEL		WB	mktg@smithy.in	IS2062GRA,SA105,SA105GR2	033 2659 1870	FORGED CARBON STEEL
10261	STEEL AUTHORITY OF INDIA	STRD1	ROUNDS: CARBON STEEL	STEEL AUTHORITY OF INDIA LTD	TN	bmassr@sail-steel.com	IS2062GRA,SA105,SA105GR2	044 2823 3582	DIA 20-300 MM, LENGTH 6.1 MTRS
18063	GORADIA SPECIAL STEELS LTD	STRD1	ROUNDS: CARBON STEEL		MH	info@goradia.in	IS2062GRA,SA105,SA105GR2	0219 2274287	FORGED ROUNDS OF DIA 120 MM TO 500 MM
16446	SANGHVI FORGINGS & ENGINEERING LTD	STRD1	ROUNDS: CARBON STEEL		GJ	ho@sanghiviforge.com	IS2062GRA,SA105,SA105GR2	02668 263020	FORGED ROUNDS ONLY.
10260	STEEL AUTHORITY OF INDIA LTD	STRDS	ROUNDS: CARBON STEEL	STEEL AUTHORITY OF INDIA LTD	TN	aspres@eth.net	BMC20,BS970EN44,IS1875CLIV, IS2062,IS2062FE410WA,IS2062GRA,SA	0431 22415231	6MM, 8MM & 10MM WIRE RODS, SPECIFICATION : IS2062GRA.
10257	STAR WIRE(INDIA) LTD	STRDS	ROUNDS: CARBON STEEL		HR	powersectormktg@splsteel.com	BMC20,BS970EN44,IS1875CLIV, IS2062,IS2062FE410WA,IS2062GRA,SA	0129-5241263	6 MM - 400 MM, LENGTH 4-6 MTRS
11540	RASHTRIYA ISPAT NIGAM LIMITED	STRDS	ROUNDS: CARBON STEEL	RASHTRIYA ISPAT NIGAM LIMITED	TN	rinlbsochennai@yahoo.com	BMC20,BS970EN44,IS1875CLIV, IS2062,IS2062FE410WA,IS2062GRA,SA	044 - 28240557	DIA 5.5-80 MM, LENGTH 12 MTRS
18063	GORADIA SPECIAL STEELS LTD	STRDS	ROUNDS: CARBON STEEL		MH	info@goradia.in	BMC20,BS970EN44,IS1875CLIV, IS2062,IS2062FE410WA,IS2062GRA,SA	0219 2274287	FORGED ROUNDS OF DIA 120 MM TO 500 MM
12857	SUNFLAG IRON & STEEL CO.LTD.,	STRDS	ROUNDS: CARBON STEEL		MH	muraliv@sunflagsteel.com	BMC20,BS970EN44,IS1875CLIV, IS2062,IS2062FE410WA,IS2062GRA,SA	044-24342262	DIA 8-180 MM, LENGTH 6.1 MTRS
10261	STEEL AUTHORITY OF INDIA	STRDS	ROUNDS: CARBON STEEL	STEEL AUTHORITY OF INDIA LTD	TN	bmassr@sail-steel.com	BMC20,BS970EN44,IS1875CLIV, IS2062,IS2062FE410WA,IS2062GRA,SA	044 2823 3582	DIA 20-300 MM, LENGTH 6.1 MTRS
10469	ARCVAC FORGECAST PRIVATE LIMITED,	STRDS	ROUNDS: CARBON STEEL		WB		BMC20,BS970EN44,IS1875CLIV, IS2062,IS2062FE410WA,IS2062GRA,SA		FORGED ROUNDS ONLY
10277	ISMT LIMITED,	STRDS	ROUNDS: CARBON STEEL		MH	sunilkumar.tonk@ismt.co.in	BMC20,BS970EN44,IS1875CLIV, IS2062,IS2062FE410WA,IS2062GRA,SA	020-2663 0144	DIA 25 - 200 MM, LENGTH 6.1 MTRS

Steel suppliers from BHEL, Ranipet

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
20047	KANEMATSU TRADING CORPORATION	WELDING FLUX-DRUM	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	AS PER BHEL WCPI	WCPI 403		81 3 5283 3680	NOT APPLICABLE
10081	ESAB INDIA LTD	WELDING FLUX-DRUM	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	AS PER BHEL WCPI	WCPI 403	CHENNAI	044-4340 4803	NOT APPLICABLE
11712	TAPADIA ENGINEERS & TRADERS P.LTD.	WELDING FLUX-DRUM	Permanent	Welding Consumables		tet_tgirpr@rediffmail.com	AS PER BHEL WCPI	WCPI 403	RAIPUR	0770 - 4090636	NOT APPLICABLE
11712	TAPADIA ENGINEERS & TRADERS P.LTD.	WELDING FLUX-FIN	Permanent	Welding Consumables		tet_tgirpr@rediffmail.com	AS PER BHEL WCPI	WCPI 405	RAIPUR	0770 - 4090636	NOT APPLICABLE
20563	VOESTALPINE BOHLER WELDING	GTAW WIRE FOR T92	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co.m	GTAW WIRE FOR SA335T92 WELDING	-----	GERMANY	2381271759	DIA.0.8,1.0 & 1.2MM
21411	METRODE PRODUCTS LIMITED,	GTAW WIRE FOR T92	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod.e.com	GTAW WIRE FOR SA335T92 WELDING	-----			DIA.0.8,1.9,1.0 & 1.2MM
20563	VOESTALPINE BOHLER WELDING	ER80S-B2 BPGMAW WIRE	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co.m	ASME.SEC.IIC,SFA-5.28,ER80S-B2	WCPI-169	GERMANY	2381271759	DIA.1.2MM
20047	KANEMATSU TRADING CORPORATION	ER80S-B2 BPGMAW WIRE	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ASME.SEC.IIC,SFA-5.28,ER80S-B2	WCPI-169		81 3 5283 3680	DIA.1.2 MM
10081	ESAB INDIA LTD	ER80S-B2 BPGMAW WIRE	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	ASME.SEC.IIC,SFA-5.28,ER80S-B2	WCPI-169	CHENNAI	044-4340 4803	DIA.1.2MM
21991	SPECIAL METALS WELDING PRODUCTS	GMAW WIRE ERNiCrFe-7A	Permanent	Welding Consumables		klowman@smwpc.com	ASME.SEC.II.C.SFA-5.14.ERNICRFE-7A	----	NORTH CAROLINA 28658	828-465-0352	DIA.0.8,0.9 & 1.0MM
20563	VOESTALPINE BOHLER WELDING	ER 70S-A1 GMAW WIRE	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co.m	ER70S-A1	WCPI 152	GERMANY	2381271759	DIA.0.8,1.0 & 1.2MM
21461	INDUSTRIA NAZIONALE ELETTRODI S.p.A	ER 70S-A1 GMAW WIRE	Permanent	Welding Consumables	SATKUL ENTERPRISES LTD.	doriana.depoli@ine.it	ER70S-A1	WCPI 152	ITALY.		DIA. 0.8MM
20047	KANEMATSU TRADING CORPORATION	ER 70S-A1 GMAW WIRE	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ER70S-A1	WCPI 152		81 3 5283 3680	DIA.0.8,0.9,1.0,1.2 & 1.6MM
13690	GEE LIMITED,	ER 70S-A1 GMAW WIRE	Permanent	Welding Consumables		mpdhanuka@geelimited.com	ER70S-A1	WCPI 152	KALYAN (W)	02522 281176	DIA: 0.8 MM (700 GM -1KG SPOOL)
21411	METRODE PRODUCTS LIMITED,	ER 70S-A1 GMAW WIRE	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod.e.com	ER70S-A1	WCPI 152			DIA:0.8, 0.9, 1.0 & 1.2 MM
91875	Arya Engineering	ER 80S-B2 GMAW WIRE	Permanent	Welding Consumables	SOREX WELDING CO LTD	aryaaengineering@gmail.com	ASME SEC II C SFA-5.28 ER80S-B2	WCPI 153	Trichy	0431 2511445	DIA.1.20MM
20047	KANEMATSU TRADING CORPORATION	ER 80S-B2 GMAW WIRE	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ASME SEC II C SFA-5.28 ER80S-B2	WCPI 153		81 3 5283 3680	DIA.1.0,1.2 & 1.6MM
10774	D&H SECHERON ELECTRODES PVT LTD.	ER 80S-B2 GMAW WIRE	Permanent	Welding Consumables		sales@dnhsecheron.net	ASME SEC II C SFA-5.28 ER80S-B2	WCPI 153	INDORE	0731-4229222	DIA.1.2 & 1.6MM
13690	GEE LIMITED,	ER 80S-B2 GMAW WIRE	Permanent	Welding Consumables		mpdhanuka@geelimited.com	ASME SEC II C SFA-5.28 ER80S-B2	WCPI 153	KALYAN (W)	02522 281176	DIA.1.2MM
21411	METRODE PRODUCTS LIMITED,	ER 80S-B2 GMAW WIRE	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod.e.com	ASME SEC II C SFA-5.28 ER80S-B2	WCPI 153			DIA.0.8,0.9,1.0 & 1.2MM
23810	NOVAMETAL SA	WELDG.WIRE-MIG ER347	Development	Welding Consumables		m.montanari@novametal.com	ER347SI	WCPI 160	SWITZERLAND.	4191 640 8337	0.8MM SPOOL 1KG AND 10 KGS
20047	KANEMATSU TRADING CORPORATION	WELDG.WIRE-MIG ER347	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ER347SI	WCPI 160		81 3 5283 3680	DIA.0.8,1.0, & 1.2MM
14400	ADOR FONTECH LIMITED,	WELDG.WIRE-MIG ER347	Permanent	Welding Consumables		adflitenders@adorfon.com	ER347SI	WCPI 160	BANGALORE.	080-2836 5751	DIA.0.8MM
11784	VENUS WIRE INDUSTRIES PVT LTD	WELDG.WIRE-MIG ER347	Permanent	Welding Consumables		sales@venuswires.com	ER347SI	WCPI 160	MUMBAI	022 - 4978840	DIA.0.8,0.9,1.0 & 1.2MM
23810	NOVAMETAL SA	WELDG.WIRE-MIG ERNiC	Development	Welding Consumables		m.montanari@novametal.com	ERNICR3	WCPI 155	SWITZERLAND.	4191 640 8337	0.8MM SPOOL 1KG AND 10KGS
20047	KANEMATSU TRADING CORPORATION	WELDG.WIRE-MIG ERNiC	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ERNICR3	WCPI 155		81 3 5283 3680	DIA.0.8,1.2 & 1.6MM
20067	VOESTALPINE BOHLER WELDING	WELDG.WIRE-MIG ERNiC	Permanent	Welding Consumables			ERNICR3	WCPI 155	GERMANY.	49 07633 40901	DIA.0.8,1.0 & 1.2MM
22391	THE LINCOLN ELECTRIC COMPANY FRANCE	WELDG.WIRE-MIG ERNiC	Permanent	Welding Consumables	MERIDIAN EXPORTS	jerome.jumeau@lincolnelectric.europe.com	ERNICR3	WCPI 155	95895 CERGY-PONTOISE CEDEX	1342 13480	DIA.0.8,1.0,1.2 & 1.6MM
21411	METRODE PRODUCTS LIMITED,	WELDG.WIRE-MIG ERNiC	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod.e.com	ERNICR3	WCPI 155			DIA.0.8,1.0 & 1.2MM
21411	METRODE PRODUCTS LIMITED,	WELDG.WIRE-MIG ER90S	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod.e.com	MIG ER90S-B9	WCPI 161			DIA.0.8,1.0 & 1.2MM

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
22391	THE LINCOLN ELECTRIC COMPANY FRANCE	WELDG.WIRE-MIG ER90S	Permanent	Welding Consumables	MERIDIAN EXPORTS	jerome.jumeau@lincolnelectric.europa.com	MIG ER90S-B9	WCPI 161	95895 CERGY-PONTOISE CEDEX	1342 13480	DIA.0.8,1.0,1.2 & 1.6MM
20563	VOESTALPINE BOHLER WELDING	WELDG.WIRE-MIG ER90S	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.com	MIG ER90S-B9	WCPI 161	GERMANY	2381271759	DIA.0.8,1.0 & 1.2MM
16662	NATIONAL ENGINEERING ENTERPRISES,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		nationaljsr@rediffmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	JAMSHEDPUR	0657 6539875	DAI.1.0,1.2 & 1.6MM
11528	RAAJRATNA ELECTRODES LTD	GMAW WIRE ER70S-6	Permanent	Welding Consumables		mktg@gnahd-rel.global.net.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	AHMEDABAD	079 - 6445258	DIA 1,1,2,1.6,2 MM
11288	JAGSHAAN INDUSTRIES	GMAW WIRE ER70S-6	Permanent	Welding Consumables		jagshaan@nagpur.dot.net.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	NAGPUR	0712 - 581557	DIA.0.8,1.0,1.2 & 1.6MM
10785	ADOR WELDING LIMITED	GMAW WIRE ER70S-6	Permanent	Welding Consumables		acegasindia@gamil.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	PUNE		DIA.0.8,1.0,1.2 & 1.6MM
10081	ESAB INDIA LTD	GMAW WIRE ER70S-6	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	CHENNAI	044-4340 4803	DIA.0.8,1.0,1.2 & 1.6MM
16166	EVERSHINE WIRES	GMAW WIRE ER70S-6	Permanent	Welding Consumables		evershine_wires@yahoo.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	TRICHY	04327- 235381	DIA.0.8,1.0,1.2 & 1.6MM
15924	DAYACHAND ENGINEERING INDUSTRIES	GMAW WIRE ER70S-6	Permanent	Welding Consumables		info@fairweld.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	MUZAFFARNAGAR.	0 9997954661	DIA: 1.20 MM
13906	MARUTI WELD PRIVATE LIMITED,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		marutiweld@marutiweld.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	DWARKA, NEW DELHI	011 6536 3100	DIA.1.0,1.2 & 1.6MM
14340	NALLI ARC INDUSTRIE,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		nalliarca@yahoo.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	ERODE Dt.	04257 245185	DIA.1.0,1.2 & 1.6MM
15810	NOUVEAUX INDUSTRIES (P) LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables			ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	KANGAYAM		DIA.1.0,1.2 & 1.6MM
13693	RASI ELECTRODES LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		rele@airtelmail.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	CHENNAI	044 26424523	DIA.1.0,1.2 & 1.6MM
16575	STANDARD WIRE PRODUCTS	GMAW WIRE ER70S-6	Permanent	Welding Consumables			ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	CHENNAI	044 26254946	DIA.1.0,1.2 & 1.6MM
15085	VOLTARC ELECTRODES (P) LTD,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		voltarc@rediffmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	TIRUPATHI	0877 2241462	DIA.1.0,1.2 & 1.6MM
14455	WIRE AND WIRE PRODUCTS	GMAW WIRE ER70S-6	Permanent	Welding Consumables		wwp@vsnl.net	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	CHENNAI	044 26242378	DAI.0.8,1.0,1.2 & 1.6MM
16661	KLINWELD WIRES PVT. LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		klinweld@gmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	MUMBAI	022 28504848	DIA.1.0,1.2 & 1.6MM
14458	M W WIRETECK PVT. LTD.	GMAW WIRE ER70S-6	Permanent	Welding Consumables		wire@wireteck.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	NEW DELHI.	011 4540 7712	DIA.1.0,1.2 & 1.6MM
17842	PRECISION DRAWEL PVT., LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables			ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	NAGPUR		DAI.1.0,1.2 & 1.6MM
17841	PRASHANTH CYLINDERS PVT. LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables			ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	BANGALORE		DIA. 1.0,1.2 & 1.6 MM
17644	VARUN ELECTRODES PVT. LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		kapoor@varunelectrodes.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	PANIPAT	0180 2653085	DAI.1.0,1.2 & 1.6MM
14428	SHAKUNT ENTERPRISES PRIVATE LIMITED	GMAW WIRE ER70S-6	Permanent	Welding Consumables		shakunt@satyam.net.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	LUDHIANA	161 2538323	DAI.1.0,1.2 & 1.6MM
13690	GEE LIMITED,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		mpdhanuka@geelimited.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	KALYAN (W)	02522 281176	DIA.0.8,1.0,1.2 & 1.6MM
14575	WELD ALLOY PRODUCTS,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		wap2005@airtelmail.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	GAUTAM BUDH NAGAR (UP)	0120-2557183	DIA.1.0,1.2 & 1.6MM
13986	B&H ELECTRODES PVT. LTD,	GMAW WIRE ER70S-6	Permanent	Welding Consumables			ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	MOHALI		DIA.1.0,1.2 & 1.6MM
13911	ROYAL ARC ELECTRODES LIMITED	GMAW WIRE ER70S-6	Permanent	Welding Consumables		tenders@royalarc.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	MUMBAI.	022 28822374	DIA.1.0,1.2 & 1.6MM
13743	UNIQUE WELDING PRODUCTS PVT.LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		ump_vvn@rediffmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	GUJARAT	02692-236 092...	DIA.0.8,1.0,1.2 & 1.6MM
15101	PRECISION WELDARC LTD,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		pwires@yahoo.co.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	KOLKATA.	033 25634753	DIA.1.0,1.2 & 1.6MM
13549	ATHARVE WELDING TECHNOLOGIES (INDIA	GMAW WIRE ER70S-6	Permanent	Welding Consumables		atharv.wt@hotmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	SOLAPUR	0217-273 7029	DIA.1.0,1.2 & 1.6MM

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
13487	MAGNARC ELECTRODES PVT.LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		magnarc@hotmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	VISAGAPATNAM	0891-276 4381...	DIA.1.0,1.2 & 1.6MM
10758	ALPHA ARC PVT LTD	GMAW WIRE ER70S-6	Permanent	Welding Consumables		alphaarc@yahoo.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	GHAZIABAD, UP	0 99114 41441	DIA.1.0,1.2 & 1.6MM
17813	K.M.CROWN WELDING CONSUMABLES PVT.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		kmcrownwelding@dataone.co m	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	DEWAS	07272 259384578	DIA.1.0,1.2 & 1.6MM
11378	MAILAM INDIA LIMITED	GMAW WIRE ER70S-6	Permanent	Welding Consumables		mailam@mailamindia.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	PONDICHERRY	0413-2677311	8
10737	SRI DHARAANI STEEL, CLASSIC ELECTRODES (INDIA) LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		wire@sridharaanisteel.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	VIRUDHUNAGAR DIST.	98943-88857	DIA.1.0,1.2 & 1.6MM
13763		GMAW WIRE ER70S-6	Permanent	Welding Consumables		classicelectrodes@yahoo.co.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	KOLKATA	033 22429581	DIA.1.0,1.2 & 1.6MM
17814	CALCUTTA ELECTRODES PVT. LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		calcutta_electrodes2006@yahoo.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	RAIPUR	0771 4090615	DIA.1.0,1.2 & 1.6MM
17451	WELDFAST ELECTRODES PVT LTD,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		weldwellngp@gmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	NAGPUR	07104 232211/...	DIA.0.80,1.0,1.20 & 1.60MM
91270	VEEPEES INDIA,	GMAW WIRE ER70S-6	Permanent	Welding Consumables	KISWEL LTD.,	veepeesindia@gmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	CHENNAI	044-43534354	DIA.1.0,1.2 & 1.6MM
16548	WELD EXCEL INDIA LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables			ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	LUDHIANA		DIA.0.8,1.0,1.2 & 1.6MM
13211	D&H INDIA LIMITED	GMAW WIRE ER70S-6	Permanent	Welding Consumables		dhindia@sancharnet.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	INDORE	0731-4273501-...	DIA.1.0,1.2 & 1.6MM
19305	MURLI ELECTRODE PVT. LTD,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		sudhir_0408@rediffmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	NAGPUR	0712 2769347	SIZE: DIA. 1.20MM
15082	ROYAL WELDING WIRES PVT. LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		admin@theoryalfirm.in	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	KANCHIPURAM DIST,	044-3741 1610	SIZE DIA.1.20MM
10774	D&H SECHERON ELECTRODES PVT LTD.	GMAW WIRE ER70S-6	Permanent	Welding Consumables		sales@dnhsecheron.net	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	INDORE	0731-4229222	DIA.0.8,1.0,1.2 & 1.6MM
14791	ANAND ARC LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		sales@anandarc.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	MUMBAI.	022 4268 8484	DIA.0.8,1.0,1.2 & 1.6MM
18705	MODI HITECH INDIA LTD.,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		gmmelectrode@gmail.com	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	MODIPURAM	011 4250 4577	DAI.1.0,1.2 & 1.6MM
13534	RUPA INDUSTRIES,	GMAW WIRE ER70S-6	Permanent	Welding Consumables		rupaent@vsnl.net	ASME.SEC.II.C-5.18.ER70S-6	WCPI-151	SECUNDERABAD	040-2771 3714	DIA. 0.8MM,1.0MM & 1.20MM
91270	VEEPEES INDIA,	GMAW WIRE ER80S-G	Permanent	Welding Consumables	KISWEL LTD.,	veepeesindia@gmail.com	ASME.SEC.II.C-SFA;5.28 ER80S-G	WCPI-157/00	CHENNAI	044-43534354	DIA. 0.8MM
20047	KANEMATSU TRADING CORPORATION	GMAW WIRE ER80S-G	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ASME.SEC.II.C-SFA;5.28 ER80S-G	WCPI-157/00		81 3 5283 3680	DAI.0.8,0.9,1.0 & 1.2,1.4 & 1.6MM
21411	METRODE PRODUCTS LIMITED,	GMAW WIRE ER80S-G	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	ASME.SEC.II.C-SFA;5.28 ER80S-G	WCPI-157/00			DIA.0.8,1.2 & 1.6MM
21461	INDUSTRIA NAZIONALE ELETTRODI S.p.A	GMAW WIRE ER80S-G	Permanent	Welding Consumables	SATKUL ENTERPRISES LTD.	doriana.depoli@ine.it	ASME.SEC.II.C-SFA;5.28 ER80S-G	WCPI-157/00	ITALY.		DIA. 0.8MM
21411	METRODE PRODUCTS LIMITED,	GMAW WIRE ER90S-G	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	ASME.SEC.II.C-SFA;5.28 ER90S-G	WCPI-156/00			DAI.0.8 & 1.2MM
20563	VOESTALPINE BOHLER WELDING	GMAW WIRE ER90S-G	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co m	ASME.SEC.II.C-SFA;5.28 ER90S-G	WCPI-156/00	GERMANY	2381271759	DAI.0.8,0.9,1.0 & 1.2,1.4 & 1.6MM
20047	KANEMATSU TRADING CORPORATION	GMAW WIRE ER90S-G	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ASME.SEC.II.C-SFA;5.28 ER90S-G	WCPI-156/00		81 3 5283 3680	DAI.0.8,0.9,1.0 & 1.2,1.4 & 1.6MM
20563	VOESTALPINE BOHLER WELDING	GMWA WIRE FOR T23.	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co m	GMAWWIRE T23	-----	GERMANY	2381271759	DIA. 0.8, 1.0 & 1.2MM
21411	METRODE PRODUCTS LIMITED,	GMWA WIRE FOR T23.	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	GMAWWIRE T23	-----			DIA.0.8, 1.0 & 1.2MM
23730	NIPPON STEEL & SUMIKIN BUSSAN	GMWA WIRE FOR T23.	Permanent	Welding Consumables	NIPPON STEEL & SUMKIN BUSSAN INDIA	yokotakao753@nssb.nssmc.co m	GMAWWIRE T23	-----	TOKYO 107-8527	81 3 6770 9383	DAI.0.8,0.9,1.0 & 1.2MM
20047	KANEMATSU TRADING CORPORATION	GMWA WIRE FOR T23.	Permanent	Welding Consumables	KOBE STEELS LIMITED	koya_okuda@kgt.kanematsu.co.jp	GMAWWIRE T23	-----		81 3 5283 3680	DAI.0.8,0.9,1.0 & 1.2MM
21411	METRODE PRODUCTS LIMITED,	WELDING FLUX-P91	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	ASME SFA 5.23	WCPI-413			NOT APPLICABLE
20563	VOESTALPINE BOHLER WELDING	WELDING FLUX-P91	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co m	ASME SFA 5.23	WCPI-413	GERMANY	2381271759	NOT APPLICABLE

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
10081	ESAB INDIA LTD	WELDING FLUX-P91	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	ASME SFA 5.23	WCPI-413	CHENNAI	044-4340 4803	NOT APPLICABLE
20047	KANEMATSU TRADING CORPORATION	WELDING FLUX-P91	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ASME SFA 5.23	WCPI-413		81 3 5283 3680	NOT APPLICABLE
22391	THE LINCOLN ELECTRIC COMPANY FRANCE	WELDING FLUX-P91	Permanent	Welding Consumables	MERIDIAN EXPORTS	jerome.jumeau@lincolnelectric-europe.com	ASME SFA 5.23	WCPI-413	95895 CERGY-PONTOISE CEDEX	1342 13480	NOT APPLICABLE
91013	VOESTALPINE BOHLER WELDING	SAWFLUX FOR SA335P92	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	bwg.india@bwgindia.com	SAW FLUX FOR SA335P92	-----	MUMBAI	022-28574448	NOT APPLICABLE
91013	VOESTALPINE BOHLER WELDING	SAWWIRE FOR SA335P92	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	bwg.india@bwgindia.com	SAW WIRE FOR SA335P92	-----	MUMBAI	022-28574448	NOT APPLICABLE
21411	METRODE PRODUCTS LIMITED,	SAWWIRE FOR SA335P92	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod-e.com	SAW WIRE FOR SA335P92	-----			DIA:3.2 MM
13486	A V WELDTech PVT.LTD.,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		products@aveasyweld.com	F48P2-EM12K	417/00	NAGPUR.	0712-252 1727	NOT APPLICABLE
13484	OSCAR AUTO FLUX,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		oscarautoflux@gmail.com	F48P2-EM12K	417/00	TRICHY	0431-2914567	NOT APPLICABLE
15099	THERMIT ALLOYS PRIVATE LTD,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		milan@thermitalloys.com	F48P2-EM12K	417/00	SHIVAMOGGA	08182 251803	NOT APPLICABLE
15085	VOLTARC ELECTRODES (P) LTD,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		voltarc@rediffmail.com	F7AZ- EL 8	WCPI-406/00	TIRUPATHI	0877 2241462	NOT APPLICABLE
19695	SUBMER FLUX TECHNOLOGIES,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		Submer_flux@yahoo.in	F7AZ- EL 8	WCPI-406/00	TRICHY	0431-4220462	NOT APPLICABLE
19735	RENUKA FLUXES COMPANY,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables			F7AZ- EL 8	WCPI-406/00	SALEM	04290 313331	NOT APPLICABLE
14791	ANAND ARC LTD.,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		sales@anandarc.com	F7AZ- EL 8	WCPI-406/00	MUMBAI.	022 4268 8484	NOT APPLICABLE
10081	ESAB INDIA LTD	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	F7AZ- EL 8	WCPI-406/00	CHENNAI	044-4340 4803	NOT APPLICABLE
11288	JAGSHAAN INDUSTRIES	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		jagshaan@nagpur.dot.net.in	F7AZ- EL 8	WCPI-406/00	NAGPUR	0712 - 581557	NOT APPLICABLE
11712	TAPADIA ENGINEERS & TRADERS P.LTD.	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		tet_tgirpr@rediffmail.com	F7AZ- EL 8	WCPI-406/00	RAIPUR	0770 - 4090636	NOT APPLICABLE
17381	NOUVEOFLUX CHEMICAL COMPANY	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		nouveauxindustries@gmail.co m	F7AZ- EL 8	WCPI-406/00	KANGAYAM		NOT APPLICABLE
15099	THERMIT ALLOYS PRIVATE LTD,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		milan@thermitalloys.com	F7AZ- EL 8	WCPI-406/00	SHIVAMOGGA	08182 251803	NOT APPLICABLE
19114	WELMET TECHNOLOGIES PVT. LTD.,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables			F7AZ- EL 8	WCPI-406/00	NAGPUR		NOT APPLICABLE
11701	SUPER WELD PRODUCTS	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables			F7AZ- EL 8	WCPI-406/00	TIRUCHIRAPALLI	0431 - 765626	NOT APPLICABLE
14309	S.CHEMS & ALLIED PRODUCERS PVT LIMI	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		s_chems@yahoo.co.in	F7AZ- EL 8	WCPI-406/00	MUMBAI	022 26368557	NOT APPLICABLE
14593	R.M.H.CHEMICAL INDUSTRIES	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		rmhfbbricators@vsnl.net	F7AZ- EL 8	WCPI-406/00	TIRUCHIRAPALLY	2500498	NOT APPLICABLE
12184	LAKSHMI CHEMICAL INDUSTRIES	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		lakshmi.chem@yahoo.com	F7AZ- EL 8	WCPI-406/00	TIRUCHIRAPALLI	9842550538	NOT APPLICABLE
10785	ADOR WELDING LIMITED	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		acegasindia@gamil.com	F7AZ- EL 8	WCPI-406/00	PUNE		NOT APPLICABLE
13211	D&H INDIA LIMITED	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		dhindia@sanchamnet.in	F7AZ- EL 8	WCPI-406/00	INDORE	0731-4273501-...	NOT APPLICABLE
17813	K.M.CROWN WELDING CONSUMABLES PVT.,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		kmcrownwelding@dataone.co m	F7AZ- EL 8	WCPI-406/00	DEWAS	07272 259384578	NOT APPLICABLE
11528	RAAJRATNA ELECTRODES LTD	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		mktg@gnahd-rel.global.net.in	F7AZ- EL 8	WCPI-406/00	AHMEDABAD	079 - 6445258	NOT APPLICABLE
15101	PRECISION WELDARC LTD,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		pwires@yahoo.co.in	F7AZ- EL 8	WCPI-406/00	KOLKATA.	033 25634753	NOT APPLICABLE
14584	SUN ENTERPRISES	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		sunenterprises2011@gmail.co m	F7AZ- EL 8	WCPI-406/00	PUDUKKUDI POST KANCHIPURAM DIST,	0 88256 36464	NOT APPLICABLE
15082	ROYAL WELDING WIRES PVT. LTD.,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		admin@theoryalfirm.in	F7AZ- EL 8	WCPI-406/00		044-3741 1610	NOT APPLICABLE
13534	RUPA INDUSTRIES,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		rupaent@vsnl.net	F7AZ- EL 8	WCPI-406/00	SECUNDERABAD	040-2771 3714	NOT APPLICABLE

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
13484	OSCAR AUTO FLUX,	SAW FLUX STRUCT.WELD	Permanent	Welding Consumables		oscarautoflux@gmail.com	F7AZ- EL 8	WCPI-406/00	TRICHY	0431-2914567	NOT APPLICABLE
20563	VOESTALPINE BOHLER WELDING	GTAW ROD - T92 / P92	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.com	GTAW ROD - T92/P92	----	GERMANY	2381271759	DIA. 1.6,2.0,2.4 & 3.2MM
20047	KANEMATSU TRADING CORPORATION	GTAW ROD ER309L	Permanent	Welding Consumables	KOBE STEELS LIMITED	koya_okuda@kgt.kanematsu.co.jp	ASME.SEC.II.C,SFA-5.9,ER309L	WCPI-124		81 3 5283 3680	DIA: 2.40 MM
22391	THE LINCOLN ELECTRIC COMPANY FRANCE	GTAW ROD ER309L	Permanent	Welding Consumables	MERIDIAN EXPORTS	jerome.jumeau@lincolnelectric-europe.com	ASME.SEC.II.C,SFA-5.9,ER309L	WCPI-124	95895 CERGY-PONTOISE CEDEX	1342 13480	DIA. 2.4MM
23730	NIPPON STEEL & SUMIKIN BUSSAN	GTAW ROD ER309L	Permanent	Welding Consumables	NIPPON STEEL & SUMIKIN BUSSAN INDIA	yokotakao753@nssb.nssmc.co-m	ASME.SEC.II.C,SFA-5.9,ER309L	WCPI-124	TOKYO 107-8527	81 3 6770 9383	DIA. 1.6,2.0 & 2.4MM
11227	HONAVAR ELECTRODES PVT. LTD.,	ER 70S-A1 GTAW ROD	Permanent	Welding Consumables		hel@vsnl.com	ER70S-A1	WCPI 101	MUMBAI	022-25020317	SIZE DIA.2.40 MM
15083	MARUTHI ELECTRODES (P) LTD.,	ER 70S-A1 GTAW ROD	Permanent	Welding Consumables		meplelec@bgl.vsnl.net.in	ER70S-A1	WCPI 101	BANGALORE	080 25275848	DIA.2.4MM
10774	D&H SECHERON ELECTRODES PVT LTD.	ER 70S-A1 GTAW ROD	Permanent	Welding Consumables		sales@dnhsecheron.net	ER70S-A1	WCPI 101	INDORE	0731-4229222	DIA.1.6,2.0,2.4,2.5 & 3.2MM
20563	VOESTALPINE BOHLER WELDING	ER 70S-A1 GTAW ROD	Permanent	Welding Consumables		christina.holle@voestalpine.com	ER70S-A1	WCPI 101	GERMANY	2381271759	DIA.1.6,2.0,2.4 & 3.0MM
13690	GEE LIMITED,	ER 70S-A1 GTAW ROD	Permanent	Welding Consumables		mpdhanuka@geelimited.com	ER70S-A1	WCPI 101	KALYAN (W)	02522 281176	DIA.2.40MM
20047	KANEMATSU TRADING CORPORATION	ER 70S-A1 GTAW ROD	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ER70S-A1	WCPI 101		81 3 5283 3680	DIA. 0.8,1.0,1.2,1.6,2.0,2.4 & 3.2MM
10785	ADOR WELDING LIMITED	ER 70S-A1 GTAW ROD	Permanent	Welding Consumables		acegasindia@gamil.com	ER70S-A1	WCPI 101	PUNE		DIA. 2.40 MM
13690	GEE LIMITED,	ER 80S-B2 GTAW ROD	Permanent	Welding Consumables		mpdhanuka@geelimited.com	ER80SG 1.25CR 1/2MO	WCPI 102	KALYAN (W)	02522 281176	SIZE DIA. 2.40 MM
21411	METRODE PRODUCTS LIMITED,	ER 80S-B2 GTAW ROD	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrode.com	ER80SG 1.25CR 1/2MO	WCPI 102			DIA.1.6,2.4 & 3.2MM
21461	INDUSTRIA NAZIONALE ELETTRODI S.p.A	ER 80S-B2 GTAW ROD	Permanent	Welding Consumables	SATKUL ENTERPRISES LTD.	doriana.depoli@ine.it	ER80SG 1.25CR 1/2MO	WCPI 102	ITALY.		DIA.2.0,2.4 & 2.5MM
22456	I.A.BARNES & CO. LTD,	ER 80S-B2 GTAW ROD	Permanent	Welding Consumables	NIVEK AGENCIES	mandy@iabco.co.uk	ER80SG 1.25CR 1/2MO	WCPI 102			DIA.2.40MM
10785	ADOR WELDING LIMITED	ER 80S-B2 GTAW ROD	Permanent	Welding Consumables		acegasindia@gamil.com	ER80SG 1.25CR 1/2MO	WCPI 102	PUNE		DIA.2.40 MM
20047	KANEMATSU TRADING CORPORATION	ER 80S-B2 GTAW ROD	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ER80SG 1.25CR 1/2MO	WCPI 102		81 3 5283 3680	DIA.1.6,2.0,2.4 & 3.2MM
10774	D&H SECHERON ELECTRODES PVT LTD.	ER 80S-B2 GTAW ROD	Permanent	Welding Consumables		sales@dnhsecheron.net	ER80SG 1.25CR 1/2MO	WCPI 102	INDORE	0731-4229222	DIA.1.6,2.0,2.4,2.5 & 3.2MM
10081	ESAB INDIA LTD	ER 80S-B2 GTAW ROD	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	ER80SG 1.25CR 1/2MO	WCPI 102	CHENNAI	044-4340 4803	DIA.2.40 MM
15083	MARUTHI ELECTRODES (P) LTD.,	ER 80S-B2 GTAW ROD	Permanent	Welding Consumables		meplelec@bgl.vsnl.net.in	ER80SG 1.25CR 1/2MO	WCPI 102	BANGALORE	080 25275848	DIA.2.4MM
10785	ADOR WELDING LIMITED	ER 90S-B3 GTAW ROD	Permanent	Welding Consumables		acegasindia@gamil.com	ER90SG-2 1/4CR 1MO	WCPI 103	PUNE		DIA: 2.40 MM
22456	I.A.BARNES & CO. LTD,	ER 90S-B3 GTAW ROD	Permanent	Welding Consumables	NIVEK AGENCIES	mandy@iabco.co.uk	ER90SG-2 1/4CR 1MO	WCPI 103			DIA.2.40MM
20047	KANEMATSU TRADING CORPORATION	ER 90S-B3 GTAW ROD	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ER90SG-2 1/4CR 1MO	WCPI 103		81 3 5283 3680	DIA.1.6,2.0,2.4 & 3.2MM
20563	VOESTALPINE BOHLER WELDING	ER 90S-B3 GTAW ROD	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.com	ER90SG-2 1/4CR 1MO	WCPI 103	GERMANY	2381271759	DIA.2.0,2.4 & 3.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	ER 90S-B3 GTAW ROD	Permanent	Welding Consumables		sales@dnhsecheron.net	ER90SG-2 1/4CR 1MO	WCPI 103	INDORE	0731-4229222	DIA. 2.40MM
15083	MARUTHI ELECTRODES (P) LTD.,	ER 90S-B3 GTAW ROD	Permanent	Welding Consumables		meplelec@bgl.vsnl.net.in	ER90SG-2 1/4CR 1MO	WCPI 103	BANGALORE	080 25275848	DIA.2.4MM
21461	INDUSTRIA NAZIONALE ELETTRODI S.p.A	ER 90S-B3 GTAW ROD	Permanent	Welding Consumables	SATKUL ENTERPRISES LTD.	doriana.depoli@ine.it	ER90SG-2 1/4CR 1MO	WCPI 103	ITALY.		DIA.2.0,2.4 & 3.2MM
21411	METRODE PRODUCTS LIMITED,	ER 90S-B3 GTAW ROD	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrode.com	ER90SG-2 1/4CR 1MO	WCPI 103			DIA.1.6 & 2.4MM

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Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
20563	VOESTALPINE BOHLER WELDING	WELDG.WIRE-TIG ER347	Permanent	Welding Consumables		christina.holle@voestalpine.co m	ER347	WCPI 107	GERMANY	2381271759	DIA.1.0,1.6,2.0,2.4 & 3.2MM
13690	GEE LIMITED,	WELDG.WIRE-TIG ER347	Permanent	Welding Consumables		mpdhanuka@geelimited.com	ER347	WCPI 107	KALYAN (W)	02522 281176	SIZE DIA.2.40MM
20047	KANEMATSU TRADING CORPORATION	WELDG.WIRE-TIG ER347	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ER347	WCPI 107		81 3 5283 3680	DIA.1.2,1.6,2.0,2.4 & 3.2MM
21411	METRODE PRODUCTS LIMITED,	WELDG.WIRE-TIG ER347	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	ER347	WCPI 107			DIA.1.0,1.6,2.0,2.4 & 3.2MM
15083	MARUTHI ELECTRODES (P) LTD.,	WELDG.WIRE-TIG ERNiC	Permanent	Welding Consumables		meplelec@bgl.vsnl.net.in	ERNICR3	WCPI 108	BANGALORE	080 25275848	DIA.2.0 & 2.4MM
20563	VOESTALPINE BOHLER WELDING	WELDG.WIRE-TIG ERNiC	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co m	ERNICR3	WCPI 108	GERMANY	2381271759	DIA.1.6,2.0,2.4 & 3.2MM
14400	ADOR FONTECH LIMITED,	WELDG.WIRE-TIG ERNiC	Permanent	Welding Consumables		adfltenders@adorfon.com	ERNICR3	WCPI 108	BANGALORE.	080-2836 5751	DIA.2.40MM
20047	KANEMATSU TRADING CORPORATION	WELDG.WIRE-TIG ERNiC	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ERNICR3	WCPI 108		81 3 5283 3680	DIA.0.8,0.9,1.0,1.2,1.6,2.0,2.4 ,3.2 & 4.0MM
21411	METRODE PRODUCTS LIMITED,	WELDG.WIRE-TIG ERNiC	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	ERNICR3	WCPI 108			DIA: 2.40 MM
20563	VOESTALPINE BOHLER WELDING	WELDG.WIRE - TIG ER9	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co m	TIG ER90S-B9	WCPI 114	GERMANY	2381271759	DIA.1.6,2.0,2.4 & 3.2MM
22391	THE LINCOLN ELECTRIC COMPANY FRANCE	WELDG.WIRE - TIG ER9	Permanent	Welding Consumables	MERIDIAN EXPORTS	jerome.jumeau@lincolnelectric europe.com	TIG ER90S-B9	WCPI 114	95895 CERGY-PONTOISE CEDEX	1342 13480	DIA.2.4MM
21411	METRODE PRODUCTS LIMITED,	WELDG.WIRE - TIG ER9	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	TIG ER90S-B9	WCPI 114			DIA.1.6,2.4 & 3.2MM
20047	KANEMATSU TRADING CORPORATION	WELDG.WIRE - TIG ER9	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	TIG ER90S-B9	WCPI 114		81 3 5283 3680	DIA.1.6,2.0 & 2.4MM
20563	VOESTALPINE BOHLER WELDING	ER80S - D2 GTAW ROD	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co m	TIG ER90S-B9	WCPI 114	GERMANY	2381271759	DIA.2.0,2.4 & 3.0MM
21411	METRODE PRODUCTS LIMITED,	ER80S - D2 GTAW ROD	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	TIG ER90S-B9	WCPI 114			DIA.1.6,2.0,2.4 & 3.2MM
20047	KANEMATSU TRADING CORPORATION	GTAW ROD SUPER304H	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	GTAW ROD SUPER 304 H	-----		81 3 5283 3680	ONLY FOR DIA.2.40MM (DIA.0.8MM STILL UNDER DEVELOPMENT)
23730	NIPPON STEEL & SUMIKIN BUSSAN	GTAW ROD SUPER304H	Permanent	Welding Consumables	NIPPON STEEL & SUMKIN BUSSAN INDIA	yokotakao753@nssb.nssmc.co m	GTAW ROD SUPER 304 H	-----	TOKYO 107-8527	81 3 6770 9383	DIA.0.8MM, 1.0MM & 2.40MM
20563	VOESTALPINE BOHLER WELDING	GTAW ROD SUPER304H	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co m	GTAW ROD SUPER 304 H	-----	GERMANY	2381271759	DIA.0.8 & 1.0 & 2.40 MM
10785	ADOR WELDING LIMITED	WELDG.ELECTROD ES:SMA	Development	Welding Consumables		acegasindia@gmail.com	E7018-A1	WCPI 208	PUNE		DIA.2.50,3.15,5.00 MM
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E7018-A1	WCPI 208	PONDICHERRY	0413-2677311	DIA 2.5, 3.15 & 4.0 MM
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		tenders@royalarc.in	E7018-A1	WCPI 208	MUMBAI.	022 28822374	DIA.2.5, 3.15, 4.0,5.0 & 6.3 MM
18432	VIJEY ELECTRODES AND WIRES PVT.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		vjelect@yahoo.co.in	E7018-A1	WCPI 208	CHENNAI	044-2238 1098	DIA.2.50,3.15,4.00 & 5.00 MM
17451	WELDFAST ELECTRODES PVT LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		weldwellngp@gmail.com	E7018-A1	WCPI 208	NAGPUR	07104 232211/...	DIA; 2.5,3.15,4.0 & 5.0 MM
11227	HONAVAR ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		hel@vsnl.com	E7018-A1	WCPI 208	MUMBAI	022-25020317	DIA:2.5, 3.15, 4.0, 5.0 & 6.30MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E7018-A1	WCPI 208	INDORE	0731-4229222	DIA.2.50,3.15,4.00,5.00 & 6.30MM
15090	RAJ KESARI ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		rajkesari@yahoo.com	E7018-A1	WCPI 208	UDAIPUR	0294 2490193	DIA.2.50,4.00,& 5.00 MM
17451	WELDFAST ELECTRODES PVT LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		weldwellngp@gmail.com	E8018-B2	WCPI 212	NAGPUR	07104 232211/...	DIA. 2.5MM, 3.15MM, 4.0MM & 5.0MM
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		tenders@royalarc.in	E8018-B2	WCPI 212	MUMBAI.	022 28822374	DIA.3.15, 4.0 & 5.0MM ONLY [2.5 MM UNDER DEVELOPMENT]
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E8018-B2	WCPI 212	PONDICHERRY	0413-2677311	DIA.2.5,3.2,4.0 & 5.0MM

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Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
13690	GEE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mpdhanuka@geelimited.com	E8018-B2	WCPI 212	KALYAN (W)	02522 281176	DIA.2.5,3.15, 4 & 5 MM
10785	ADOR WELDING LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		acegasindia@gamil.com	E8018-B2	WCPI 212	PUNE		DIA.2.5,3.15,4.0 & 5.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E8018-B2	WCPI 212	INDORE	0731-4229222	DIA.2.0,2.5,3.2,4.0 & 5.0MM
18705	MODI HITECH INDIA LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		gmmelectrode@gmail.com	E8018-B2	WCPI 212	MODIPURAM	011 4250 4577	DIA.2.5,3.15, 4.0 & 5.0 MM
15090	RAJ KESARI ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		rajkesari@yahoo.com	E8018-B2	WCPI 212	UDAIPUR	0294 2490193	DIA.2.5,3.15,4.0 & 5.0MM
18432	VIJEY ELECTRODES AND WIRES PVT.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		vjelect@yahoo.co.in	E8018-B2	WCPI 212	CHENNAI	044-2238 1098	DIA.2.5,3.15 & 4.0 MM
11227	HONAVAR ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		hel@vsnl.com	E8018-B2	WCPI 212	MUMBAI	022-25020317	DIA.2.5,3.2,4.0 & 5.0MM
13906	MARUTI WELD PRIVATE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		marutiweld@marutiweld.com	E8018-B2	WCPI 212	DWARKA, NEW DELHI	011 6536 3100	DIA.2.5,3.15,4.0 & 5.0MM
15833	THIRUMALA ELECTRODES CO.,	WELDG.ELECTROD ES:SMA	Development	Welding Consumables		tec_sevenarcs@yahoo.co.in	E8018-B2	WCPI 212	TRICHY	0431-6573566	DIA 2.50, 3.15 & 4.0 MM
13211	D&H INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		dhindia@sanchamnet.in	E9018-B3	WCPI 214	INDORE	0731-4273501-...	DIA.2.5,3.15,4.0 & 5.0 MM
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E9018-B3	WCPI 214	PONDICHERRY	0413-2677311	DIA.2.5,3.15,4.0 & 5.0 MM
17451	WELDFAST ELECTRODES PVT LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		weldwellngp@gmail.com	E9018-B3	WCPI 214	NAGPUR	07104 232211/...	DIA. 2.5MM, 3.15MM, 4.0MM & 5.0MM
11227	HONAVAR ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		hel@vsnl.com	E9018-B3	WCPI 214	MUMBAI	022-25020317	DIA.2.5,3.2,4.0 & 5.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E9018-B3	WCPI 214	INDORE	0731-4229222	DIA.2.0,2.5,3.2,4.0 & 5.0MM
18705	MODI HITECH INDIA LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		gmmelectrode@gmail.com	E9018-B3	WCPI 214	MODIPURAM	011 4250 4577	DIA.2.5,3.15 & 4.0 MM
13690	GEE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mpdhanuka@geelimited.com	E9018-B3	WCPI 214	KALYAN (W)	02522 281176	DIA.2.5,3.15, 4 & 5 MM
10785	ADOR WELDING LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		acegasindia@gamil.com	E9018-B3	WCPI 214	PUNE		DIA.2.5,3.15,4.0 & 5.0MM
18432	VIJEY ELECTRODES AND WIRES PVT.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		vjelect@yahoo.co.in	E9018-B3	WCPI 214	CHENNAI	044-2238 1098	DIA.2.5,3.15 & 4.0MM
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		tenders@royalarc.in	E9018-B3	WCPI 214	MUMBAI.	022 28822374	DIA.2.5,3.15,4.0 & 5.0MM
13906	MARUTI WELD PRIVATE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		marutiweld@marutiweld.com	E9018-B3	WCPI 214	DWARKA, NEW DELHI	011 6536 3100	DIA.3.15,4.0 & 5.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	SMAW ELECD E9015-B91	Permanent	Welding Consumables		sales@dnhsecheron.net	ASME SEC.II.C.SFA-5.5E9015-B91	WCPI-245	INDORE	0731-4229222	DIA 2.5 MM, 3.2 MM & 4.00 MM
11378	MAILAM INDIA LIMITED	SMAW ELECD E9015-B91	Permanent	Welding Consumables		mailam@mailamindia.com	ASME SEC.II.C.SFA-5.5E9015-B91	WCPI-245	PONDICHERRY	0413-2677311	DIA.2.50,3.20,4.0 MM
20047	KANEMATSU TRADING CORPORATION	SMAW ELECD E9015-B91	Permanent	Welding Consumables	KOBE STEELS LIMITED	koya_okuda@kgt.kanematsu.co.jp	ASME SEC.II.C.SFA-5.5E9015-B91	WCPI-245		81 3 5283 3680	DIA.2.6,3.2,4.0 & 5.0MM
21411	METRODE PRODUCTS LIMITED,	SMAW ELECD E9015-B91	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	ASME SEC.II.C.SFA-5.5E9015-B91	WCPI-245			DIA.2.5,3.2,4.0 & 5.0MM
22391	THE LINCOLN ELECTRIC COMPANY FRANCE	SMAW ELECD E9015-B91	Permanent	Welding Consumables	MERIDIAN EXPORTS	jerome.jumeau@lincolnelectric europe.com	ASME SEC.II.C.SFA-5.5E9015-B91	WCPI-245	95895 CERGY-PONTOISE CEDEX	1342 13480	DIA.2.5,3.2,4.0 & 5.0MM
20011	VOESTALPINE BOHLER WELDING	SMAW ELECD E9015-B91	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	Alexandra.Luckinger@bsga.at	ASME SEC.II.C.SFA-5.5E9015-B91	WCPI-245	AUSTRIA.	43 3862 30128...	DIA.2.5,3.2,4.0 & 5.0MM
21411	METRODE PRODUCTS LIMITED,	SMAW ELECD - T92/P92	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	SMAW ELECTRODE - T92 / P92	----			DIA.2.5,3.2 & 4.0MM
20563	VOESTALPINE BOHLER WELDING	SMAW ELECD - T92/P92	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co m	SMAW ELECTRODE - T92 / P92	----	GERMANY	2381271759	DIA.2.5,3.2 & 4.0MM
16168	P.R.Industries	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		prindustries.kota@gmail.com	E6013	WCPI 201	Kota	0744 236 0878	SIZE DIA. 2.5,3.15,4.0 & 5.0MM
17813	K.M.CROWN WELDING CONSUMABLES PVT.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		kmcrownwelding@dataone.co m	E6013	WCPI 201	DEWAS	07272 259384578	DIA 2.50,3.15,4.00 & 5.00

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Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
11227	HONAVAR ELECTRODES PVT. LTD.,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		hel@vsnl.com	E6013	WCPI 201	MUMBAI	022-25020317	DIA 2.50,3.15,4.00 & 5.00
15102	SOLARC WELD RODS,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		solarcweldrods@gmail.com	E6013	WCPI 201	TRICHY	0431 2700 149	DIA 2.50,3.15,4.00 & 5.00
13690	GEE LIMITED,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		mpdhanuka@geelimited.com	E6013	WCPI 201	KALYAN (W)	02522 281176	DIA 2.50,3.15,4.00 & 5.00
100200	H.D.WIRES PVT LTD.	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		chandrashekar_rao_04@yahoo.co.in	E6013	WCPI 201	INDORE	0731-4111165	DIA 2.5, 3.2, 4.0 & 5.0 MM
13487	MAGNARC ELECTRODES PVT.LTD.,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		magnarc@hotmail.com	E6013	WCPI 201	VISAGAPATNAM	0891-276 4381...	DIA 2.50,3.15,4.00 & 5.00
16003	MIGLANI ENGINEERS	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		migliani6013_engineers@yahoo.com	E6013	WCPI 201	HARIDWAR.	01332 235172	DIA. 2.5,3.15,4.0 & 5.0MM
15929	WELDALL ELECTRODES (INDIA)	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		info@weldall.co.in	E6013	WCPI 201	DIST. NAGPUR.	07104 265007	DIA: 2.5,3.15,4.0 & 5.0 MM
15082	ROYAL WELDING WIRES PVT. LTD.,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		admin@theoryalfirm.in	E6013	WCPI 201	KANCHIPURAM DIST,	044-3741 1610	DIA 2.50,3.15,4.00 & 5.00
15090	RAJ KESARI ELECTRODES PVT LTD.	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		rajkesari@yahoo.com	E6013	WCPI 201	UDAIPUR	0294 2490193	DIA 2.50,3.15,4.00 & 5.00
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		tenders@royalarc.in	E6013	WCPI 201	MUMBAI.	022 28822374	DIA 2.50,3.15,4.00 & 5.00
14575	WELD ALLOY PRODUCTS,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		wap2005@airtelmail.in	E6013	WCPI 201	GAUTAM BUDH NAGAR (UP)	0120-2557183	DIA 2.50,3.15,4.00 & 5.00
17644	VARUN ELECTRODES PVT. LTD.,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		kapoor@varunelectrodes.com	E6013	WCPI 201	PANIPAT	0180 2653085	DIA 2.50,3.15,4.00 & 5.00
17814	CALCUTTA ELECTRODES PVT. LTD.,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		calcutta_electrodes2006@yahoo.com	E6013	WCPI 201	RAIPUR	0771 4090615	DIA 2.50,3.15,4.00 & 5.00
10081	ESAB INDIA LTD	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E6013	WCPI 201	CHENNAI	044-4340 4803	DIA 2.50,3.15,4.00 & 5.00
14584	SUN ENTERPRISES	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		sunenterprises2011@gmail.com	E6013	WCPI 201	PUDUKKUDI POST	0 88256 36464	DIA 2.50,3.15,4.00 & 5.00
14534	AARYA ELECTRODES PVT.LTD.	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		vibhor@aaryaelectrodes.com	E6013	WCPI 201	AGRA.	0562 262 2121	DIA 2.50,3.15,4.00 & 5.00
17643	SUNDEEP ELECTRODES PVT. LTD.,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		Sun_elec@yahoo.co.in	E6013	WCPI 201	HAPUR	0122 231 3698	DIA 2.50,3.15,4.00 & 5.00
19684	MANOHAR ELECTRODES PVT. LTD	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		manohargroup@gmail.com	E6013	WCPI 201	HAPUR	01222333206	DIA 2.5, 3.15, 4.0 & 5.0 MM
11378	MAILAM INDIA LIMITED	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E6013	WCPI 201	PONDICHERRY	0413-2677311	DIA 2.50,3.15,4.00 & 5.00
13211	D&H INDIA LIMITED	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		dhindia@sancharnet.in	E6013	WCPI 201	INDORE	0731-4273501-...	DIA 2.50,3.15,4.00 & 5.00
15085	VOLTARC ELECTRODES (P) LTD,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		voltarc@rediffmail.com	E6013	WCPI 201	TIRUPATHI	0877 2241462	DIA 2.50,3.15,4.00 & 5.00
11380	MALU ELECTRODES PVT.LIMITED	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		meploffice@rediffmail.com	E6013	WCPI 201	NAGPUR	0712 - 2734895	DIA 2.50,3.15,4.00 & 5.00
18384	ACCURATE WELDARC PVT LTD	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		md@accuratearc.com	E6013	WCPI 201	RAIPUR	0771 257 2623	DIA.2.50,3.15,4.0 & 5.0MM
11881	FUSION ENGG. PRODUCTS PRIVATE LTD.,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		info@fusionweld.co.in	E6013	WCPI 201	GAMARIA	0657-6542444	DIA 2.50,3.15,4.00 & 5.00
15086	SRI RENGHA ELECTRODES (P) LTD,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables			E6013	WCPI 201	TRICHY	0431-25501173	DIA 2.50,3.15,4.00 & 5.00
18540	KOLLIPARA ELECTRODES PVT.LTD.,	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables			E6013	WCPI 201	KRISHNA DIST.(AP)		DIA 2.50,3.15,4.00 & 5.00
17778	ASOKAA ALLOYS	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		asokaaalloys@gmail.com	E6013	WCPI 201	COIMBATORE	0422 2681138	DIA. 2.50,3.15,4.0 & 5.0MM
17518	VALENCY COMPOUNDS SERVICES PVT LTD	WELDG.ELECTRODES:SMA	Permanent	Welding Consumables		valencybrahma@yahoo.co.in	E6013	WCPI 201	Ahmednagar	0241-6602065	DIA.2.5,3.15,4.0 & 5.0MM

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
14429	ALPHA FLUX & ELECTRODES,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		t.vasanthan@sify.com	E6013	WCPI 201	TRICHY DISTRICT	04327 294169	DIA 2.50,3.15,4.00 & 5.00
19808	VAISHALI ELECTRODES	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		GOELVAIBHAV695@GMAIL.COM	E6013	WCPI 201	BHIWADI.	9828789392	DIA 2.5, 3.15, 4.0 & 5.0 MM
13906	MARUTI WELD PRIVATE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		marutiweld@marutiweld.com	E6013	WCPI 201	DWARKA, NEW DELHI	011 6536 3100	DIA 2.50,3.15,4.00 & 5.00
13763	CLASSIC ELECTRODES (INDIA) LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		classicelectrodes@yahoo.co.in	E6013	WCPI 201	KOLKATA	033 22429581	DIA 2.50,3.15,4.00 & 5.00
19809	ANUVRAT INDUSTRIES	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		info.anuvrat@gmail.com	E6013	WCPI 201	PALGHAR	02525240140	DIA 2.5, 3.15, 4.0, & 5.0 MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E6013	WCPI 201	INDORE	0731-4229222	DIA 2.50,3.15,4.00 & 5.00
15088	NIVETHA ELECTRODES,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E6013	WCPI 201	TIRUCHIRAPALLY	0431 2341377	DIA 2.50,3.15,4.00 & 5.00
15087	V.N.C.ELECTRODEES,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		kru_vnc@sancharnet.in	E6013	WCPI 201	KARUR	04324 242774	DIA 2.50,3.15,4.00 & 5.00
16344	MICRO WELD (INDIA)	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		rajeev@microweldindia.com	E6013	WCPI 201	LUDHIANA	0 93169 15172	DIA 2.50,3.15,4.00 & 5.00
15083	MARUTHI ELECTRODES (P) LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		meplelec@bgl.vsnl.net.in	E6013	WCPI 201	BANGALORE	080 25275848	DIA 2.50,3.15,4.00 & 5.00
13693	RASI ELECTRODES LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		rele@airtelmail.in	E6013	WCPI 201	CHENNAI	044 26424523	DIA 2.50,3.15,4.00 & 5.00
14448	BRIGHT WELD TECHNOLOGIES	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		brigtweld13@gmail.com	E6013	WCPI 201	COIMBATORE.	0422 257 4756	DIA 2.50,3.15,4.00 & 5.00
10667	EUREKA SYSTEMS AND ELECTRODES P.LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		info@eurekaelectrodes@gmail.com	E6013	WCPI 201	COIMBATORE	0422-268 7199...	DIA 2.50,3.15,4.00 & 5.00
19906	BAGHERWAL ELECTRODES PVT.LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		bagherwal13@yahoo.com	E6013	WCPI 201	INDORE	0731-2905067	DIA 2.50,3.15,4.00 & 5.00
19875	ABIRAMI ELECTRODES,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sun_weld@yahoo.com	E6013	WCPI 201	COIMBATORE	0422 3232724	DIA 2.50,3.15,4.00 & 5.00
10758	ALPHA ARC PVT LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		alphaarc@yahoo.com	E6013	WCPI 201	GHAZIABAD, UP	0 99114 41441	DIA 2.50,3.15,4.00 & 5.00
19745	MEGA WELD TECHNOLOGIES,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		megaweldcbe@yahoo.com	E6013	WCPI 201	COIMBATORE	0422-658 1989	DIA 2.50,3.15,4.00 & 5.00
13538	WELDCOM ELECTRODES PVT.LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E6013	WCPI 201	SURAT	0261-305 4555	DIA 2.50,3.15,4.00 & 5.00
17451	WELDFAST ELECTRODES PVT LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		weldwellngp@gmail.com	E6013	WCPI 201	NAGPUR	07104 232211/...	DIA 2.50,3.15,4.00 & 5.00
11528	RAAJRATNA ELECTRODES LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mktg@gnahd-rel.global.net.in	E6013	WCPI 201	AHMEDABAD	079 - 6445258	DIA 2.50,3.15,4.00 & 5.00
13729	ORANGE ELECTRODES INDUSTRIES,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		orangeelectrodes@gmail.com	E6013	WCPI 201	ASANGAON	02527-271 995	DIA 2.50,3.15,4.00 & 5.00
19111	SPECTRA SUPER ALLOYS LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		ss_alloys@yahoo.co.in	E6013	WCPI 201	JAMSHEDPUR	0657 6577148	DIA 2.50,3.15,4.00 & 5.00
13549	ATHARVE WELDING TECHNOLOGIES (INDIA	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		atharv.wt@hotmail.com	E6013	WCPI 201	SOLAPUR	0217-273 7029	DIA 2.50,3.15,4.00 & 5.00
15833	THIRUMALA ELECTRODES CO.,	WELDG.ELECTROD ES:SMA	Development	Welding Consumables		tec_sevenarcs@yahoo.co.in	E6013	WCPI 201	TRICHY	0431-6573566	DIA 2.50, 3.15, 4.0 & 5.0 MM
18846	COSMOS ELECTRODES PVT., LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		cosmoselectrodes@yahoo.com	E6013	WCPI 201	INDORE	0731 2707946	DIA 2.50,3.15,4.00 & 5.00
18705	MODI HITECH INDIA LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		gmmelectrode@gmail.com	E6013	WCPI 201	MODIPURAM	011 4250 4577	DIA 2.50,3.15,4.00 & 5.00
18300	SUPERON SCHWEISSTECHNIK INDIA LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E6013	WCPI 201	HARYANA	011-24647199	DIA 2.50,3.15,4.00 & 5.00
15089	WELDCRAFT PRIVATE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		weldcraft@vsnl.net	E6013	WCPI 201	BANGALORE.	080 3373351	DIA 2.50,3.15,4.00 & 5.00
18597	SHIELDARC EQUIPMENTS PVT. LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E6013	WCPI 201	KOLKATA		DIA 2.50,3.15,4.00 & 5.00

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
18433	NUCOR WELD(INDIA)PVT.LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@nucorweldindia.com	E6013	WCPI 201	BANGALORE	080-2784 2523	DIA 2.50,3.15,4.00 & 5.00
17820	SETH ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sepl@sethindia.com	E6013	WCPI 201	KHURAI	07581 240704	DIA 2.50,3.15,4.00 & 5.00
17802	SRI VARSHA ELECTRODES,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E6013	WCPI 201	CHENNAI	0 98402 60618	DIA 2.50,3.15,4.00 & 5.00
13986	B&H ELECTRODES PVT. LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E6013	WCPI 201	MOHALI		DIA 2.50,3.15,4.00 & 5.00
14457	BALAJI ELECTRODES	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sonyaarc6013@gmail.com	E6013	WCPI 201	COIMBATORE.	0422 438 7817	DIA 2.50,3.15,4.00 & 5.00
14449	IDEAL ELECTRODES	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		idealelectrode@gmail.com	E6013	WCPI 201	COIMBATORE.	0422 262 7710	DIA 2.50,3.15,4.00 & 5.00
12893	RUHKMANI ELECTRODES PVT.LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		rukhmanielectrodes@rediffmail .com	E6013	WCPI 201	KOLKATA	033-2526 2039	DIA 2.50,3.15,4.00 & 5.00
17451	WELDFAST ELECTRODES PVT LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		weldwellngp@gmail.com	E7018	WCPI 206	NAGPUR	07104 232211/...	DIA 2.50,3.15,4.00 & 5.00 MM
15085	VOLTARC ELECTRODES (P) LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		voltarc@rediffmail.com	E7018	WCPI 206	TIRUPATHI	0877 2241462	DIA 2.50,3.15,4.00 & 5.00
14791	ANAND ARC LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@anandarc.com	E7018	WCPI 206	MUMBAI.	022 4268 8484	DIA 2.50,3.15,4.00 & 5.00
13211	D&H INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		dhindia@sancharnet.in	E7018	WCPI 206	INDORE	0731-4273501-...	DIA 2.50,3.15,4.00 & 5.00
18846	COSMOS ELECTRODES PVT., LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		cosmoselectrodes@yahoo.com	E7018	WCPI 206	INDORE	0731 2707946	DIA 2.50,3.15,4.00 & 5.00
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E7018	WCPI 206	PONDICHERRY	0413-2677311	DIA 2.50,3.15,4.00 & 5.00
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		tenders@royalarc.in	E7018	WCPI 206	MUMBAI.	022 28822374	DIA 2.50,3.15,4.00 & 5.00
15083	MARUTHI ELECTRODES (P) LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		meplelec@bgl.vsnl.net.in	E7018	WCPI 206	BANGALORE	080 25275848	DIA 2.50,3.15,4.00 & 5.00
13690	GEE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mpdhanuka@geelimited.com	E7018	WCPI 206	KALYAN (W)	02522 281176	DIA 2.50,3.15,4.00 & 5.00
14534	AARYA ELECTRODES PVT.LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		vibhor@aaryaelectrodes.com	E7018	WCPI 206	AGRA.	0562 262 2121	DIA; 2.5, 3.15 & 4.0 MM
13986	B&H ELECTRODES PVT. LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E7018	WCPI 206	MOHALI		DIA 2.50 & 3.15 MM
18433	NUCOR WELD(INDIA)PVT.LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@nucorweldindia.com	E7018	WCPI 206	BANGALORE	080-2784 2523	DIA 2.50,3.15,4.00 & 5.00
18540	KOLLIPARA ELECTRODES PVT.LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E7018	WCPI 206	KRISHNA DIST.(AP)		DIA 2.50,3.15,4.00 & 5.00
18705	MODI HITECH INDIA LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		gmmelectrode@gmail.com	E7018	WCPI 206	MODIPURAM	011 4250 4577	DIA 2.50,3.15,4.00 & 5.00
13693	RASI ELECTRODES LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		rele@airtelmail.in	E7018	WCPI 206	CHENNAI	044 26424523	DIA 2.50,3.15,4.00 & 5.00
15090	RAJ KESARI ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		rajkesari@yahoo.com	E7018	WCPI 206	UDAIPUR	0294 2490193	DIA 2.50,3.15,4.00 & 5.00
18300	SUPERON SCHWEISSTECHNIK INDIA LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E7018	WCPI 206	HARYANA	011-24647199	DIA 2.50,3.15,4.00 & 5.00
18432	VIJAY ELECTRODES AND WIRES PVT.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		vjelect@yahoo.co.in	E7018	WCPI 206	CHENNAI	044-2238 1098	DIA 2.50,3.15,4.00 & 5.00 MM
13906	MARUTI WELD PRIVATE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		marutiweld@marutiweld.com	E7018	WCPI 206	DWARKA, NEW DELHI	011 6536 3100	DIA 2.50,3.15,4.00 & 5.00
13542	SAITRON ENGINEERS PVT. LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sepl.welding@yahoo.com	E7018	WCPI 206	NAGPUR	07104265587	DIA. 2.50,3.15,4.00 & 5.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E7018	WCPI 206	INDORE	0731-4229222	DIA 2.50,3.15,4.00 & 5.00
17644	VARUN ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		kapoor@varunelectrodes.com	E7018	WCPI 206	PANIPAT	0180 2653085	DIA 2.50,3.15,4.00 & 5.00
16548	WELD EXCEL INDIA LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E7018	WCPI 206	LUDHIANA		DIA 2.50,3.15,4.00 & 5.00

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
15929	WELDALL ELECTRODES (INDIA)	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		info@weldall.co.in	E7018	WCPI 206	DIST. NAGPUR.	07104 265007	DIA: 2.50, 3.15,4.0 & 5.0 MM
17643	SUNDEEP ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		Sun_elec@yahoo.co.in	E7018	WCPI 206	HAPUR	0122 231 3698	DIA 2.50,3.15,4.00 & 5.00
15833	THIRUMALA ELECTRODES CO.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		tec_sevenarcs@yahoo.co.in	E7018	WCPI 206	TRICHY	0431-6573566	DIA 2.50,3.15,4.00 & 5.00
11227	HONAVAR ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		hel@vsnl.com	E7018	WCPI 206	MUMBAI	022-25020317	DIA 2.50,3.15,4.00 & 5.00
15082	ROYAL WELDING WIRES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		admin@theoryalfirm.in	E7018	WCPI 206	KANCHIPURAM DIST,	044-3741 1610	DIA 2.50,3.15,4.00 & 5.00
15086	SRI RENGHA ELECTRODES (P) LTD,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables			E7018	WCPI 206	TRICHY	0431-25501173	DIA 2.50,3.15,4.00 & 5.00
10785	ADOR WELDING LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		acegasindia@gmail.com	E7018	WCPI 206	PUNE		DIA 2.50,3.15,4.00 & 5.00MM
11227	HONAVAR ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		hel@vsnl.com	E7018-1	WCPI 207	MUMBAI	022-25020317	DIA 2.50,3.15,4.00 & 5.00 & 6.30MM
18432	VIJAY ELECTRODES AND WIRES PVT.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		vjelect@yahoo.co.in	E7018-1	WCPI 207	CHENNAI	044-2238 1098	DIA 2.50, 3.15, 4.00 & 5.00 MM
10785	ADOR WELDING LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		acegasindia@gmail.com	E7018-1	WCPI 207	PUNE		DIA 2.5MM,3.15MM & 4.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E7018-1	WCPI 207	INDORE	0731-4229222	DIA 2.50,3.15,4.00 & 5.00 & 6.30MM
13211	D&H INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		dhindia@sancharnet.in	E7018-1	WCPI 207	INDORE	0731-4273501-...	DIA 2.50,3.15 & 4.00MM
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E7018-1	WCPI 207	PONDICHERRY	0413-2677311	DIA 2.50,3.15 & 4.00 MM
13690	GEE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mpdhanuka@geelimited.com	E7018-1	WCPI 207	KALYAN (W)	02522 281176	DIA 2.50,3.15,4.00,5.00 & 6.30 MM
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		tenders@royalarc.in	E7018-1	WCPI 207	MUMBAI.	022 28822374	DIA 2.5MM,3.15MM & 4.0MM
19111	SPECTRA SUPER ALLOYS LTD,	E7018 SMAW Electrode	Permanent	Welding Consumables		ss_alloys@yahoo.co.in	E7018	WCPI-204	JAMSHEDPUR	0657 6577148	DIA 2.50,3.15,4.00 & 5.00
18432	VIJAY ELECTRODES AND WIRES PVT.	E7018 SMAW Electrode	Permanent	Welding Consumables		vjelect@yahoo.co.in	E7018	WCPI-204	CHENNAI	044-2238 1098	DIA 2.50,3.15,4.00 & 5.00
17814	CALCUTTA ELECTRODES PVT. LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		calcutta_electrodes2006@yahoo.com	E7018	WCPI-204	RAIPUR	0771 4090615	DIA 2.50,3.15,4.00 & 5.00
15102	SOLARC WELD RODS,	E7018 SMAW Electrode	Permanent	Welding Consumables		solarcweldrods@gmail.com	E7018	WCPI-204	TRICHY	0431 2700 149	DIA 2.50,3.15,4.00 & 5.00
15091	MAGNA ENGINEERING	E7018 SMAW Electrode	Permanent	Welding Consumables			E7018	WCPI-204	VIJAYAWADA	08676 252181	DIA 2.50,3.15,4.00 & 5.00
15089	WELDCRAFT PRIVATE LIMITED,	E7018 SMAW Electrode	Permanent	Welding Consumables		weldcraft@vsnl.net	E7018	WCPI-204	BANGALORE.	080 3373351	DIA 2.50,3.15,4.00 & 5.00
15087	V.N.C.ELECTRODEES,	E7018 SMAW Electrode	Permanent	Welding Consumables		kru_vnc@sancharnet.in	E7018	WCPI-204	KARUR	04324 242774	DIA 2.50,3.15,4.00 & 5.00
15082	ROYAL WELDING WIRES PVT. LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		admin@theoryalfirm.in	E7018	WCPI-204	KANCHIPURAM DIST,	044-3741 1610	DIA 2.50,3.15,4.00 & 5.00
14791	ANAND ARC LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		sales@anandarc.com	E7018	WCPI-204	MUMBAI.	022 4268 8484	DIA 2.50,3.15,4.00 & 5.00
14575	WELD ALLOY PRODUCTS,	E7018 SMAW Electrode	Permanent	Welding Consumables		wap2005@airtelmail.in	E7018	WCPI-204	GAUTAM BUDH NAGAR (UP)	0120-2557183	DIA 2.50,3.15,4.00 & 5.00
13911	ROYAL ARC ELECTRODES LIMITED	E7018 SMAW Electrode	Permanent	Welding Consumables		tenders@royalarc.in	E7018	WCPI-204	MUMBAI.	022 28822374	DIA 2.50,3.15,4.00 & 5.00
13906	MARUTI WELD PRIVATE LIMITED,	E7018 SMAW Electrode	Permanent	Welding Consumables		marutiweld@marutiweld.com	E7018	WCPI-204	DWARKA, NEW DELHI	011 6536 3100	DIA 2.50,3.15,4.00 & 5.00
13693	RASI ELECTRODES LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		rele@airtelmail.in	E7018	WCPI-204	CHENNAI	044 26424523	DIA 2.50,3.15,4.00 & 5.00
19305	MURLI ELECTRODE PVT. LTD,	E7018 SMAW Electrode	Permanent	Welding Consumables		sudhir_0408@rediffmail.com	E7018	WCPI-204	NAGPUR	0712 2769347	DIA 2.50,3.15,4.00 & 5.00

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
19906	BAGHERWAL ELECTRODES PVT.LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		bagherwal13@yahoo.com	E7018	WCPI-204	INDORE	0731-2905067	DIA 2.50,3.15,4.00 & 5.00
10667	EUREKA SYSTEMS AND ELECTRODES P.LTD	E7018 SMAW Electrode	Permanent	Welding Consumables		info@eurekaelectrodes@gmail.com	E7018	WCPI-204	COIMBATORE	0422-268 7199...	DIA 2.50,3.15,4.00 & 5.00
10758	ALPHA ARC PVT LTD	E7018 SMAW Electrode	Permanent	Welding Consumables		alphaarc@yahoo.com	E7018	WCPI-204	GHAZIABAD, UP	0 99114 41441	DIA 2.50,3.15,4.00 & 5.00
10785	ADOR WELDING LIMITED	E7018 SMAW Electrode	Permanent	Welding Consumables		acegasindia@gamil.com	E7018	WCPI-204	PUNE		DIA 2.50,3.15,4.00 & 5.00
11380	MALU ELECTRODES PVT.LIMITED	E7018 SMAW Electrode	Permanent	Welding Consumables		meploffice@rediffmail.com	E7018	WCPI-204	NAGPUR	0712 - 2734895	DIA 2.50,3.15,4.00 & 5.00
11528	RAAJRATNA ELECTRODES LTD	E7018 SMAW Electrode	Permanent	Welding Consumables		mktg@gnahd-rel.global.net.in	E7018	WCPI-204	AHMEDABAD	079 - 6445258	DIA 2.50,3.15,4.00 & 5.00
12893	RUHKMANI ELECTRODES PVT.LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		rukhmanielectrodes@rediffmail.com	E7018	WCPI-204	KOLKATA	033-2526 2039	DIA 2.50,3.15,4.00 & 5.00
13388	THE INDIAN SEEL & WIRE PRODUCTS LTD	E7018 SMAW Electrode	Permanent	Welding Consumables		upshar@tatasteel.com	E7018	WCPI-204	JHARKAND	0657- 6512744	DIA 2.50,3.15,4.00 & 5.00
13487	MAGNARC ELECTRODES PVT.LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		magnarc@hotmail.com	E7018	WCPI-204	VISAGAPATNAM	0891-276 4381...	DIA 2.50,3.15,4.00 & 5.00
13763	CLASSIC ELECTRODES (INDIA) LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		classicelectrodes@yahoo.co.in	E7018	WCPI-204	KOLKATA	033 22429581	DIA 2.50,3.15,4.00 & 5.00
14429	ALPHA FLUX & ELECTRODES,	E7018 SMAW Electrode	Permanent	Welding Consumables		t.vasanthan@sify.com	E7018	WCPI-204	TRICHY DISTRICT	04327 294169	DIA 2.50,3.15,4.00 & 5.00
13542	SAITRON ENGINEERS PVT. LTD,	E7018 SMAW Electrode	Permanent	Welding Consumables		sepl.welding@yahoo.com	E7018	WCPI-204	NAGPUR	07104265587	DIA. 2.50,3.15,4.00 & 5.00MM
13690	GEE LIMITED,	E7018 SMAW Electrode	Permanent	Welding Consumables		mpdhanuka@geelimited.com	E7018	WCPI-204	KALYAN (W)	02522 281176	DIA 2.50,3.15,4.00 & 5.00
15083	MARUTHI ELECTRODES (P) LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		meplelec@bgl.vsnl.net.in	E7018	WCPI-204	BANGALORE	080 25275848	DIA 2.50,3.15,4.00 & 5.00
15085	VOLTARC ELECTRODES (P) LTD,	E7018 SMAW Electrode	Permanent	Welding Consumables		voltarc@rediffmail.com	E7018	WCPI-204	TIRUPATHI	0877 2241462	DIA 2.50,3.15,4.00 & 5.00 MM
15086	SRI RENG A ELECTRODES (P) LTD,	E7018 SMAW Electrode	Permanent	Welding Consumables			E7018	WCPI-204	TRICHY	0431-25501173	DIA 2.50,3.15,4.00 & 5.00MM
15090	RAJ KESARI ELECTRODES PVT LTD.	E7018 SMAW Electrode	Permanent	Welding Consumables		rajkesari@yahoo.com	E7018	WCPI-204	UDAIPUR	0294 2490193	DIA 2.50,3.15,4.00 & 5.00
15833	THIRUMALA ELECTRODES CO.,	E7018 SMAW Electrode	Permanent	Welding Consumables		tec_sevenarcs@yahoo.co.in	E7018	WCPI-204	TRICHY	0431-6573566	DIA 2.50,3.15,4.00 & 5.00
16548	WELD EXCEL INDIA LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables			E7018	WCPI-204	LUDHIANA		DIA 2.50,3.15,4.00 & 5.00
17451	WELDFAST ELECTRODES PVT LTD,	E7018 SMAW Electrode	Permanent	Welding Consumables		weldwelngp@gmail.com	E7018	WCPI-204	NAGPUR	07104 232211/...	DIA 2.50,3.15,4.00 & 5.00 MM
17643	SUNDEEP ELECTRODES PVT. LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		Sun_elec@yahoo.co.in	E7018	WCPI-204	HAPUR	0122 231 3698	DIA 2.50,3.15,4.00 & 5.00
17644	VARUN ELECTRODES PVT. LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		kapoor@varunelectrodes.com	E7018	WCPI-204	PANIPAT	0180 2653085	DIA 2.50,3.15,4.00 & 5.00
17813	K.M.CROWN WELDING CONSUMABLES PVT.,	E7018 SMAW Electrode	Permanent	Welding Consumables		kmcrownwelding@dataone.com	E7018	WCPI-204	DEWAS	07272 259384578	DIA 2.50,3.15,4.00 & 5.00
18300	SUPERON SCHWEISSTECHNIK INDIA LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables			E7018	WCPI-204	HARYANA	011-24647199	DIA 2.50,3.15,4.00 & 5.00
18433	NUCOR WELD(INDIA)PVT.LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		sales@nucorweldindia.com	E7018	WCPI-204	BANGALORE	080-2784 2523	DIA 2.50,3.15,4.00 & 5.00
18540	KOLLIPARA ELECTRODES PVT.LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables			E7018	WCPI-204	KRISHNA DIST.(AP)		DIA 2.50,3.15,4.00 & 5.00
18705	MODI HITECH INDIA LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		gmmelectrode@gmail.com	E7018	WCPI-204	MODIPURAM	011 4250 4577	DIA 2.50,3.15,4.00 & 5.00
18846	COSMOS ELECTRODES PVT., LTD,	E7018 SMAW Electrode	Permanent	Welding Consumables		cosmoselectrodes@yahoo.com	E7018	WCPI-204	INDORE	0731 2707946	DIA 2.50,3.15,4.00 & 5.00

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
10081	ESAB INDIA LTD	E7018 SMAW Electrode	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E7018	WCPI-204	CHENNAI	044-4340 4803	DIA 2.50,3.15,4.00 & 5.00
10774	D&H SECHERON ELECTRODES PVT LTD.	E7018 SMAW Electrode	Permanent	Welding Consumables		sales@dnhsecheron.net	E7018	WCPI-204	INDORE	0731-4229222	DIA 2.50,3.15,4.00 & 5.00
11227	HONAVAR ELECTRODES PVT. LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		hel@vsnl.com	E7018	WCPI-204	MUMBAI	022-25020317	DIA 2.50,3.15,4.00 & 5.00
11378	MAILAM INDIA LIMITED	E7018 SMAW Electrode	Permanent	Welding Consumables		mailam@mailamindia.com	E7018	WCPI-204	PONDICHERRY	0413-2677311	DIA 2.50,3.15,4.00 & 5.00
11881	FUSION ENGG. PRODUCTS PRIVATE LTD.,	E7018 SMAW Electrode	Permanent	Welding Consumables		info@fusionweld.co.in	E7018	WCPI-204	GAMARIA	0657-6542444	DIA 2.50,3.15,4.00 & 5.00
13211	D&H INDIA LIMITED	E7018 SMAW Electrode	Permanent	Welding Consumables		dhindia@sancharnet.in	E7018	WCPI-204	INDORE	0731-4273501-...	DIA 2.50,3.15,4.00 & 5.00
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables		tenders@royalarc.in	E71T-1	WCPI 502 / 02	MUMBAI.	022 28822374	DIA.1.2 MM
20970	THE SHANGHAI LINCOLN ELECTRIC	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables			E71T-1	WCPI 502 / 02		86 21 560 26664	DIA.1.2 & 1.6MM
91820	SATKUL ENTERPRISES LTD.	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables	CHOSUN WELDING CO. LTD.	sales@satkulwelding.com	E71T-1	WCPI 502 / 02	AHMEDABAD.	079 2562 0552	DIA.1.20MM
20047	KANEMATSU TRADING CORPORATION	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	E71T-1	WCPI 502 / 02		81 3 5283 3680	DIA.1.2,1.4 & 1.6MM
91270	VEEPEES INDIA,	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables	KISWEL LTD.,	veepesindia@gmail.com	E71T-1	WCPI 502 / 02	CHENNAI	044-43534354	DIA.1.2 & 1.6MM
13690	GEE LIMITED,	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables		mpdhanuka@geelimited.com	E71T-1	WCPI 502 / 02	KALYAN (W)	02522 281176	DIA 1.2 MM & 1.6 MM
21180	TIEN TAI ELECTRODE CO., LTD,	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables	ITW INDIA LIMITED: WELDING GROUP.	TwTrad@itw weld.com	E71T-1	WCPI 502 / 02	TAIWAN R.O.C.	88662663721-215	DIA 1.2 & 1.6 MM
11378	MAILAM INDIA LIMITED	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables		mailam@mailamindia.com	E71T-1	WCPI 502 / 02	PONDICHERRY	0413-2677311	DIA 1.2 MM (DEVT IN DIA 1.6 MM)
91875	Arya Engineering	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables	SOREX WELDING CO LTD	aryaaengineering@gmail.com	E309T0-1	WCPI 507	Trichy	0431 2511445	DIA. 1.20 MM
20047	KANEMATSU TRADING CORPORATION	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	E309T0-1	WCPI 507		81 3 5283 3680	DIA.1.2 & 1.6MM
91820	SATKUL ENTERPRISES LTD.	WELDG.WIRE:FLUX CORE	Permanent	Welding Consumables	CHOSUN WELDING CO. LTD.	sales@satkulwelding.com	E309T0-1	WCPI 507	AHMEDABAD.	079 2562 0552	DIA.1.20MM
21065	HYUNDAI WELDING CO. LTD.,	WELDG: WIRE: FLUX CO	Permanent	Welding Consumables		alex@hdweld.co.kr	E551T1-B2C	WCPI 505		82-02 6230-6077	DIA.1.2 & 1.6MM
91270	VEEPEES INDIA,	WELDG: WIRE: FLUX CO	Permanent	Welding Consumables	KISWEL LTD.,	veepesindia@gmail.com	E551T1-B2C	WCPI 505	CHENNAI	044-43534354	DIA.1.2 & 1.6MM
21411	METRODE PRODUCTS LIMITED,	WELDG: WIRE: FLUX CO	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	E551T1-B2C	WCPI 505			SIZE DIA.1.20MM
20047	KANEMATSU TRADING CORPORATION	WELDG: WIRE: FLUX CO	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	E551T1-B2C	WCPI 505		81 3 5283 3680	DIA.1.2,1.4 & 1.6MM
10081	ESAB INDIA LTD	WELDG: WIRE: FLUX CO	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E551T1-B2C	WCPI 505	CHENNAI	044-4340 4803	SIZE DIA.1.20MM
91820	SATKUL ENTERPRISES LTD.	WELDG: WIRE: FLUX CO	Permanent	Welding Consumables	CHOSUN WELDING CO. LTD.	sales@satkulwelding.com	E91T1-B3	WCPI 506	AHMEDABAD.	079 2562 0552	DIA.1.20MM
21180	TIEN TAI ELECTRODE CO., LTD,	WELDG: WIRE: FLUX CO	Permanent	Welding Consumables	ITW INDIA LIMITED: WELDING GROUP.	TwTrad@itw weld.com	E91T1-B3	WCPI 506	TAIWAN R.O.C.	88662663721-215	DIA. 1.20MM & 1.60MM
91270	VEEPEES INDIA,	BULKPACK :E551T1-B2C	Permanent	Welding Consumables	KISWEL LTD.,	veepesindia@gmail.com	ASME.SEC.II.C SFA-5.29 E551T1-B2C	WCPI-511	CHENNAI	044-43534354	DIA.1.6MM
20047	KANEMATSU TRADING CORPORATION	BULKPACK :E551T1-B2C	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	ASME.SEC.II.C SFA-5.29 E551T1-B2C	WCPI-511		81 3 5283 3680	DIA.1.6 MM
21180	TIEN TAI ELECTRODE CO., LTD,	BULKPACK :E551T1-B2C	Permanent	Welding Consumables	ITW INDIA LIMITED: WELDING GROUP.	TwTrad@itw weld.com	ASME.SEC.II.C SFA-5.29 E551T1-B2C	WCPI-511	TAIWAN R.O.C.	88662663721-215	DIA:1.6 MM
11378	MAILAM INDIA LIMITED	SMAW ELECTRO ECoCr-E	Permanent	Welding Consumables		mailam@mailamindia.com	ECOCR-E	-	PONDICHERRY	0413-2677311	DIA 3.2 MM ONLY (DEVT IN 2.5 & 4.0 MM)
13690	GEE LIMITED,	SMAW ELECTRO ECoCr-E	Permanent	Welding Consumables		mpdhanuka@geelimited.com	ECOCR-E	-	KALYAN (W)	02522 281176	SIZE: DIA.3.2MM
20018	KENNAMETAL STELLITE	SMAW ELECTRO ECoCr-E	Permanent	Welding Consumables		asiasales@stellitesales.com	ECOCR-E	-	USA	44-0-1793 498...	DIA: 3.20 & 4.0 MM
20073	WEARTECH INTL INC	SMAW ELECTRO ECoCr-E	Permanent	Welding Consumables	BHAVANI AGENCY & CO	Ruckie_Balendran@weartech.net	ECOCR-E	-	USA	714 683 2430	DIA.2.5,3.2,4.0 & 5.0MM

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
91875	Arya Engineering	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables	SOREX WELDING CO LTD	aryaengineering@gmail.com	ENICRFE3	WCPI 225	Trichy	0431 2511445	ONLY FOR DIA 2.5 MM (COUNTER OFFERED PRICE NOT ACCEPTED BY VENDOR FOR DIA 3.5 & 4 MM)
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	ENICRFE3	WCPI 225	INDORE	0731-4229222	DIA.2.5,3.2,4.0 & 5.0MM
20563	VOESTALPINE BOHLER WELDING	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.com	ENICRFE3	WCPI 225	GERMANY	2381271759	DIA. 2.5, 3.2 & 4.0 MM
11227	HONAVAR ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		hel@vsnl.com	ENICRFE3	WCPI 225	MUMBAI	022-25020317	DIA. 2.50,3.15 & 4.0MM
13690	GEE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mpdhanuka@geelimited.com	ENICRFE3	WCPI 225	KALYAN (W)	02522 281176	DIA 2.50,3.15 & 4.00 MM
21991	SPECIAL METALS WELDING PRODUCTS	SMAW ELECTRODE	Permanent	Welding Consumables		klowman@smwpc.com	ASME:SEC.II.C.SFA-5.14,ENICRFE-7	-----	NORTH COROLINA 28658	828-465-0352	DIA.2.4,3.2,4.0 & 4.8
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E308-16	WCPI 217	PONDICHERRY	0413-2677311	DIA.2.5,3.15,4.0 & 5.0
10081	ESAB INDIA LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E308-16	WCPI 217	CHENNAI	044-4340 4803	DIA.2.5,3.15,4.0 & 5.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E308-16	WCPI 217	INDORE	0731-4229222	DIA.2.0,2.5,3.15,4.0 & 5.0MM
10081	ESAB INDIA LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E308L-16	WCPI 244	CHENNAI	044-4340 4803	DIA.2.50, 3.15 & 4.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E308L-16	WCPI 244	INDORE	0731-4229222	DIA.2.50, 3.15 AND 4.0MM
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		tenders@royalarc.in	E309-16	WCPI 218	MUMBAI.	022 28822374	DIA 2.5, 3.15, 4.0 & 5.0 MM.
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E309-16	WCPI 218	INDORE	0731-4229222	DIA.2.0,2.5,3.15,4.0 & 5.0MM
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E309-16	WCPI 218	PONDICHERRY	0413-2677311	DIA.2.5,3.15,4.0 & 5.0MM
10081	ESAB INDIA LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E309-16	WCPI 218	CHENNAI	044-4340 4803	DIA.2.5,3.15,4.0 & 5.0MM
11227	HONAVAR ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		hel@vsnl.com	E309-16	WCPI 218	MUMBAI	022-25020317	DIA.2.5,3.15 & 4.0MM
13690	GEE LIMITED,	WELDG.ELECTROD ES:SMA	Development	Welding Consumables		mpdhanuka@geelimited.com	E309-16	WCPI 218	KALYAN (W)	02522 281176	DIA 2.5, 3.15 & 4.0 MM
10081	ESAB INDIA LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E310-16	WCPI 219	CHENNAI	044-4340 4803	DIA.2.5,3.15,4.0 & 5.0MM
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E310-16	WCPI 219	PONDICHERRY	0413-2677311	DIA 2.5, 3.15 & 4.0 MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E310-16	WCPI 219	INDORE	0731-4229222	DIA.2.0,2.5,3.15,4.0 & 5.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E316-16	WCPI 220	INDORE	0731-4229222	DIA.2.0,2.5,3.15,4.0 & 5.0MM
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Development	Welding Consumables		mailam@mailamindia.com	E316-16	WCPI 220	PONDICHERRY	0413-2677311	2.5, 3.15 & 4.0 MM
10081	ESAB INDIA LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E316-16	WCPI 220	CHENNAI	044-4340 4803	DIA.2.5,3.15,4.0 & 5.0MM
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		tenders@royalarc.in	E316-16	WCPI 220	MUMBAI.	022 28822374	DIA.3.15 & 4.0MM
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E316L-16	WCPI 243	PONDICHERRY	0413-2677311	2.5, 3.15 & 4.0 MM
10081	ESAB INDIA LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E316L-16	WCPI 243	CHENNAI	044-4340 4803	DIA.2.5,3.15,4.0 & 5.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E316L-16	WCPI 243	INDORE	0731-4229222	DIA.2.0,2.5,3.15,4.0 & 5.0MM
13690	GEE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mpdhanuka@geelimited.com	E316L-16	WCPI 243	KALYAN (W)	02522 281176	2.5,3.15 & 4.0 MM
13911	ROYAL ARC ELECTRODES LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		tenders@royalarc.in	E347-16	WCPI 221	MUMBAI.	022 28822374	DIA.2.5, 3.15 & 4 MM

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sales@dnhsecheron.net	E347-16	WCPI 221	INDORE	0731-4229222	DIA.2.0,2.5,3.15,4.0 & 5.0MM
11378	MAILAM INDIA LIMITED	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mailam@mailamindia.com	E347-16	WCPI 221	PONDICHERRY	0413-2677311	DIA.2.5,3.15,4.0 & 5.0MM
18705	MODI HITECH INDIA LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		gmmelectrode@gmail.com	E347-16	WCPI 221	MODIPURAM	011 4250 4577	DIA.2.5,3.15 & 4.0MM
13906	MARUTI WELD PRIVATE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		marutiweld@marutiweld.com	E347-16	WCPI 221	DWARKA, NEW DELHI	011 6536 3100	DIA.2.5,3.15 & 4.0MM
11227	HONAVAR ELECTRODES PVT. LTD.,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		hel@vsnl.com	E347-16	WCPI 221	MUMBAI	022-25020317	DIA.2.5,3.15,4.0 & 5.0MM
13690	GEE LIMITED,	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		mpdhanuka@geelimited.com	E347-16	WCPI 221	KALYAN (W)	02522 281176	DIA.2.50, 3.15 & 4.0MM
10081	ESAB INDIA LTD	WELDG.ELECTROD ES:SMA	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	E347-16	WCPI 221	CHENNAI	044-4340 4803	DIA.2.5,3.15,4.0 & 5.0MM
19905	T.M.INDUSTRIES,	EL-8 SAW WIRE	Permanent	Welding Consumables		tmtapadia@rediffmail.com	AWS A5.17 EL-8	WCPI-015/01	RAIPUR	0771-2100524	DIA.2.0 TO 5.0MM
13486	A V WELDTech PVT.LTD.,	EL-8 SAW WIRE	Permanent	Welding Consumables		products@aveasyweld.com	AWS A5.17 EL-8	WCPI-015/01	NAGPUR.	0712-252 1727	DIA: 4.0 MM
11378	MAILAM INDIA LIMITED	EL-8 SAW WIRE	Permanent	Welding Consumables		mailam@mailamindia.com	AWS A5.17 EL-8	WCPI-015/01	PONDICHERRY	0413-2677311	DIA.2.0 TO 5.0MM
19114	WELMET TECHNOLOGIES PVT. LTD.,	EL-8 SAW WIRE	Permanent	Welding Consumables			AWS A5.17 EL-8	WCPI-015/01	NAGPUR		DIA.2.0 TO 5.0MM
10774	D&H SECHERON ELECTRODES PVT LTD.	EL-8 SAW WIRE	Permanent	Welding Consumables		sales@dnhsecheron.net	AWS A5.17 EL-8	WCPI-015/01	INDORE	0731-4229222	DIA.2.0 TO 5.0MM
13211	D&H INDIA LIMITED	EL-8 SAW WIRE	Permanent	Welding Consumables		dhindia@sancharnet.in	AWS A5.17 EL-8	WCPI-015/01	INDORE	0731-4273501-...	DIA.2.0 TO 5.0MM
13534	RUPA INDUSTRIES,	EL-8 SAW WIRE	Permanent	Welding Consumables		rupaent@vsnl.net	AWS A5.17 EL-8	WCPI-015/01	SECUNDERABAD	040-2771 3714	DIA.2.0 TO 5.0MM
11528	RAAJRATNA ELECTRODES LTD	EL-8 SAW WIRE	Permanent	Welding Consumables		mktg@gnahd-rel.global.net.in	AWS A5.17 EL-8	WCPI-015/01	AHMEDABAD	079 - 6445258	DIA.2.0 TO 5.0MM
13693	RASI ELECTRODES LTD.,	EL-8 SAW WIRE	Permanent	Welding Consumables		rele@airtelmail.in	AWS A5.17 EL-8	WCPI-015/01	CHENNAI	044 26424523	DIA.2.4,3.2 & 4.0MM
17813	K.M.CROWN WELDING CONSUMABLES PVT.,	EL-8 SAW WIRE	Permanent	Welding Consumables		kmcrownwelding@dataone.co m	AWS A5.17 EL-8	WCPI-015/01	DEWAS	07272 259384578	DIA.2.0 TO 5.0MM
15810	NOUVEAUX INDUSTRIES (P) LTD.,	EL-8 SAW WIRE	Permanent	Welding Consumables			AWS A5.17 EL-8	WCPI-015/01	KANGAYAM		DIA.2.4,3.2 & 4.0MM
14584	SUN ENTERPRISES	EL-8 SAW WIRE	Permanent	Welding Consumables		sunenterprises2011@gmail.co m	AWS A5.17 EL-8	WCPI-015/01	PUDUKKUDI POST	0 88256 36464	DIA.2.4,3.2 & 4.0MM
14455	WIRE AND WIRE PRODUCTS	EL-8 SAW WIRE	Permanent	Welding Consumables		wwp@vsnl.net	AWS A5.17 EL-8	WCPI-015/01	CHENNAI	044 26242378	DIA.2.4,3.2 & 4.0MM
15101	PRECISION WELDARC LTD,	EL-8 SAW WIRE	Permanent	Welding Consumables		pwires@yahoo.co.in	AWS A5.17 EL-8	WCPI-015/01	KOLKATA.	033 25634753	DIA.2.4,3.2 & 4.0MM
16314	SUN WIRES.	EL-8 SAW WIRE	Permanent	Welding Consumables		sunwiress@gmail.com	AWS A5.17 EL-8	WCPI-015/01	TRICHY.	0431 2577448	DIA.2.50MM TO 5.0MM
14340	NALLI ARC INDUSTRIE,	EL-8 SAW WIRE	Permanent	Welding Consumables		nalliar@yahoo.com	AWS A5.17 EL-8	WCPI-015/01	ERODE Dt.	04257 245185	DIA.2.4,3.2 & 4.0MM
11288	JAGSHAAN INDUSTRIES	EL-8 SAW WIRE	Permanent	Welding Consumables		jagshaan@nagpur.dot.net.in	AWS A5.17 EL-8	WCPI-015/01	NAGPUR	0712 - 581557	DIA.2.4,3.2 & 4.0MM
14791	ANAND ARC LTD.,	EL-8 SAW WIRE	Permanent	Welding Consumables		sales@anandarc.com	AWS A5.17 EL-8	WCPI-015/01	MUMBAI.	022 4268 8484	DIA.2.0 TO 5.0MM
15085	VOLTARC ELECTRODES (P) LTD,	EL-8 SAW WIRE	Permanent	Welding Consumables		voltarc@rediffmail.com	AWS A5.17 EL-8	WCPI-015/01	TIRUPATHI	0877 2241462	DIA.2.4,3.2 & 4.0MM
10081	ESAB INDIA LTD	EL-8 SAW WIRE	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	AWS A5.17 EL-8	WCPI-015/01	CHENNAI	044-4340 4803	DIA.2.4,3.2 & 4.0MM
10785	ADOR WELDING LIMITED	EL-8 SAW WIRE	Permanent	Welding Consumables		acegasindia@gamil.com	AWS A5.17 EL-8	WCPI-015/01	PUNE		DIA.2.4,3.2 & 4.0MM
16166	EVERSHINE WIRES	EL-8 SAW WIRE	Permanent	Welding Consumables		evershine_wires@yahoo.in	AWS A5.17 EL-8	WCPI-015/01	TRICHY	04327- 235381	DIA.2.0 TO 5.0MM
20047	KANEMATSU TRADING CORPORATION	WELDING WIRE:SAW EB3	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	EB3	WCPI 007		81 3 5283 3680	DIA 3.2,4.0 & 4.8 MM
20563	VOESTALPINE BOHLER WELDING	WELDING WIRE:SAW EB3	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co m	EB3	WCPI 007	GERMANY	2381271759	DIA.3.2,4.0 & 4.8MM

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
91270	VEEPEES INDIA,	WELDING WIRE:SAW EB3	Permanent	Welding Consumables	KISWEL LTD.,	veepeesindia@gmail.com	EB3	WCPI 007	CHENNAI	044-43534354	DIA.4.0MM
20516	LINCOLN ELECTRIC FRANCE S.A.	WELDING WIRE:SAW EB2	Permanent	Welding Consumables	VENUS WELDS		EB2	WCPI 006		33232 114040	DIA:2.0MM AND 4.0MM
20047	KANEMATSU TRADING CORPORATION	WELDING WIRE:SAW EB2	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	EB2	WCPI 006		81 3 5283 3680	DIA 2.0,3.2,4.0 & 4.8 MM
20563	VOESTALPINE BOHLER WELDING	WELDING WIRE:SAW EB2	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co.m	EB2	WCPI 006	GERMANY	2381271759	DIA.3.2,4.0 & 4.8MM
91270	VEEPEES INDIA,	WELDING WIRE:SAW EB2	Permanent	Welding Consumables	KISWEL LTD.,	veepeesindia@gmail.com	EB2	WCPI 006	CHENNAI	044-43534354	DIA. 2.0MM & 4.0MM
22456	I.A.BARNES & CO. LTD.	WELDING WIRE:SAW EB2	Permanent	Welding Consumables	NIVEK AGENCIES	mandy@iabco.co.uk	EB2	WCPI 006			DIA. 4.0MM
21461	INDUSTRIA NAZIONALE ELETTRICI S.p.A	WELDING WIRE:SAW EB2	Permanent	Welding Consumables	SATKUL ENTERPRISES LTD.	doriana.depoli@ine.it	EB2	WCPI 006	ITALY.		DIA.2.0MM
20563	VOESTALPINE BOHLER WELDING	WELDING WIRE:SAW EA4	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co.m	EG	WCPI 009	GERMANY	2381271759	DIA.2.0,2.4,3.2,4.0 & 4.8MM
20047	KANEMATSU TRADING CORPORATION	WELDING WIRE:SAW EA4	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	EG	WCPI 009		81 3 5283 3680	DIA.2.0,2.4,3.2,4.0 & 4.8MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WELDING WIRE:SAW EM1	Permanent	Welding Consumables		sales@dnhsecheron.net	EM12K	WCPI 003	INDORE	0731-4229222	DIA.1.6,2.0,2.4 & 3.2MM
11378	MAILAM INDIA LIMITED	WELDING WIRE:SAW EM1	Permanent	Welding Consumables		mailam@mailamindia.com	EM12K	WCPI 003	PONDICHERRY	0413-2677311	DIA.1.6,2.0,2.4 & 3.2MM
20563	VOESTALPINE BOHLER WELDING	WELDING WIRE:SAW EM1	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co.m	EM12K	WCPI 003	GERMANY	2381271759	DIA.1.6,2.0,2.4 & 3.2MM
20047	KANEMATSU TRADING CORPORATION	WELDING WIRE:SAW EM1	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	EM12K	WCPI 003		81 3 5283 3680	DIA.1.6,2.0,2.4 & 3.2MM
10081	ESAB INDIA LTD	WELDING WIRE:SAW EM1	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	EM12K	WCPI 003	CHENNAI	044-4340 4803	DIA.1.6,2.0,2.4 & 3.2MM
14455	WIRE AND WIRE PRODUCTS	WELDING WIRE:SAW EM1	Permanent	Welding Consumables		wwp@vsnl.net	EM12K	WCPI 003	CHENNAI	044 26242378	DIA.1.6,2.0,2.4 & 3.2MM
10785	ADOR WELDING LIMITED	WELDING WIRE:SAW EM1	Permanent	Welding Consumables		acegasindia@gamil.com	EM12K	WCPI 003	PUNE		DIA.1.6,2.0,2.4 & 3.2MM
15810	NOUVEAUX INDUSTRIES (P) LTD.,	WELDING WIRE:SAW EM1	Permanent	Welding Consumables			EM12K	WCPI 003	KANGAYAM		DIA.1.6,2.0,2.4 & 3.2MM
20563	VOESTALPINE BOHLER WELDING	WELDING WIRE:SAW 3 B	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co.m	SFA 5.23 EB9	WCPI-010	GERMANY	2381271759	DIA. 1.6, 2.5 & 3.2 MM
20047	KANEMATSU TRADING CORPORATION	WELDING WIRE:SAW 3 B	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	SFA 5.23 EB9	WCPI-010		81 3 5283 3680	DIA.1.6,2.4 & 3.2 & 4.00MM
10081	ESAB INDIA LTD	WELDING WIRE:SAW 3 B	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	SFA 5.23 EB9	WCPI-010	CHENNAI	044-4340 4803	DIA.2.5 & 3.2MM
22391	THE LINCOLN ELECTRIC COMPANY FRANCE	WELDING WIRE:SAW 3 B	Permanent	Welding Consumables	MERIDIAN EXPORTS	jerome.jumeau@lincolnelectric europe.com	SFA 5.23 EB9	WCPI-010	95895 CERGY-PONTOISE CEDEX	1342 13480	DIA.2.4 & 3.2MM
21411	METRODE PRODUCTS LIMITED,	WELDING WIRE:SAW 3 B	Permanent	Welding Consumables	VENUS WELDS	raghvendra.srivastava@metrod e.com	SFA 5.23 EB9	WCPI-010			DIA.2.4 & 3.2MM
15810	NOUVEAUX INDUSTRIES (P) LTD.,	WeldWire SAW EM12K	Permanent	Welding Consumables			EM12K	WCPI-003	KANGAYAM		DIA.1.6,2.0,2.4 & 3.2MM
20047	KANEMATSU TRADING CORPORATION	WeldWire SAW EM12K	Permanent	Welding Consumables	SAICHEM COATINGS PVT.LTD.	koya_okuda@kgt.kanematsu.co.jp	EM12K	WCPI-003		81 3 5283 3680	DIA.1.6,2.0,2.4 & 3.2MM
20563	VOESTALPINE BOHLER WELDING	WeldWire SAW EM12K	Permanent	Welding Consumables	VOESTALPINE BOHLER WELDING	christina.holle@voestalpine.co.m	EM12K	WCPI-003	GERMANY	2381271759	DIA.1.6,2.0,2.4 & 3.2MM
11288	JAGSHAAN INDUSTRIES	WeldWire SAW EM12K	Permanent	Welding Consumables		jagshaan@nagpur.dot.net.in	EM12K	WCPI-003	NAGPUR	0712 - 581557	DIA.1.6,2.0,2.4 & 3.2MM
14340	NALLI ARC INDUSTRIE,	WeldWire SAW EM12K	Permanent	Welding Consumables		nalliar@yaho.com	EM12K	WCPI-003	ERODE Dt.	04257 245185	DIA.1.6,2.0,2.4 & 3.2MM
14455	WIRE AND WIRE PRODUCTS	WeldWire SAW EM12K	Permanent	Welding Consumables		wwp@vsnl.net	EM12K	WCPI-003	CHENNAI	044 26242378	DIA.1.6,2.0,2.4 & 3.2MM
13486	A V WELDTech PVT.LTD.,	WeldWire SAW EM12K	Permanent	Welding Consumables		products@aveasyweld.com	EM12K	WCPI-003	NAGPUR.	0712-252 1727	DIA:4 MM ONLY
15101	PRECISION WELDARC LTD,	WeldWire SAW EM12K	Permanent	Welding Consumables		pwires@yahoo.co.in	EM12K	WCPI-003	KOLKATA.	033 25634753	DIA.1.6,2.0,2.4 & 3.2MM
11378	MAILAM INDIA LIMITED	WeldWire SAW EM12K	Permanent	Welding Consumables		mailam@mailamindia.com	EM12K	WCPI-003	PONDICHERRY	0413-2677311	DIA.1.6,2.0,2.4 & 3.2MM

APPROVED SUPPLIER LIST FOR WELDING CONSUMABLES

Vendor No	Vendor Name	Material Group Description	Nature	GROUP DESCRIPTION	PARTNER NAME	EMAIL	Specification	TDC	CITY1	PHONE1	Size Detail
17813	K.M.CROWN WELDING CONSUMABLES PVT.,	WeldWire SAW EM12K	Permanent	Welding Consumables		kmcrownwelding@dataone.com	EM12K	WCPI-003	DEWAS	07272 259384578	DIA.2.0,3.20 & 4.0MM
10785	ADOR WELDING LIMITED	WeldWire SAW EM12K	Permanent	Welding Consumables		acegasindia@gmail.com	EM12K	WCPI-003	PUNE		DIA.1.6,2.0,2.4 & 3.2MM
16166	EVERSHINE WIRES	WeldWire SAW EM12K	Permanent	Welding Consumables		evershine_wires@yahoo.in	EM12K	WCPI-003	TRICHY	04327- 235381	DIA 2.0, 2.4, 3.2 & 4.0 MM
10774	D&H SECHERON ELECTRODES PVT LTD.	WeldWire SAW EM12K	Permanent	Welding Consumables		sales@dnhsecheron.net	EM12K	WCPI-003	INDORE	0731-4229222	DIA.1.6,2.0,2.4 & 3.2MM
10081	ESAB INDIA LTD	WeldWire SAW EM12K	Permanent	Welding Consumables		sukalyan.chakladar@esab.co.in	EM12K	WCPI-003	CHENNAI	044-4340 4803	DIA.1.6,2.0,2.4 & 3.2MM
19114	WELMET TECHNOLOGIES PVT. LTD.,	WeldWire SAW EM12K	Permanent	Welding Consumables			EM12K	WCPI-003	NAGPUR		DIA.1.6,2.0,2.4 & 3.2MM
Welding consumable and Painint suppliers from BHEL, Ranipet											

Section V: Approved Supplier List for Paints

Vendor No	Vendor Name	Mat Group	Material Group Description	CITY	EMAIL	Specification	TDC	CITY1	PHONE2
17627	KORROCOAT POLYMERS PVT LTD	PGDIP	DIP COAT PAINT	MH	korrocoatpolymers@yahoo.co.in	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	PUNE.	0 98900 00370
18403	HARLEQUIN PAINTS PVT LTD	PGDIP	DIP COAT PAINT	MH	harlequinchem@yahoo.com	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	KHOPOLI.	0 98201 49080
10174	NOVAA PAINTS	PGDIP	DIP COAT PAINT	TN	novapaints89@gmail.com	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	TIRUCHIRAPALLI-13	0 96009 07011
10268	SUNDARAM PAINTS PVT LTD	PGDIP	DIP COAT PAINT	TN	sundarampaint1@rediffmail.com	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	THANJAVUR	
19552	GRAUER & WEIL (INDIA) LTD.,	PGDIP	DIP COAT PAINT	KA	bp1chennai@rediffmail.com	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	CHENNAI	
19620	CHEMECOAT PAINTS,	PGDIP	DIP COAT PAINT	TN	chemekkn@bsnl.in	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	TRICHY	0 98424 45649
19764	SYNORGANIC PAINTS PVT LTD	PGDIP	DIP COAT PAINT	AP	synovsp@gmail.com	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	VISAKHAPATNAM,	9701702411
10308	WESTERN INDIA PAINT& COLOUR CO. (P)	PGDIP	DIP COAT PAINT	TN	westernpaints@gmail.com	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	CHENNAI	0 98840 88887
18491	TITAN PAINTS & CHEMICALS LTD	PGDIP	DIP COAT PAINT	TN	businessdevelopment@titanpaints.in	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	COIMBATORE.	9003555628
10635	PASU MEENA PAINTS INDUSTRIES	PGDIP	DIP COAT PAINT	TN	pasummeena@yahoo.com	120011121900,120011120002,120050530000	PR:CHEM09-03/REV02D230810	TIRUPPUVANAM	0 9443065268
10308	WESTERN INDIA PAINT& COLOUR CO. (P)	PGPH1	PSS:HR.AL.Paint Gr-I	TN	westernpaints@gmail.com	IS:13183 GRADE-I	AS PER BHEL TDC	CHENNAI	0 98840 88887
18491	TITAN PAINTS & CHEMICALS LTD	PGPH1	PSS:HR.AL.Paint Gr-I	TN	businessdevelopment@titanpaints.in	IS:13183 GRADE-I	AS PER BHEL TDC	COIMBATORE.	9003555628
10031	BERGER PAINTS INDIA LTD.,	PGPH1	PSS:HR.AL.Paint Gr-I	TN	bpil_ch2@sify.com	IS:13183 GRADE-I	AS PER BHEL TDC	CHENNAI	9282329896
10051	CARBOLINE INDIA PRIVATE LTD	PGPH1	PSS:HR.AL.Paint Gr-I	TN	anand@carbolineindia.com	IS:13183 GRADE-I	AS PER BHEL TDC	CHENNAI.	0 76674 71777
18747	SHREE SURYA COATINGS	PGPH1	PSS:HR.AL.Paint Gr-I	MH	info@shreesuryacoatings.com	IS:13183 GRADE-I	AS PER BHEL TDC	NASIK	0 97652 40987
10323	STAR PAINT & OIL INDUSTRIES	PGPH1	PSS:HR.AL.Paint Gr-I	MH		IS:13183 GRADE-I	AS PER BHEL TDC	MUMBAI	
18403	HARLEQUIN PAINTS PVT LTD	PGPH1	PSS:HR.AL.Paint Gr-I	MH	harlequinchem@yahoo.com	IS:13183 GRADE-I	AS PER BHEL TDC	KHOPOLI.	0 98201 49080
10174	NOVAA PAINTS	PGPH1	PSS:HR.AL.Paint Gr-I	TN	novapaints89@gmail.com	IS:13183 GRADE-I	AS PER BHEL TDC	TIRUCHIRAPALLI-13	0 96009 07011
10095	KANSAI NEROLAC PAINTS LIMITED,	PGPH1	PSS:HR.AL.Paint Gr-I	TN		IS:13183 GRADE-I	AS PER BHEL TDC	CHENNAI	
18248	POWER LIGHT PAINTS	PGPH1	PSS:HR.AL.Paint Gr-I	TN	powerlightpaints@yahoo.in	IS:13183 GRADE-I	AS PER BHEL TDC	TRICHY.	0 98424 03768
19764	SYNORGANIC PAINTS PVT LTD	PGPH1	PSS:HR.AL.Paint Gr-I	AP	synovsp@gmail.com	IS:13183 GRADE-I	AS PER BHEL TDC	VISAKHAPATNAM,	9701702411
10930	ADVANCE PAINTS PVT LTD.,	PGPH1	PSS:HR.AL.Paint Gr-I	TN	aplch@vsnl.net	IS:13183 GRADE-I	AS PER BHEL TDC	CHENNAI	
16739	JOTUN INDIA PVT LTD	PGPH1	PSS:HR.AL.Paint Gr-I	TN	moinudin.i@jotun.com	IS:13183 GRADE-I	AS PER BHEL TDC	CHENNAI.	0 87544 80089
17627	KORROCOAT POLYMERS PVT LTD	PGPH1	PSS:HR.AL.Paint Gr-I	MH	korrocoatpolymers@yahoo.co.in	IS:13183 GRADE-I	AS PER BHEL TDC	PUNE.	0 98900 00370
18403	HARLEQUIN PAINTS PVT LTD	PGPH2	H.R.ALUMINIUM PAINTS	MH	harlequinchem@yahoo.com	IS:13183 GRADE-II	AS PER BHEL TDC	KHOPOLI.	0 98201 49080
18248	POWER LIGHT PAINTS	PGPH2	H.R.ALUMINIUM PAINTS	TN	powerlightpaints@yahoo.in	IS:13183 GRADE-II	AS PER BHEL TDC	TRICHY.	0 98424 03768
10930	ADVANCE PAINTS PVT LTD.,	PGPH2	H.R.ALUMINIUM PAINTS	TN	aplch@vsnl.net	IS:13183 GRADE-II	AS PER BHEL TDC	CHENNAI	
16739	JOTUN INDIA PVT LTD	PGPH2	H.R.ALUMINIUM PAINTS	TN	moinudin.i@jotun.com	IS:13183 GRADE-II	AS PER BHEL TDC	CHENNAI.	0 87544 80089
17627	KORROCOAT POLYMERS PVT LTD	PGPH2	H.R.ALUMINIUM PAINTS	MH	korrocoatpolymers@yahoo.co.in	IS:13183 GRADE-II	AS PER BHEL TDC	PUNE.	0 98900 00370
18491	TITAN PAINTS & CHEMICALS LTD	PGPH2	H.R.ALUMINIUM PAINTS	TN	businessdevelopment@titanpaints.in	IS:13183 GRADE-II	AS PER BHEL TDC	COIMBATORE.	9003555628
10308	WESTERN INDIA PAINT& COLOUR CO. (P)	PGPH2	H.R.ALUMINIUM PAINTS	TN	westernpaints@gmail.com	IS:13183 GRADE-II	AS PER BHEL TDC	CHENNAI	0 98840 88887
10323	STAR PAINT & OIL INDUSTRIES	PGPH2	H.R.ALUMINIUM PAINTS	MH		IS:13183 GRADE-II	AS PER BHEL TDC	MUMBAI	
10095	KANSAI NEROLAC PAINTS LIMITED,	PGPH2	H.R.ALUMINIUM PAINTS	TN		IS:13183 GRADE-II	AS PER BHEL TDC	CHENNAI	

Section V: Approved Supplier List for Paints

Vendor No	Vendor Name	Mat Group	Material Group Description	CITY	EMAIL	Specification	TDC	CITY1	PHONE2
10442	ASIAN PAINTS PPG PRIVATE LTD.	PGPH2	H.R.ALUMINIUM PAINTS	TN	smohammad.mohideen@asianpaintspg.com	IS:13183 GRADE-II	AS PER BHEL TDC	CHENNAI	
18747	SHREE SURYA COATINGS	PGPH2	H.R.ALUMINIUM PAINTS	MH	info@shreesuryacoatings.com	IS:13183 GRADE-II	AS PER BHEL TDC	NASIK	0 97652 40987
10031	BERGER PAINTS INDIA LTD.,	PGPH2	H.R.ALUMINIUM PAINTS	TN	bpil_ch2@sify.com	IS:13183 GRADE-II	AS PER BHEL TDC	CHENNAI	9282329896
10174	NOVAA PAINTS	PGPH2	H.R.ALUMINIUM PAINTS	TN	novapaints89@gmail.com	IS:13183 GRADE-II	AS PER BHEL TDC	TIRUCHIRAPALLI-13	0 96009 07011
10051	CARBOLINE INDIA PRIVATE LTD	PGPH2	H.R.ALUMINIUM PAINTS	TN	anand@carbolineindia.com	IS:13183 GRADE-II	AS PER BHEL TDC	CHENNAI.	0 76674 71777
19620	CHEMECOAT PAINTS,	PGPH2	H.R.ALUMINIUM PAINTS	TN	chemekkn@bsnl.in	IS:13183 GRADE-II	AS PER BHEL TDC	TRICHY	0 98424 45649
19764	SYNORGANIC PAINTS PVT LTD	PGPH2	H.R.ALUMINIUM PAINTS	AP	synovsp@gmail.com	IS:13183 GRADE-II	AS PER BHEL TDC	VISAKHAPATNAM,	9701702411
10242	SHALIMAR PAINTS LTD.	PGPH3	H.R.ALUMINIUM PAINTS	TN		IS:13183 GRADE-III	AS PER BHEL TDC	CHENNAI	
19764	SYNORGANIC PAINTS PVT LTD	PGPH3	H.R.ALUMINIUM PAINTS	AP	synovsp@gmail.com	IS:13183 GRADE-III	AS PER BHEL TDC	VISAKHAPATNAM,	9701702411
17627	KORROCOAT POLYMERS PVT LTD	PGPH3	H.R.ALUMINIUM PAINTS	MH	korrocoatpolymers@yahoo.co.in	IS:13183 GRADE-III	AS PER BHEL TDC	PUNE.	0 98900 00370
17784	SEVEN SEAS PAINTS PVT. LIMITED	PGPH3	H.R.ALUMINIUM PAINTS	UP	gagan@smgroup.net.in	IS:13183 GRADE-III	AS PER BHEL TDC	NOIDA	09811775278
10174	NOVAA PAINTS	PGPH3	H.R.ALUMINIUM PAINTS	TN	novapaints89@gmail.com	IS:13183 GRADE-III	AS PER BHEL TDC	TIRUCHIRAPALLI-13	0 96009 07011
18248	POWER LIGHT PAINTS	PGPH3	H.R.ALUMINIUM PAINTS	TN	powerlightpaints@yahoo.in	IS:13183 GRADE-III	AS PER BHEL TDC	TRICHY.	0 98424 03768
18747	SHREE SURYA COATINGS	PGPH3	H.R.ALUMINIUM PAINTS	MH	info@shreesuryacoatings.com	IS:13183 GRADE-III	AS PER BHEL TDC	NASIK	0 97652 40987
18403	HARLEQUIN PAINTS PVT LTD	PGPH3	H.R.ALUMINIUM PAINTS	MH	harlequinchem@yahoo.com	IS:13183 GRADE-III	AS PER BHEL TDC	KHOPOLI.	0 98201 49080
18491	TITAN PAINTS & CHEMICALS LTD	PGPH3	H.R.ALUMINIUM PAINTS	TN	businessdevelopment@titanpaints.in	IS:13183 GRADE-III	AS PER BHEL TDC	COIMBATORE.	9003555628
10308	WESTERN INDIA PAINT& COLOUR CO. (P)	PGPH3	H.R.ALUMINIUM PAINTS	TN	westernpaints@gmail.com	IS:13183 GRADE-III	AS PER BHEL TDC	CHENNAI DIST.	0 98840 88887
18453	RAMDEV RESINS PVT LTD	PGPH3	H.R.ALUMINIUM PAINTS	GJ	info@ramdevcoatings.com	IS:13183 GRADE-III	AS PER BHEL TDC	GANDHINAGAR.	0 93750 80920
10031	BERGER PAINTS INDIA LTD.,	PGPH3	H.R.ALUMINIUM PAINTS	TN	bpil_ch2@sify.com	IS:13183 GRADE-III	AS PER BHEL TDC	CHENNAI	9282329896
19552	GRAUER & WEIL (INDIA) LTD.,	PGPH3	H.R.ALUMINIUM PAINTS	KA	bplchennai@rediffmail.com	IS:13183 GRADE-III	AS PER BHEL TDC	CHENNAI	
10051	CARBOLINE INDIA PRIVATE LTD	PGPH3	H.R.ALUMINIUM PAINTS	TN	anand@carbolineindia.com	IS:13183 GRADE-III	AS PER BHEL TDC	CHENNAI.	0 76674 71777
10442	ASIAN PAINTS PPG PRIVATE LTD.	PGPH3	H.R.ALUMINIUM PAINTS	TN	smohammad.mohideen@asianpaintspg.com	IS:13183 GRADE-III	AS PER BHEL TDC	CHENNAI	
10323	STAR PAINT & OIL INDUSTRIES	PGPH3	H.R.ALUMINIUM PAINTS	MH		IS:13183 GRADE-III	AS PER BHEL TDC	MUMBAI	
10095	KANSAI NEROLAC PAINTS LIMITED,	PGPH3	H.R.ALUMINIUM PAINTS	TN		IS:13183 GRADE-III	AS PER BHEL TDC	CHENNAI	
19552	GRAUER & WEIL (INDIA) LTD.,	PGPTC	PSS:PAINTS & THINNER	KA	bplchennai@rediffmail.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	CHENNAI	
10930	ADVANCE PAINTS PVT LTD.,	PGPTC	PSS:PAINTS & THINNER	TN	aplch@vsnl.net	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	CHENNAI	
10442	ASIAN PAINTS PPG PRIVATE LTD.	PGPTC	PSS:PAINTS & THINNER	TN	smohammad.mohideen@asianpaintspg.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	CHENNAI	

Section V: Approved Supplier List for Paints

Vendor No	Vendor Name	Mat Group	Material Group Description	CITY	EMAIL	Specification	TDC	CITY1	PHONE2
10308	WESTERN INDIA PAINT& COLOUR CO. (P)	PGPTC	PSS:PAINTS & THINNER	TN	westernpaints@gmail.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	CHENNAI	0 98840 88887
18747	SHREE SURYA COATINGS	PGPTC	PSS:PAINTS & THINNER	MH	info@shreesuryacoatings.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	NASIK	0 97652 40987
18248	POWER LIGHT PAINTS	PGPTC	PSS:PAINTS & THINNER	TN	powerlightpaints@yahoo.in	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	TRICHY.	0 98424 03768
10268	SUNDARAM PAINTS PVT LTD	PGPTC	PSS:PAINTS & THINNER	TN	sundarampaint1@rediffmail.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	THANJAVUR	
10174	NOVAA PAINTS	PGPTC	PSS:PAINTS & THINNER	TN	novapaints89@gmail.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	TIRUCHIRAPALLI-13	0 96009 07011
10095	KANSAI NEROLAC PAINTS LIMITED,	PGPTC	PSS:PAINTS & THINNER	TN		IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	CHENNAI	
19620	CHEMECOAT PAINTS,	PGPTC	PSS:PAINTS & THINNER	TN	chemekkn@bsnl.in	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	TRICHY	0 98424 45649
10635	PASU MEENA PAINTS INDUSTRIES	PGPTC	PSS:PAINTS & THINNER	TN	pasummeena@yahoo.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	TIRUPPUVANAM	0 9443065268
17784	SEVEN SEAS PAINTS PVT. LIMITED	PGPTC	PSS:PAINTS & THINNER	UP	gagan@smgroup.net.in	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	NOIDA	09811775278
19568	DOOALL CORPRO INDIA	PGPTC	PSS:PAINTS & THINNER	MH	dadiabharath@gmail.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	MUMBAI	0 9819491313
17627	KORROCOAT POLYMERS PVT LTD	PGPTC	PSS:PAINTS & THINNER	MH	korrocoatpolymers@yahoo.co.in	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	PUNE.	0 98900 00370
16739	JOTUN INDIA PVT LTD	PGPTC	PSS:PAINTS & THINNER	TN	moinudin.i@jotun.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	CHENNAI.	0 87544 80089
19764	SYNORGANIC PAINTS PVT LTD	PGPTC	PSS:PAINTS & THINNER	AP	synovsp@gmail.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	VISAKHAPATNAM,	9701702411
10031	BERGER PAINTS INDIA LTD.,	PGPTC	PSS:PAINTS & THINNER	TN	bpil_ch2@sify.com	IS:2074,2932,104,2339 & BHEL SPEC PR:CHEM:0	AS PER BHEL TDC	CHENNAI	9282329896
10174	NOVAA PAINTS	PGPTE	EPOXY BASED PAINTS &	TN	novapaints89@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	TIRUCHIRAPALLI-13	0 96009 07011
19568	DOOALL CORPRO INDIA	PGPTE	EPOXY BASED PAINTS &	MH	dadiabharath@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	MUMBAI	0 9819491313
18747	SHREE SURYA COATINGS	PGPTE	EPOXY BASED PAINTS &	MH	info@shreesuryacoatings.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	NASIK	0 97652 40987
19764	SYNORGANIC PAINTS PVT LTD	PGPTE	EPOXY BASED PAINTS &	AP	synovsp@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	VISAKHAPATNAM,	9701702411
10051	CARBOLINE INDIA PRIVATE LTD	PGPTE	EPOXY BASED PAINTS &	TN	anand@carbolineindia.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI.	0 76674 71777
10442	ASIAN PAINTS PPG PRIVATE LTD.	PGPTE	EPOXY BASED PAINTS &	TN	smohammad.mohideen@asianpaintspg.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	
18491	TITAN PAINTS & CHEMICALS LTD	PGPTE	EPOXY BASED PAINTS &	TN	businessdevelopment@titanpaints.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	COIMBATORE.	9003555628
10308	WESTERN INDIA PAINT& COLOUR CO. (P)	PGPTE	EPOXY BASED PAINTS &	TN	westernpaints@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	0 98840 88887
10031	BERGER PAINTS INDIA LTD.,	PGPTE	EPOXY BASED PAINTS &	TN	bpil_ch2@sify.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	9282329896
16739	JOTUN INDIA PVT LTD	PGPTE	EPOXY BASED PAINTS &	TN	moinudin.i@jotun.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI.	0 87544 80089
17627	KORROCOAT POLYMERS PVT LTD	PGPTE	EPOXY BASED PAINTS &	MH	korrocoatpolymers@yahoo.co.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	PUNE.	0 98900 00370
19620	CHEMECOAT PAINTS,	PGPTE	EPOXY BASED PAINTS &	TN	chemekkn@bsnl.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	TRICHY	0 98424 45649
10930	ADVANCE PAINTS PVT LTD.,	PGPTE	EPOXY BASED PAINTS &	TN	aplch@vsnl.net	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	

Section V: Approved Supplier List for Paints

Vendor No	Vendor Name	Mat Group	Material Group Description	CITY	EMAIL	Specification	TDC	CITY1	PHONE2
10095	KANSAI NEROLAC PAINTS LIMITED,	PGPTE	EPOXY BASED PAINTS &	TN		AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	
13494	GRAND POLYCOATS CO. PVT. LTD,	PGPTE	EPOXY BASED PAINTS &	GJ	marketing@grandpolycoats.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	VADODARA	
18248	POWER LIGHT PAINTS	PGPTE	EPOXY BASED PAINTS &	TN	powerlightpaints@yahoo.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	TRICHY.	0 98424 03768
19552	GRAUER & WEIL (INDIA) LTD.,	PGPTE	EPOXY BASED PAINTS &	KA	bp1chennai@rediffmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	
10007	AKZO NOBEL INDIA LTD.	PGPTF	EPOXY FINISH PAINTS	KA	pvr.narasimharao@akzonobel.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	BANGALORE	0 98804 22270
10031	BERGER PAINTS INDIA LTD.,	PGPTF	EPOXY FINISH PAINTS	TN	bpil_ch2@sify.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	9282329896
16739	JOTUN INDIA PVT LTD	PGPTF	EPOXY FINISH PAINTS	TN	moinudin.i@jotun.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI.	0 87544 80089
10930	ADVANCE PAINTS PVT LTD.,	PGPTF	EPOXY FINISH PAINTS	TN	aplch@vsnl.net	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	
19764	SYNORGANIC PAINTS PVT LTD	PGPTF	EPOXY FINISH PAINTS	AP	synovsp@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	VISAKHAPATNAM,	9701702411
17627	KORROCOAT POLYMERS PVT LTD	PGPTF	EPOXY FINISH PAINTS	MH	korrocoatpolymers@yahoo.co.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	PUNE.	0 98900 00370
10308	WESTERN INDIA PAINT& COLOUR CO. (P)	PGPTF	EPOXY FINISH PAINTS	TN	westernpaints@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	0 98840 88887
19568	DOOALL CORPRO INDIA	PGPTF	EPOXY FINISH PAINTS	MH	dadiabharath@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	MUMBAI	0 9819491313
19620	CHEMECOAT PAINTS,	PGPTF	EPOXY FINISH PAINTS	TN	chemekkn@bsnl.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	TRICHY	0 98424 45649
10174	NOVAA PAINTS	PGPTF	EPOXY FINISH PAINTS	TN	novapaints89@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	TIRUCHIRAPALLI-13	0 96009 07011
18491	TITAN PAINTS & CHEMICALS LTD	PGPTF	EPOXY FINISH PAINTS	TN	businessdevelopment@titanpaints.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	COIMBATORE.	9003555628
18248	POWER LIGHT PAINTS	PGPTF	EPOXY FINISH PAINTS	TN	powerlightpaints@yahoo.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	TRICHY.	0 98424 03768
10051	CARBOLINE INDIA PRIVATE LTD	PGPTF	EPOXY FINISH PAINTS	TN	anand@carbolineindia.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI.	0 76674 71777
19552	GRAUER & WEIL (INDIA) LTD.,	PGPTF	EPOXY FINISH PAINTS	KA	bp1chennai@rediffmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	
10442	ASIAN PAINTS PPG PRIVATE LTD.	PGPTF	EPOXY FINISH PAINTS	TN	smohammad.mohideen@asianpaintspg.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	
13494	GRAND POLYCOATS CO. PVT. LTD,	PGPTF	EPOXY FINISH PAINTS	GJ	marketing@grandpolycoats.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	VADODARA	
18747	SHREE SURYA COATINGS	PGPTF	EPOXY FINISH PAINTS	MH	info@shreesuryacoatings.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	NASIK	0 97652 40987
10095	KANSAI NEROLAC PAINTS LIMITED,	PGPTF	EPOXY FINISH PAINTS	TN		AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	
19568	DOOALL CORPRO INDIA	PGPTP	SPECIAL PRIMER PAINT	MH	dadiabharath@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	MUMBAI	0 9819491313
18491	TITAN PAINTS & CHEMICALS LTD	PGPTP	SPECIAL PRIMER PAINT	TN	businessdevelopment@titanpaints.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	COIMBATORE.	9003555628
18248	POWER LIGHT PAINTS	PGPTP	SPECIAL PRIMER PAINT	TN	powerlightpaints@yahoo.in	AS PER CUSTOMER REQ	AS PER BHEL TDC	TRICHY.	0 98424 03768
10051	CARBOLINE INDIA PRIVATE LTD	PGPTP	SPECIAL PRIMER PAINT	TN	anand@carbolineindia.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI.	0 76674 71777
10174	NOVAA PAINTS	PGPTP	SPECIAL PRIMER PAINT	TN	novapaints89@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	TIRUCHIRAPALLI-13	0 96009 07011
10442	ASIAN PAINTS PPG PRIVATE LTD.	PGPTP	SPECIAL PRIMER PAINT	TN	smohammad.mohideen@asianpaintspg.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	
13494	GRAND POLYCOATS CO. PVT. LTD,	PGPTP	SPECIAL PRIMER PAINT	GJ	marketing@grandpolycoats.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	VADODARA	
10031	BERGER PAINTS INDIA LTD.,	PGPTP	SPECIAL PRIMER PAINT	TN	bpil_ch2@sify.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	9282329896
19764	SYNORGANIC PAINTS PVT LTD	PGPTP	SPECIAL PRIMER PAINT	AP	synovsp@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	VISAKHAPATNAM,	9701702411
18747	SHREE SURYA COATINGS	PGPTP	SPECIAL PRIMER PAINT	MH	info@shreesuryacoatings.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	NASIK	0 97652 40987
19552	GRAUER & WEIL (INDIA) LTD.,	PGPTP	SPECIAL PRIMER PAINT	KA	bp1chennai@rediffmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	
10308	WESTERN INDIA PAINT& COLOUR CO. (P)	PGPTP	SPECIAL PRIMER PAINT	TN	westernpaints@gmail.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	0 98840 88887

Section V: Approved Supplier List for Paints

Vendor No	Vendor Name	Mat Group	Material Group Description	CITY	EMAIL	Specification	TDC	CITY1	PHONE2
16739	JOTUN INDIA PVT LTD	PGPTP	SPECIAL PRIMER PAINT	TN	moinudin.i@jotun.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	0 87544 80089
10007	AKZO NOBEL INDIA LTD.	PGPTP	SPECIAL PRIMER PAINT	KA	pvr.narasimharao@akzonobel.com	AS PER CUSTOMER REQ	AS PER BHEL TDC	BANGALORE	0 98804 22270
10095	KANSAI NEROLAC PAINTS LIMITED,	PGPTP	SPECIAL PRIMER PAINT	TN		AS PER CUSTOMER REQ	AS PER BHEL TDC	CHENNAI	

 BHEL – BAP- RANIPET VELLORE DIST. TAMIL NADU-632 406 RANIPET		MANUFACTURING QUALITY PLAN			QP NO	ESP 299 REV.00 DT. 28.05.2019				
					PROJECT	STANDARD				
		ITEM: PACKING BOXES			PAGE	1 OF 1				
SI No 1	Component & operation 2	Characteristics 3	Type of Check 4	Quantum of Check 5	Reference Documents 6	Acceptance Norms 7	Format Of Records 8	Agency		Remarks 10
								M	B	
								9		

1.0										
1.1	Raw material	Chemistry & Mechanical	Chem & Mech. properties	Each Heat	Respective Material spec	TC	P	V		
2.0	In- process control	Size, Visual	Measurement	Random	Drawing					
2.1	Welding	NDE	LPI/MPI*	10% in each box*	BHE: NDT:RP:PT:01 (Latest) BHE: NDT:RP:MT:01 (Latest)	R	P	W		*LPI/MPI- 100% for Manufacturer & 10% for BHEL/BHEL's AIA for each box
3.0	Final inspection	Overall Dimension	Measurement	10%#	Drawing & BHEL specification					#100% for Manufacturer and 10% for BHEL/BHEL's AIA
3.1	Packing Boxes					R	P	W		Balance nos- review of reports
3.2	Preservation	Painting	Visual	100%	BHEL Standard	--	P	V		

Notes:

- 1) This QP shall be read along with relevant PO, BHEL specifications, approved drawing and applicable standards.
- 2) Raw material TCs to be provided for all plates and rolled sections for verification.
- 3) Document package should include TCs, NDE reports, Final dimension report and Painting certificate.

LEGENDS: M - MANUFACTURER / SUB CONTRACTOR B - BHEL /BHEL' s AUTHORIZED INSPECTION AGENCY (AIA) P - PERFORMED, V - VERIFICATION, W - WITNESS, R - REPORT C - CUSTOMER T C - TEST CERTIFICATE			Prepared By  (Rajamanickam. M) Dy. Manager/ QA	Reviewed & Approved By  (K.C. Gandhi Parimalam) DGM/QA
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BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI - 620 014
QUALITY ASSURANCE DEPARTMENT

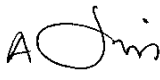
AMENDMENT TO QUALITY WORK INSTRUCTIONS (QWI)

QWI NO: QCP002 REV.: 04 Dt. 08.12.2011

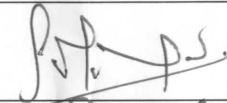
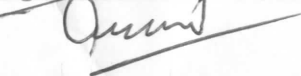
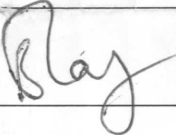
AMENDMENT SL NO: A1 DATE: 13.06.13

Page 1 of 1

DESCRIPTION:

Clause No	The existing points	Amended as...				Basis for amendment
4.6	4.6 Post weld heat treatment Note-1: All fabricated components of P4 materials with any member above 16mm thickness, the entire assembly shall be Post weld heat treated. However when the size of fillet weld is less than 12mm PWHT is not required for non load carrying members..	4.6 Post weld heat treatment In respect of the fabricated components of P4 Materials , PWHT requirement of entire assembly is detailed in the tabulated columns.				CE M&P and collobarator practice.
		Plate thick	Load carrying members (PWHT)		Non-Load carrying members (PWHT)	
			Fillet size >12mm	Fillet size =<12mm	Fillet size >12mm	Fillet size =<12mm
		>16mm	YES	YES	YES	NO
		16mm & below	NO	NO	NO	NO
NOTE	The above-mentioned changes will be incorporated in the relevant QWI during the next revision of the document.					
 Prepared by: A.Francis			 Approved by: Bikramoditya Roy			
Dt: 13-06-2013			Dt: 13-06-2013			

BHARAT HEAVY ELECTRICAL LIMITED**TIRUCHIRAPALLI****QUALITY CONTROL PROCEDURE****For
Non Pressure parts****QCP:002/04**Prepared by A.Francis
Quality assuranceA 

Reviewed by	SIGNATURE
Engineering (Shri.V.Sridharan)	
Out sourcing (Shri.S.Mohanram)	
Quality control (Shri.Amitroy)	
Quality Assurance (Shri.Bikramodityaroy)	

Revision No	Date	Approved	Signature
00	01-04-1993	--SM/QA	--Sd--
01	01.01.1995	SM/QA	--Sd--
02	24.04.2004	SDGM/QA	--Sd--
03	10.06.2010	SM/QA	--Sd--
04	08.12.2011	DGM/QA	

Proprietary data - For internal use

ECORD OF REVISIONS

Rev No...	Clause No	Details of revision
00	--	This document consolidates all the general requirements and technical disciplines covered in the various previous
01	--	All amendments issued has been regularized and editorial correction made for better clarity. Scope of machining added in this document.
02		Editorial correction made for better clarity. Scope of machining added in this document.
03		Shaded clauses & Type of joints for base plates incorporated. Pwht temperature for P4 matl.revised.
04		P91&92 Bar process requirements added (Shaded clauses)

1.0 SCOPE

- 1.1 This procedure details out the process control and quality requirements for manufacture of Non Pressure Parts.

2.0 REFERENCE DOCUMENTS

- 2.1 AWS D.1.1, D1.6, IS 7215 and CE: M&P 5.11.1.1, 5.11.2.1 & 5.11.2.2 as guidelines.

3.0 MATERIALS

- 3.1 CLASSIFICATION OF MATERIALS (commonly used):

<u>P No. Group</u>	<u>Specifications</u>
P1 - Group 1 - SA 515 Gr 60.	Carbon steel IS 2062/ E250A & E250B , IS 1239, IS 1161, A 36,
P1 - Group 2 -	H.Strength CS :SA105, SA 515 Gr 70, SA 299, SA 516 Gr 70,.
P4 - Alloy Steel	SA 387 Gr 11 & Gr 12, SA 182 Gr F 11 & F 12.
P5A – Gr 1(LAS),	SA 387 Gr 22 Cl.1 &Cl.2, SA 182 Gr F 22
P5B-Gr.1 (AS)	SA387 Gr5 Cl.1 & SA387 Gr9 CL.2
P15E Gr1	SA182F91, F92 , SA387 Gr.91,GR.92, SA335 P91, P92
P6 -	SA213T91, T92, SA234WP91, WP92&SA336F91, F92
P8 - Stainless steel	SA 240-410,429
Any other materials as specified in the drawings.	SA 240 - 304 ,309,310, 316, 321, 347 & 253MA

- 3.2 Raw materials used shall conform to the relevant specification as given in drawings and applicable TDC/PO. Any substitution of materials shall be done only with prior approval of engineering through applicable documents. Where subcontractors procure the raw materials, the same shall have valid test certificates.
- 3.3 Raw materials shall be free from visual defects like cracks, seams, laps, laminations, heavy pitting etc. When defects are noticed in visual inspection the same shall be confirmed using appropriate NDE techniques and repaired using applicable approved process .
- 3.4 All materials are procured with permitted dimensional tolerances of the material specifications and / or TDC. Wherever required, the raw materials shall be corrected prior to fabrication to achieve the required product tolerances.
- 3.5 Customer supplied materials are to be verified as per SP 0626.
- 3.6 The requirements of material traceability shall be as indicated in the respective drawings.
- 3.6.1 Product Attest “P” items indicated as in drawings are traceable to the test certificates and identified with material Specification, grade and melt number by stamping.
- 3.6.2 CERTIFIED items indicated as "C" in drawings are traceable to material Specification / grade only and identified by stamping / engraving / stenciling / painting.
- 3.6.3 Raw materials not covered by the above shall be identified by its W.O.No / material code / Specification / grade by painting / stenciling / engraving.
- 3.6.4 All subdeliveries shall be identified by its material code by painting or through name plates / tags.
- 3.7 When materials (including stock) are to be upgraded for special contract requirements QC shall ensure that the respective specification/ contract TDC (as applicable) are complied.

4.0 FABRICATION

4.1 MARKING, CUTTING AND PREPARATION

- 4.1.1 Raw material shall be marked and cut to size by shearing, machining, saw cutting, flame or plasma (for SS materials) cutting. Flame cut edges shall be cleaned to remove slag. Uneven edges shall be dressed by grinding. Gas cutting notches shall be filled up by grinding the notches smoothly for welding using compatible electrodes and ground before taking up for further fabrication.
- 4.1.2 Wherever raw materials supplied / available are not sufficient for the sizes required, the same can be built up using the splicing either by groove weld/fillet weld sufficient to hold the parts in place instructions given in the respective SQPs/ Drawings/DCN (Incl. Production Notes)
- 4.1.3 Layout for size and shape shall be marked before cutting (for other than CNC applications). The tolerance for marking shall be maintained within + 2mm unless otherwise specified. The diagonal difference shall be within 3 mm.
- 4.1.4 The markings shall be punched at convenient intervals and bordered with white paint.
- 4.1.5 Stainless Steel (SS) materials shall be cut using plasma cutting or shearing only. Any further dressing/ grinding of cut surfaces should be done with separate and clean abrasive wheels.
- 4.1.5.1 The cut edges should be smoothly ground.
- 4.1.5.2 Notches above 3 mm or 20 % 'T' shall be thoroughly cleaned and welded by using a qualified WPS and examined visually and by LPI. The repaired surfaces are to be cleaned to bright metal surface.
- 4.1.6 Clip / Cleat angles above 10mm thick used for beam connections which are sheared to length shall require heat treatment.
- 4.1.7 Heat treatment shall be done after shearing for P4 materials $t > 12.5\text{mm}$ and for P5 materials $t > 10\text{mm}$.
- 4.1.8 Shearing /Flame/gas cutting is prohibited on Gr 91 and Grade 92 materials.
- 4.1.9 Use only bandsaw for cutting of Gr91&92 materials. However for plates use plasma/waterjet/bandsaw only
- 4.1.10 The requirements of preheat for gas cutting are as follows:
- | | | |
|--------------------------|----------------------------|---------------------|
| Carbon steel | $t \leq 50\text{mm}$ | Nil |
| Carbon steel | $t > 50\text{mm}$ | 100 ° C.min. |
| Alloy steel (P4) | $t \leq 25\text{mm}$ | Nil |
| Alloy steel (P4) | $t > 25\text{mm}$ | 150 ° C |
| Alloy steel (P5A,B Gr.1) | All | 150 ° C |
| Stainless steel | | Not applicable..... |

4.1.11 Stress relieving for gas cut edges shall be as follows.

Material	Thickness	Heat treatment cycle
P1	> 50 mm	600 ° - 650 ° C for 30 minutes . Furnace cool (Alternatively, the cut surface can be ground / machined upto 3 mm to remove HAZ)
P4	> 16 mm	650 ° – 700 ° C for 30 minutes . Furnace cool
P5	All	680 ° - 730 ° C for 30 minutes . Furnace cool
SS (plasma)	Any	Not required

4.1.11.1 For materials other than P5, P15E Gr 1(Grade 91) and Grade 92 this heat treatment may be clubbed with the final heat treatment of the product.

4.1.12 The prepared plates shall be visually inspected and repaired if required as per SIP:NP:06.

4.1.13 The raw materials after cutting shall be identified with relevant WO No., DU No., Part No. and Material Spec / Grade (transferred).

4.2 FORMING

4.2.1 Before forming , proper cutting plan (Drawing dimensions with process allowances) shall be prepared and cleared by the concerned agency. Forming shall be done using proper tooling free from damages. Method of forming and work centre shall be identified in OPS / relevant QWI referred in PO.

4.2.2 Built up (Forming) operations for Beams and columns shall be done by suitable Fixtures,Machines ,WPS & other accessories required for forming. All the Forming operations of sheets / plates shall be done by rolling / pressing. For shell formed components Circularity of rolled shells shall be checked using templates (of length > ¼ of ID).

4.2.3 Suitable nonmetallic padding shall be provided while forming of stainless steels to avoid contamination.

4.2.4 All formed /Built up components shall be checked for orientation, angle, and other dimensions as per drg. All formed parts shall have smooth finish and shall be free from bends, folds and sudden transitions.

4.2.5 Minimum thickness after forming shall be ensured whenever specified in drg.

4.2.6: **Forming of U-ROD(Gr 91 &92)**

4.2.6.1 Identify, mark and cut the rod using bandsaw to a length of equivalent to the arc length indicated in the drawing with two arm length(upto butt joint) +20mm .

4.2.6.2 Mark the centre of the rod with a heat resistant chalk to be visible after heating. For temperature and other details refer the SQP:NP:15(Latest)

4.2.6.3 Remove the “U”rod and air cool to room temperature .

4.2.6.4 Visually inspect the bend surface and check dimensions and ensure no surface imperfections.

- 4.2.6.5 Normalizing and tempering of “U” Rods to be done within 72 hours after pressing/bending operation.(Ref.SQP:NP:15(latest))
- 4.2.6.6 Shot blast the “U” Rod to remove scaling and check the dimension. Conduct LPI/Wet MPI and ensure no surface indications.
- 4.2.6.7 Mark and cut the limbs of “U” rods such that the straight portion shall be as per drawing from the tangent point.
- 4.2.6.8 Edge prepare the “U” rods for butt joint preparation as shown in the drawing by machining. No gouging and grinding is allowed.
- 4.2.6.9 For Detailed operation of cold and hot forming of Gr 91 & Gr 92 materials refer SQP:NP:15(latest)
- 4.2.7 Threading of “U” Rods
- 4.2.7.1 Mark and cut the rods equivalent to the straight portions as shown in the drawings.
- 4.2.7.2 Threading to be done on one end of the rod to thread size as mentioned in the drawing/SQP: NP15(latest).
- 4.2.7.3 Edge prepare the other end of the rods by machining for butt welding as shown in the drawing.
- 4.2.8 Tolerances for formed components when not specified in drg. /SQP:NP15(latest). Shall be as follows
- a) St.Length / Dia, : + 1 mm/M, 5 mm Max
 - Width & Height
 - b) Verticality : 1 mm / M, 5 mm Max
 - c) Squareness : 1 mm / M of length / Dia
 - d) Straightness : 1 mm / M, 5 mm Max
 - e) Radius : ± 5 mm
 - f) Bend Angle : $+ 2^\circ$
 - g) Ovality : 1%
 - h) E.P Angle : $+ 5^\circ / - 2.5^\circ$
 - i) Diagonal diff : 3 mm

4.3 WELDING

4.3.1 WELDING CONSUMABLES

- 4.3.1.1 Welding consumables conforming to the qualified welding procedures shall be used. However the following guide lines are provided.
- 4.3.1.2 Only Basic coated electrodes (E 7018) shall be used in the following cases:-
- a. All Strength welds in ceiling girders, flange/web butt welds and in other beams, columns etc.
 - b. For all structural welds, or when thickness of any one member of the weld joint is > 12

mm (unless otherwise indicated in the drawings / Qualified WPS).

c. For welding of high tensile steels like BSEN 10025 E250A & B, SA299, SA515 Gr.70, SA516 Gr.70.

- 4.3.1.3 Rutile electrodes may be used for other weld joints.
- 4.3.1.4 All low hydrogen electrodes (EXX 16 & EXX 18) shall be dried in the baking oven at 250-300 deg.C for 2 hours and the electrodes shall be held at 120 deg.C until they are used. Electrodes shall not be re-baked more than once and use of electrodes in wet condition is prohibited.
- 4.3.1.5 All rutile electrodes (EXX 13) shall be dried at 120 deg. C for 1 hour min. and held at 120 deg.C till use.
- 4.3.1.6 Fluxes for SAW shall be dried at 250 deg.C for 1 hour min. before use. Height of flux bed while drying in pan or oven, shall not be more than 100mm.
- 4.3.1.7 Unless otherwise specified, SS consumable shall be baked as per Electrode manufacturer's recommendations and stored at 120 ° - 150 ° C until use.
- 4.3.1.8 The type of welds employed in the structural fabrications (Girders, Columns, Beams & Base plates etc) are identified in the annexure –A along with sketch for better clarity and understanding. For further details the fabricator can refer the engg.dwg. no.3-35-110-00995/00

4.3.2 FIT UP

- 4.3.2.1 Proper fit up shall be ensured before welding as per Drawing. Tack welding or mechanical clampings shall be used to maintain the fit up requirements before and during welding. Bridge pieces used during fit up shall be of ferritic for ferritic materials and stainless for stainless steel materials. However for P15E Gr.1.(F91 & F92) prepare a fixture for fit-up of butt joint of 'U' rod with Straight rods.
- 4.3.2.2 Dimensions of the cross sections of groove welded joint shall be within the following tolerances w.r.t . drawing requirements:

	Root not back gouged	Root back gouged
1. Root face of joint(land)	± 2 mm	Not limited
2. Root opening of joint (with out backing)	± 2 mm	+ 2 mm - 3 mm
Root opening of joint* with backing)	+ 6 mm - 2 mm	Not Applicable
3. Groove angle of of joint	+ 10° - 5°	+ 10° - 5°

*(NOTE): Root opening wider than permitted by above tolerances but not greater than twice the thickness of the thinner part or 19mm, whichever is less may be corrected by edge buildup to acceptable dimensions prior to welding. Such buildup edge shall be MPI / LPI checked.

- 4.3.2.3 For C. S. fillet welds, the parts shall be as close as practicable and gap shall be limited to 5 mm (If gap exceeds 2 mm, the leg of fillet shall be increased by the amount of gap but in no case shall exceed 4.8 mm). For thickness 75 mm and above gap up to 8 mm can be permitted provided suitable backing is used.
- 4.3.2.4 For S. S. fillet welds, the parts shall be as close as practicable. Gaps 2 mm and above upto 5mm are acceptable if the fillet size is increased by an amount equal to the gap.
- 4.3.2.4 Parts to be joined by butt welds shall be properly aligned. An offset not exceeding 10% of the thickness of the thinner part joined can be permitted, but in no case more than 3.2 mm, is permitted.
- 4.3.2.5 The types of weld joints indicated in the fabrication of structural components are identified with symbols in ANNEXUR -A & B .For further details refer the Engg standard drawing no.3-35-110-00995(Latest)

4.3.3 PRE HEATING

- 4.3.3.1 Pre heating requirements for welding shall be as per Clause 4.6.7 and controls shall be exercised as detailed below. No preheating is required for stainless steels.
- 4.3.3.2 Preheating shall be maintained during the entire process of welding.
- 4.3.3.3 Preheating is to be done using gas burner or induction / resistance heating. The temperature must be uniform and verified using thermal chinks or thermocouples prior to start of welding as well as during welding for a width of 't' (maximum) or (100)75 mm whichever is less.
- 4.3.3.4 Where interpass temperature control is required during welding, the temperature must be ensured using thermal chinks / thermocouples with recorder . Inter pass nitrogen / air cooling can be adopted to maintain inter pass temperature in case of stainless steels.
- 4.3.3.5 Wherever post heating is specified after welding, the preheating shall be continued till attaining the post heat temperature and maintained for the required time and cooled slowly by wrapping suitable insulating blankets like asbestos.
- 4.3.4 Welding shall be performed using qualified procedures and qualified personnel. Edge preparation and welding details shall be as per drawing.
- 4.3.5 For items to be manufactured at subcontractor's works (including away centre fabrication) , for requirements of procedure and personnel qualification SIP:NP: 07 (Latest) shall be followed.
- 4.3.6 When double bevel welding is adopted, back gouging and grinding is to be done. Back gouged groove shall be checked with PT / MT before welding from second side. However for P15E Gr.1.(F91 & F92) Only back grinding to be done after interstage PWHT.
- 4.3.7 Proper sequence of welding shall be adopted to minimise distortion. The distortion of the finished jobs, if any may be corrected by mechanical means / hot correction.
- 4.3.7.1 For welding of SS extreme care is to be taken in weld sequencing to minimize the weld distortion and shrinkage. For complex weldments a weld sequence instructions may be prepared by contractor prior to work commencement. Weld joints likely to have high shrinkage should be welded (with minimum restraints) before welding other joints providing allowance for shrinkage.For further details ref.SQP:NP:20

- 4.3.7.2 While cutting long web plates suitable camber may be provided /required to compensate for the distortion during cutting and welding.
- 4.3.8 All butt welds of divider plate and guide vanes in ducts shall be flush ground inside.
- 4.3.9 The use of jigs and fixtures is recommended where ever practicable. Suitable allowances shall be provided for weld shrinkage. Proper sequence of welding shall be followed to control the distortion during welding.
- 4.3.10 All temporary attachments shall be welded with the required preheat. After their removal welded spots shall be ground flush and LPI checked.
- 4.3.11 Groove welds shall preferably be made with minimum reinforcement unless and otherwise specified in drawing / SQP. In case of butt welds, reinforcement shall not exceed 3.2 mm. and shall have gradual transition to the plane of the base material surface.
- 4.3.12 The surface of the welds shall be free from coarse ripples, overlaps, undercuts and abrupt ridges to avoid stress raisers.
- 4.3.13 Where parts of different thicknesses are welded or surface offset is more, the transition shall be made gradual by grinding / machining with 1: 2.5 taper.
- 4.3.14 Stray arcs shall be avoided to the extent possible. Arc spots if noticed shall be ground and checked by LPI / MPI. Thickness requirements shall be ensured after grinding.
- 4.3.15 Pre heating of Gr 91 & Gr 92 shall be 220 Deg.C .For other process parameters refer the applicable WPS.

4.4 WELD REPAIRS

- 4.4.1 Removal of defective weld / portions of the base material may be done by machining, grinding, chipping, gas cutting, oxygen gouging or carbon arc gouging. Defective portions of the weld shall be removed without substantial removal of sound base metal.
- 4.4.2 For under sized welds additional weld metal shall be deposited using an electrode preferably smaller than that used for making original weld limited to 4mm in diameter. The surfaces shall be cleaned thoroughly before deposition.
- 4.4.3 Defective welds/base metal shall be repaired by removing or/and rewelding as follows:
 - 4.4.3.1 Overlap / excess weld metal shall be removed by grinding.
 - 4.4.3.2 For excess concavity, crater, undersize & undercuts, deposit additional weld metal after cleaning the weld surface.
 - 4.4.3.3 For Cracks in weld or base metal, ascertain the extent of crack by suitable NDE / acid etching, remove the crack to sound metal upto each end of the crack by arresting the ends for further propagation and reweld.
 - 4.4.3.4 For weld porosity, slag inclusions & lack of fusion remove defective portions & reweld

4.5 HOT CORRECTION

- 4.5.1 Members which require hot correction are to be supported at suitable locations and mark the locations for heating.
- 4.5.2 Heat the locations marked by using neutral flame. Torches used for heating shall be moved continuously & uniformly over selected area to avoid localised over heating.

- 4.5.3 For Carbon steels the maximum temperature shall not exceed 650 ° C and shall be ensured using thermal chinks / thermocouples.
- For alloy steels P4 – 705° C , P5 – 735° C temperatures are to be maintained for hot corrections
- 4.5.3.1 For Austenitic stainless steels the maximum temperature shall not exceed 430 ° C and shall be made known to inspection authorities . Otherwise , after hot correction solution annealing at 1050 – 1100 deg C is to be done.
- 4.5.3.2 For Ferritic/Martensitic/Duplex stainless steels the maximum temperature shall not exceed 315° C and shall be made known to inspection authorities . The temperature shall be ensured using thermal chinks / thermocouples.
- 4.5.4 Additional dead weights may be placed over the positive side of the bend depending upon the requirement to accelerate hot correction.
- 4.5.5 Allow for natural cooling. Accelerated cooling shall not be adopted. Remove the dead weights used after cooling.
- 4.5.6 Wherever the correction for distortion affects the weld joints, applicable NDE shall be repeated after the correction.

4.6 POST WELD HEAT TREATMENT (PWHT)

- 4.6.1 The process controls (temperature control and recording) for heat treatment shall cover the activities before, during and after heat treatment.
- 4.6.2 The weldment shall be cleaned to free of grease, oil etc. prior to heat treatment.
- 4.6.3 PWHT shall be done in a furnace or by local heating a band (including the entire weld and adjacent area of the base metal) .
- 4.6.4 The thermocouples and recording instruments shall be calibrated as per applicable standards and records maintained. The furnace shall have been qualified and calibrated.
- 4.6.5 All materials to be heat treated in furnace shall be loaded in such a way that they shall not be subjected to direct flame impingement. Jobs shall be preferably loaded on raised plat forms so that no material projects into the plane of burners. Alternatively flame deflectors may be provided in front of the burners to avoid direct flame impingement. Ensure loading of test coupons wherever applicable. The furnace temperature shall not exceed 315 ° C at the time of loading material / weldment.
- 4.6.6 Number of thermocouples and their location shall be decided covering maximum and minimum thickness and covering all the zones. The temperature variation within 5 meters shall not exceed 140 ° C during heating period (above 315 ° C).
- 4.6.7 The **temperature requirements** for Pre heating, Post Weld Heat Treatment(PWHT) & temperatures are as below.(Unless otherwise specified.)

Material	Thickness	Pre heating	PWHT Temp.	Remarks
P1 Gr 1&2	t < 38	Nil	625 +/- 25 ° C	a) For all butt welds in plate welded girders when t > 50mm.
	T= 39-62	100 ° C		
	t> 63	150 ° C		

P4 Gr 1&2	All	150	665 +/- 15 ° C	a)All butt welds in tension member b)All fabricated components when t>16mm(Note1)
P5A Gr 1& P5BGr2	All	150 ° C (Note2)	705+/- 25 ° C	All welds (Note 3)
P15E Gr1	All	220 ° C	760+/- 10 ° C	After welding, cool to below 95 ° C before PWHT. PWHT to be done within 72hrs after completion of welding. (Post heat as perWPS)
P8	300 type 400type	120 ° C 205 ° C	- -	

Note 1 All fabricated structural components of P4 materials with any member above 16mm thickness, the entire assembly shall be post weld heat treated. However when size of fillet weld is less than 12 mm, PWHT is not required for non load carrying members.

Note 2 All welds on P5 material shall be post heated at 250 ° C for 2 hrs or 150 ° C for 4 Hrs, immediately following welding.

Note 3 All welds of P5 material shall be post weld heat treated. In case where the size of fillet is less than 12 mm, PWHT is not required for non load carrying members.

4.6.7.1 The **soaking time** shall be as follows:

- For P1 materials the soaking time shall be 1 hr/inch of thickness(t) (2.5 mts / mm) upto 2" and 2 hrs + 15 minutes for each additional inch for t > 2".
- For P4 & P5 materials the soaking time shall be 1 hr/inch of thickness (2.5 mts / mm) upto 5" and 5 hrs + 15 minutes for each additional inch for t > 5".
- For combination cycles mentioned above, calculate the minimum soaking time for individual components as 2.5 minutes/mm of the thickness of weld/material whichever is applicable. Soaking time selected for the cycle shall not exceed the limits given below:

Material	Thickness (mm)	Max. soaking time (minutes)
P1 (A,B,C), P4, P5A, P1 (A,B) + P4, P1C + P4, P1 + P3 P4 + P5A, P15E Gr1	Up to 25 mm	125
	26 - 50 mm	200
	51 - 80 mm	250
	81 - 150mm	375

4.6.7.2 Unless otherwise specified, in case of mixed loads of materials not covered under simulation HT, the following heat treatment temperatures shall be followed. In such cases, guidelines for soaking can be taken from Clause 4.6.9.

For components having butt joint between P1 & P4, or P3 & P4, the cycle shall be 630 - 670° C.

Where a component has a butt joint between P4 & P5A, the cycle shall be 680 - 710° . C.

Where a component has a butt joint between P1 & P3, the cycle shall be 620-660 ° . C

For P1+P5A material combination, follow the WPS requirements

The following jobs shall not be combined in the same cycle during PWHT.

Separate jobs of P1 and P4 Separate jobs of P4 and P5

- 4.6.7.3 For PWHT of P15E Gr 1 (Grade 91) & Grade 92 materials, soaking time shall be 1 hour per/inch with minimum soaking of 1 hour. The hardness of the weld metal or heat affected zone after PWHT shall be within 181 BHN to 303 BHN.
- 4.6.8 The following rules shall apply to establish the thickness to be used in determining the soaking time for PWHT.
- 4.6.8.1 For Butt welds, the thickness shall be the thickness of the material at the weld. For bar stock, the thickness shall be the diameter.
- 4.6.8.2 For fillet welds, the thickness shall be the throat thickness. If a fillet weld is used in conjunction with a groove weld, the thickness shall be the greater of the depth of the groove or the throat thickness.
- 4.6.8.3 For partial penetration branch welds, the thickness shall be the depth of the groove prior to welding.
- 4.6.8.4 For repairs, thickness shall be the depth of the groove as prepared for repair welding.
- 4.6.8.5 For combination of different welds in a component, maximum thickness of weld shall govern.
- 4.6.9 Requirements of Rate of Heating (ROH) above loading temperature 315 ° C and Rate of Cooling (ROC) are as given below. During heating and cooling, variation in temperature between thermocouples shall be 85 ° C maximum, unless otherwise specified.

Thickness	ROH / ROC (Max) Above / upto 315 ° C
Up to 25mm	220 ° C / hour
26 - 50 mm	95 ° C / hour
50 – 75 mm	70° C / hour
Above 75 mm	55 ° C/hour
For S.S Matl	200 ° C / hour min (Forced air cooling)
GR 91 &92	Furnace cooling upto 350 ° C

- 4.6.10 In case of interruption during Heat treatment the following action has to be taken depending on the stage of occurrence:

Type of Heat treatment	Stage of interruption	Action
Annealing & stress relieving	Heating	Heat treat subsequently as specified
	Soaking	Heat treat subsequently for balance soaking
	Cooling	If the ROC during interruption period meets the specified rate, cool subsequently at required rate upto 400° C. Otherwise, reheat to the soaking temperature, hold for 15 minutes and then cool at the specified rate

Normalising(N) Tempering (T) & Soln. annealing (S)	Heating	Heat treat subsequently as specified
	Soaking	Heat treat subsequently for full soaking(N,S) / Balance soaking (T)
	Cooling	Not applicable

- 4.6.11 Local heat treatment can be carried out by Resistance heating or Induction heating. For local heat treatment of weld joints, width of the heated band on either side of the weld must be at least 3 times the width of the weld groove of the thickest part or 3 times the highest section thickness, whichever is greater.
- 4.6.11.1 The width of the insulation band beyond the heating band shall be at least twice the total width of the heating band.
- 4.6.11.2 A minimum of three thermocouples shall be placed such that at least one is on the weldment and the other two on the base material on either side of the weldment.
- 4.6.11.3 The winding arrangement shall be established to attain the required temperature. The initial rate of heating shall be minimum such that it stabilises at the required rate of heating before reaching 400 deg C.
- 4.6.12 After heat treatment, the charts shall be correlated with the job and cleared by QC. The chart shall contain cycle no, Date, W.O and DU details. Temperature, ROH, ROC and soaking time shall be calculated, entered in the chart and signed off by QC.
- 4.6.13 Wherever applicable the test coupons shall be tested and reports obtained to complete the clearance of heat treatment operation.

5.0 NON-DESTRUCTIVE TESTING

- 5.1 The requirement of NDE, extent and type of examination shall be as per respective product SQP and / or CQP .Wherever product SQP is not existing the following requirements shall apply.
- 5.2 Visual inspection shall be performed as per SIP:NP:06
- 5.3 RADIOGRAPHY.
- All Butt welds of Carbon steel for thickness $t > 32\text{mm}$
 - All butt welds of alloy steels for thickness $t > 12.0\text{mm}$ for P5 and $T > 16\text{mm}$ for P4.
 - All butt welds in monorails.
 - SS butt welds of $T > 16\text{mm}$ unless otherwise specified.
- 5.3.1 All radiographic films shall possess Firm code , RT agency, Cust. No, Part No, RT reference Number. and weld location reference number. The job shall be numbered with Radiograph number.
- 5.4 MPI / LPI BEFORE PWHT
- All flame cut edges of Carbon steel for $t \geq 38\text{ mm}$ and alloy steels for $t > 12\text{mm}$.
 - All butt welds joining plate members in which one of the plate member is over 25 mm thick for Carbon steel and over 12 mm thick for alloy steel.
 - All fillet welds between tension flange and web.
 - All fillet welds joining plate members in which both the plate members are over 25 mm thick for Carbon steel and over 12 mm thick for alloy steel.
 - For all butt welds of CS & AS weld groove after back chipping prior to welding from

second side.

f. All main fillet welds for SS require LPI

g. MPI/LPI for all fillet welds & HAZ of SA387 Gr.22 materials after HT.

- 5.5 All NDE shall be carried out by qualified personnel as per BHEL NDT procedures. Where subcontractors use their own procedures for NDE the same shall have the approval of BHEL NDTL.

6.0 MACHINING

6.1 GENERAL

- 6.1.1 Ensure of raw material identification throughout the machining process. Traceability to the contract shall be ensured by stamping or marking / painting or by tags(WO No.and DU / Part no.)
- 6.1.2 Where the material identification is likely to be removed during cutting or machining , the transfer of material identification shall be ensured.
- 6.1.3 In case of components / part processed items received from Subcontracting / other shops, ensure the completeness and clearance by QC / Customer Inspector through Inspection Reports / OPS.
- 6.1.4 Proper care shall be taken during handling of materials at all stages of manufacture. Items stored in the shop floor shall be properly identified and preserved to prevent mixup and damages / rusting / warpages.
- 6.1.5 All Machined surfaces shall be properly protected and stored. Wherever long storage is envisaged, they shall be preserved with grease / rust preventive oils and protected suitably with polythene / gunny bag or plastic peel off coatings.

6.2 MARKING

- 6.2.1 The marking on machined components shall be in such a location which will not be detrimental to the surface finish requirements of the component.
- 6.2.2 Purpose of marking is to:
1. Ensure availability of machining allowance.
 2. Identify locations for machining.
 3. Provide reference for setting and inspection.

6.3 PROCESS CONTROLS

- 6.3.1 The following shall be ensured for selection of work centers, tools, jigs and fixtures:
- a The work centre for machining shall be identified in OPS / loading sheet based on the process capability of the machine or Machine accuracy established to suit the tolerances.
 - b Test hardware (Jigs, Fixtures and Templates) used as a means of inspection / process control shall have been qualified through first off trials and shall be regulated through valid number. The same shall be reflected in the OPS / loading sheet .
 - c Softwares used in case of CNC / NC machines shall have been validated through trials or inspection of similar components produced and accepted.

- d All cutting tools shall have been ensured for its correctness before use. In case of regrinding of tools they shall be verified after regrinding.
- 6.3.2 The following shall be ensured before setting the job on the machine, during processing and after completion of machining:
 - a Ensure the verticality and flatness of the job after clamping by using the reference markings or dialing the surfaces. Ensure the adequacy of clamping.
 - b Ensure proper clamping of the correct tool in to the tool holders.
 - c After machining the machined surfaces shall be cleaned and all corners shall be deburred. After removing from the machine they shall be properly stored.
 - d Before starting reaming ensure proper material allowance for finish operation.
 - e During drilling, reaming and tapping the removal of chips shall be done periodically to prevent clogging of chips. For deep drilling ensure that run out and drill travel are verified in free condition and ensure proper clamping of the tools.

.4 INSPECTION

- 6.4.1 Ensure completeness of all final machining operations. Dimensional inspection shall be done with relevant drawings. Ensure use of calibrated instruments / gauges.
- 6.4.2 Unless otherwise specified in the drawing or SQP, the following tolerances can be used for untoleranced dimensions.

1.Linear Tolerance (:millimeters) - Medium

PERMISSIBLE DEVIATIONS FOR BASIC SIZE RANGE						
Up to 6	From 6 TO 30	from 30-120	From 120-400	From 400-1000	From 1000-2000	Above 2000
± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2.0

2. Angular Tolerance

- a. Assembly characteristics $\pm 0.5^\circ$
- b. Other characteristics $\pm 1^\circ$

7.0 FINAL INSPECTION

- 7.1 All dimension shall be inspected as per relevant drawings. Tolerances for fabricated items when not specified in drawings shall be as per clause 4.2.6.

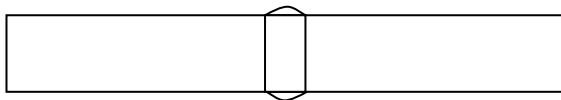
8.0 CLEANING AND PAINTING

- 8.1 All the temporary cleats, bridge pieces shall be removed carefully so as to avoid damage to parent material. Temporary tack welds shall be ground smooth. Complete assembly shall be cleaned to remove mill scales, spatter, slag, rust, oil or grease. Surfaces shall be prepared and painted as per SIP:PP:22 (latest). Site EPs shall be applied with weldable primer. All site EP shall be protected suitably from mechanical damage.
- 8.2 All temporary stiffeners / attachments used for transportation and handling that are removed after site assembly shall be painted with yellow paint.

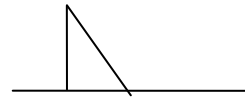
- 8.3 Match marking and flow direction for applicable components shall be as per the respective product SQP./Drawing
- 8.4 The following details shall be clearly marked with relevant details by paint, bordered and covered by one coat of transparent varnish
- Project Name :
 Work order number , DU NO. Weight & Sub-contractor Name/Code:
 Component / Assly. Designation :
- 8.5 Tension flanges in girders are to be identified by hard punching indicating 'TENSION FLANGE'
- 8.6 Apply grease on the threaded portion of "U"Rod and protect the threaded portion from damage with suitable plastic end caps.
- 8.7 For subcontracted items the firm code shall be punched and bordered with white paint.

ANNEXURE - A

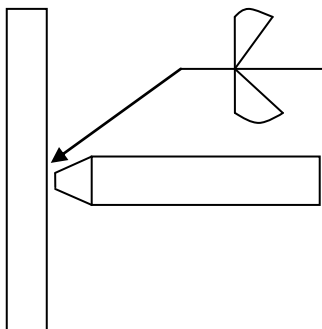
SQUARE BUTT WELD



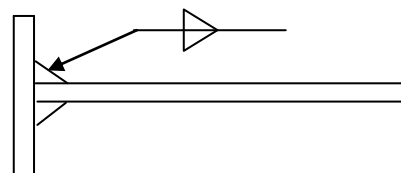
BEVEL WELD



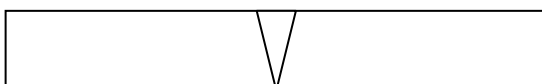
K WELD



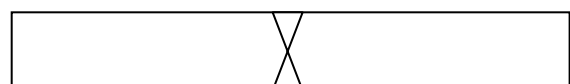
FILLET WELD



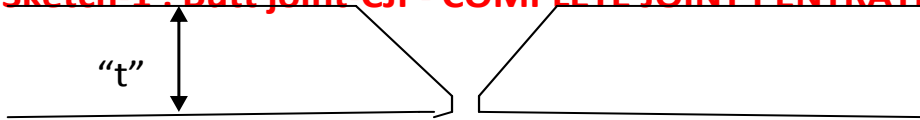
SINGLE V JOINT



DOUBLE V JOINT

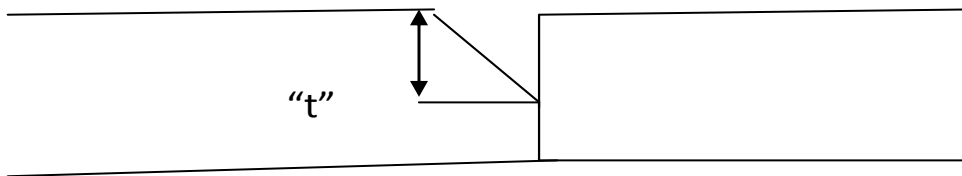


ANNEXURE-B

Sketch-1 : Butt joint-CJP- COMPLETE JOINT PENTRATION

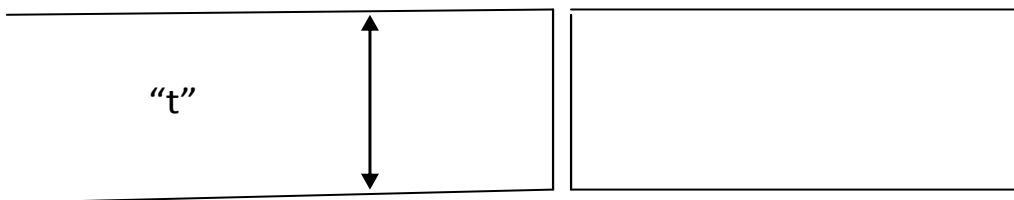
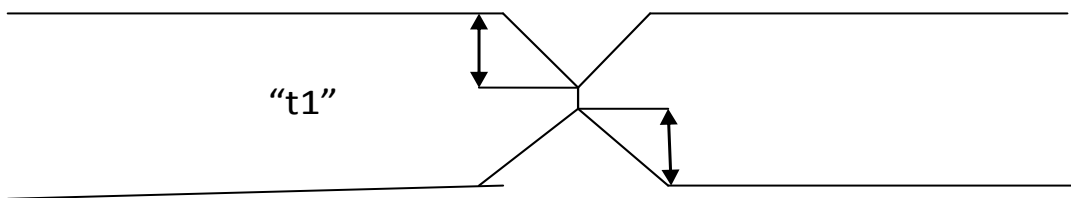
Where "t" is base metal thickness . If "t" is > 50mm PWHT to be done.

If "t" is > 32mm RT to be done.

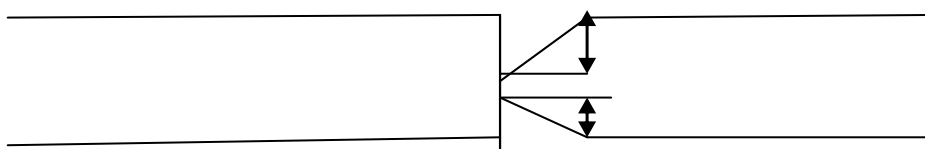
Sketch: 2 GROOVE Butt joint-PJP- PARTIAL JOINT PENTRATION

Where "t" is weld metal thickness. If weld depth is >50mm PWHT to be done

RT: is not applicable.

Sketch:3 - SQUARE BUTT JOINT PWHT & RT is not applicable in this case**Sketch:4 - DOUBLE "V" GROOVE BUTT JOINT –PARTIAL PENTRATION JOINT**

Where "t" is equal to $t_1 + t_2$. If "t" is > 50mm PWHT to be done. RT is not applicable

Sketch:5 – "K" GROOVE WELD BUTT JOINT –PJP-PARTIAL PENTRATION JOINT



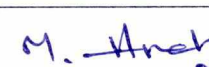
BHARAT HEAVY ELECTRICALS LIMITED

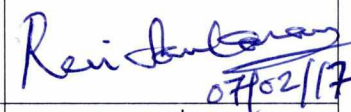
TIRUCHIRAPPALLI 620 014

SIP:NP: 14/01

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Guidelines for procurement of raw materials by OVM Firms

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Revision No.	Date	Approved by	Signature
01	07/02/2017	AGM /QA &BE	 07/02/17
00	04/06/2013	AGM /QA	-sd-

Rev. No.	Clause No.	Details of revision
00	--	New release
01	1.0	Scope modified
	2.0	Products operating only in OVM mode are included. The products Which are not operated in OVM mode had been removed.
	3.1	Table -II columns are modified to as per material specification and TDC. Note modified.
	4.2	BRAMAS mode of material sourcing added. Annexure-I & II Included
	4.4&4.5	scope for material sourcing defined.
	5.4	Color coding for E350 plates specified.

1.0 SCOPE :

1.1 This document details out the following modes of sourcing of raw materials by OVM vendors and associated Quality Documentation requirements for Non-NTPC projects

1. Mills /Suppliers approved by BHEL-Trichy
2. BRAMAS
3. Consignee
4. Traders/Agents
5. Inter Vendor Material Transfer

1.2 For NTPC projects, the guidelines given in CIP:653(Latest) shall be followed

2.0 PRODUCTS / MATERIALS SPECIFICATIONS / SIZE:

Table-I

SL No.	PRODUCT	PG OR PGMA	MATERIAL SHAPES AND SPECIFICATION
1	DUCTS AND SUPPORTS, THREADED CLEVIS AND TAPPING POINTS.	48 & 48-XX5	Plates and sheets: IS 2062 E250 A/BR, IS 1079, IS 513 Type D, SA 387 Gr 12 & 22, SA 204 Gr B, ASTM A588 Gr A, ASTM A240 TP 316 & TP 321, SA 515 Gr 70, SA 387 Gr 12/22. Forgings and Fittings: SA 105, IS 2062, SA 182 F12/22 Bolts: SA 193 B7 Pipes: ASTM A53 GrB, IS 3589, SA 106 Gr B, API 5L Gr B. Tubes: IS 1161, IS 1239, IS 1161 Yst 240,
2	STRUCTURES (Other than Ceiling Girders)	34,35,36,38,39, 86-XXX	Plates: IS 2062 E250A, BO, BR&C, IS 2062 E350A, BR, BO, C, & E410, ASTM A36, BSEN10025-3 Gr S420N, ASTM A 572 Gr 50
3	COAL BUNKER	67,68 –XXX	Plates: IS2062 E250 A & BR, SS LINER -SA240 TY 304 Grade 2B.

3.0 TECHNICAL DELIVERY CONDITIONS for the materials covered under Table-1

3.1 Technical Delivery Conditions for various material specifications sourced under the modes specified under Clause-4 are given in the following Table-II

Table-II

Matl Spec.	HT *	Microstructure Grain Size (ASTM E112)	CHEM	MECH	UT	Remarks
SA 105	As per material specification and Grade.					Rolled bars are permitted upto Dia 114.3mm. Dia>114.3 mm shall only be a forging.
SA 182 F12/F22	As per material specification and Grade.					
SA 193 B7	As per material specification and Grade.					Shall be in quenched and tempered condition as per the material specification.

Matl Spec.	HT*	Microstructure Grain Size (ASTM E112)	CHEM	MECH	UT	Remarks
SA 515 Gr 70		As per material specification and Grade.				
SA204 Gr B		As per material specification and TDC 0: 208 (latest).				
SA 387 Gr 12 /Gr 22		As per material specification and Grade				
SA 240 TY 304 Grade 2B		As per material specification and Grade				
SA106 GR B		As per material specification and Grade				
ASTM A53 Gr B		As per material specification and Grade				
ASTM A 588 Gr A		As per material specification and Grade				
ASTM A 240 TP 316 &TP 321		As per material specification and Grade				
ERW TUBE IS1161 YST240		As per material specification and Grade				
ERW PIPE IS1239		As per material specification and Grade				
IS 1079		As per material specification and Grade				
IS 513		As per material specification and Grade				
API 5L Gr B – ERW		As per material specification and (TDC 0: 109 latest)				
ERW :IS 3589 Fe 410		As per material specification and Grade				
IS 2062 E250 Gr A,BR&BO.		As per material specification and TDC 0: 301(latest)				Normalized rolling accepted for thickness above 40 upto 63mm.
IS 2062 E350 Gr A,BR,BO&C		As per material specification and TDC 0: 301(latest)				
BSEN10025-3 Gr S420N , IS 2062 E410,ASTM A572 Gr50		As per material specification and TDC 0: 301(latest)				

Note for Table II:

- The grain size determination wherever specified shall be as per ASTM E112.
- The TDC no specified in the table-II is to be followed unless otherwise contract specified TDC is given.
- *For carbon steel plates $t \geq 40$ mm shall be in normalized condition only and Alloy steel shall be normalized and tempered as per specification unless otherwise specified in table -II .Stainless steel shall be solution annealed.

4.0 MODES OF SOURCING BY OVM VENDORS

4.1 Mills /Suppliers approved by BHEL-Trichy

The materials shall be procured directly from BHEL-Approved suppliers or from the stock yards of BHEL approved suppliers. The original invoice and TC in the name of the OVM vendor or TC copy endorsed by the mill stockyard authorized personnel with identification shall be submitted to BHEL-QC-OLI for verification and clearance as per table-II for further processing.

4.2 BRAMAS:

This mode can be operated by procuring materials from BRAMAS or their stockyards meeting the requirements of Table-II. BRAMAS can procure the materials from BHEL-Approved suppliers for non- NTPC projects and the general process of material procurement & issue to vendors is detailed below:

- 4.2.1 The original Invoice shall be in the name of BRAMAS and TC copy shall be endorsed by the mill stockyard authorized personnel.
- 4.2.2 The materials thus procured i.e., plates, rolled beams, angles, channels etc. shall be stocked maintaining the identification. This process will be periodically audit checked by BHEL.
- 4.2.3 The documents pertaining to inward materials shall be verified as per BHEL TDC/ respective specification by BHEL. The Inward receipt no./DB no, melt no. and plate no shall be stamped on the plates and inward receipt no. /DB no shall be stenciled on other materials by BRAMAS. In case of plates upto 10 mm thickness stenciling may be done instead of hard stamping. Inward Receipt registers shall be maintained by BRAMAS as per the Format given in Annexure-1. This process will be periodically audit checked by BHEL.
- 4.2.4 These materials thus stocked shall be issued to various approved OVM firms through Delivery challan / Invoice indicating inward receipt no. of BRAMAS. The Delivery challan / Invoices / TC copy shall be certified and signed by an AIA appointed by BRAMAS out of BHEL approved list of AIAs.
- 4.2.5 Wherever part quantity is issued to OVM vendors, BRAMAS shall stamp the inward receipt no., melt no., plate no., on the plates issued as well as on the balance materials. Issue details are to be recorded in the format as per Annexure-II in the inward receipt register as mentioned in clause 4.2.3. The AIA appointed by BRAMAS shall verify the same and affix the stamp on the plates. Inward receipt no. shall be stenciled on other materials. This process shall be periodically audit checked by BHEL.
- 4.2.6 The OVM firms receiving material from BRAMAS shall maintain the traceability of the materials at their works. The TC along with Invoice will be verified by BHEL QC/OLI and the Material clearance Report will be verified and signed by BHEL QC/OLI. Subsequently, physical verification and stamping shall be done by BHEL AIA at OVM Firms before processing.

4.3 Consignee mode

In this mode, the materials shall be procured from BRAMAS/Traders/Agents complying to the requirements of Table-II with consignment directly addressed to OVM firm without unloading the materials physically at BRAMAS/Trader/Agents' premises. In this mode, the original TC shall be in the name of BRAMAS/Trader/Agents. The Mill or Mill Stockyard invoice in the name of BRAMAS/Trader/Agent shall however have the consignee address of OVM vendors. The vendor shall submit TC and invoice copies to BHEL-QC-OLI for verification and clearance.

4.4 From Traders/Dealers

The materials upto 5 tons of rolled sections, pipes, tubes, plates & fittings can be procured directly from the stock yards of traders/agents which will be identified by hard stamping /stenciling with day book number, material specification and heat number physically verified as recorded in the day receipt register of the OVM vendor by BHEL-QC-OLI/AIA. The random samples melt wise and size wise shall be selected with inspector's seals and shall be tested at any NABL accredited lab complying to the requirements of Table-II. In addition, UT tests for thickness above 10mm shall be conducted. All the above test results along with TC copy shall be submitted to BHEL-QC-OLI for verification and clearances.

4.5 Inter Vendor Material Transfer

The materials procured under modes 4.1, 4.2 and 4.3 can be transferred by an OVM vendor (hereinafter called main OVM vendor) to other OVM Vendor (hereinafter called Receiving OVM Vendor) for up to 5 tons of rolled sections, pipes, tubes, plates & fittings. However, in case of transfer of plates under this mode, one full size plate /off-cut plate of specific grade and thickness weighing beyond 5 MT is also acceptable, subject to a condition that the plate/part of plate under transfer shall have original Mill stamping.

- 4.5.1 The Receiving OVM Vendor shall not transfer the material to other OVM vendors.
- 4.5.2 The main OVM vendor shall maintain issue control register such that material reconciliation for each Day Book can be demonstrated for BHEL projects.
- 4.5.3 The issue control number will be allotted by the main OVM.
- 4.5.4 The Receiving OVM vendor shall submit TC and invoice copies to BHEL-QC-OLI for verification and clearances as per table-II.
- 4.5.5 BHEL AIA shall stamp/stencil the material in main OVM vendors' works and endorse the Material Transfer Form, as per Annexure-III, which will be verified and signed by BHEL/QC/OLI with the particulars of both Main OVM vendor and receiving OVM vendor.
- 4.5.6 Material traceability shall be ensured by BHEL-QC /AIA in terms of Main OVM Vendor's Day Book Number Reference, Material Specification, Size and Melt Number by hard stamping /stenciling the material to be issued to receiving OVM Vendor.
- 4.5.7 The receiving OVM vendor will maintain the traceability of the transferred materials at their works as per the clause number 5.0 of this procedure.

5.0 TRACEABILITY OF RAW MATERIALS AT OVM VENDOR WORKS:

5.1 A day book number shall be allotted on receipt of materials. Hard stamping & stenciling of the day book number, material specification, plate number and heat number shall be carried out on plates. For Rolled sections (beams, angles, channels etc), stenciling of DB no. shall be done. In case of pipes/tubes/fittings of

-thickness greater than 10mm, the DB number shall be hard stamped and

-thickness less than or equal to 10mm stenciling of DB number is to be done.

5.2 The scanned copy of the day book details along with TC and invoice or Material test results wherever applicable shall be sent to BHEL-QC-OLI for review. The material shall be further processed only after acceptance of the material by BHEL-QC-OLI and physical verification by BHEL authorized inspection agency.

5.3 Subsequent transfer by hard stamping/stenciling of day book number, material specification and heat number on the plates shall be meticulously followed before further cutting, processing and the same shall be subjected to witness inspection by AIA. The stamp of AIA shall be put while transferring the details.

5.4 E350 material shall be separately identified to avoid mix up with E250 by painting the plate thickness on all sides using weldable primer of the respective color shades as indicated below:

- E350 BR - Golden brown
- E350 B0 - Silver
- E350 C - Yellow

It is the responsibility of the vendor to transfer the color codes in all cutout plates subsequently.

5.5 The material shall be subjected to Positive Material Identification (PMI) for materials other than carbon steel during fit up stage and certified by BHEL-QC-OLI or AIA and further review by QC-OLI before starting full welding. The PMI instrument shall be calibrated in a NABL accredited lab and instrument identification shall be included in the PMI report.

Annexure-1

[illegible]

Note : Receipt details shall appear on LHS of the Register

Annexure-II

[illegible]

Note : Issue details shall appear on RHS of Register

Annexure-III

MATERIAL TRANSFER FORM

TRANSFER OF MATERIALS FROM MAIN OVM VENDOR TO RECEIVING OVM VENDOR (TEST CERTIFICATE SHALL BE IN THE NAME OF THE MAIN OVM VENDOR)		CONTROL NUMBER.	
		DATE	
PARTICULARS	MAIN OVM VENDOR	RECEIVING OVM VENDOR	
DETAILS OF THE FIRM			
PO DETAILS			
WORK ORDER NUMBER.			
DESCRIPTION OF MATERIAL			
SIZE			
SPECIFICATION			
QTY.			
WEIGHT			
TEST CERTIFICATE NUMBER			
DB NUMBER.			
1. The above materials were identified against TCs, and the test certificates were scrutinized as per TDC and found satisfactory. 2. Copies of TCs & Invoices are enclosed with this.(TC is duly certified by the main OVM vendor) 3. Hard stamp by AIA-details-“Thickness, specification, heat number & plate number”-AIA stamp			
Main OVM Vendor- QC	AIA	Receiving OVM Vendor- QC	BHEL /QC/OLI

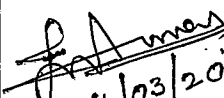
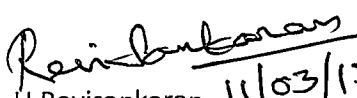


BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPALLI 620 014
QUALITY ASSURANCE

SIP: NP: 06/02

PAGE: 1 Of 5

PROCEDURE FOR VISUAL INSPECTION OF NON PRESSURE PARTS

REV.	DATE	PREPARED BY	REVIEWED BY	APPROVED BY
00	15/07/96	-Sd- P.S.Narayanan	-Sd- A.R.Reddy	-Sd- V.Raghavendran
01	28/03/04	-Sd- A Francis	-Sd- G S N Murthy	-Sd- C R Raju
02	11/03/2017	 11/03/2017 K.Nagarajan, Sr.Engineer/QA	 11/03/2017 J.V.V.Aruna Kumar, DGM/QA	 11/03/17 U.Revisankaran, AGM/QA&BE

Record of Revisions

Revision No.	Clause No.	Details of revision
00		PR:QE:021/02renumbered as SIP:NP:06
		Editorial corrections for clarity
		Clause 3.1 modified
01	3.1	Code related change
	3.2	For better clarity
	3.2.1	For better clarity
	3.2.3	Code related change
	3.2.5	For better clarity
	4.4	Code related change
02	3.2.2,3.2.4, 4.4 (3),4.4 (5)	<i>Clauses modified based on AWS D 1.1 /D1.1M:2015 Standard.</i>

1.0 SCOPE

This procedure details out the visual inspection of all base metal surfaces and weld joints of Non Pressure Parts.

2.0 REFERENCE DOCUMENTS

AWS D 1.1 /D1.1M:2015 & relevant drawings.

3.0 VISUAL INSPECTION OF GAS CUT EDGES

3.1 Limits on acceptability and repair of mill induced laminar discontinuities in cut surfaces

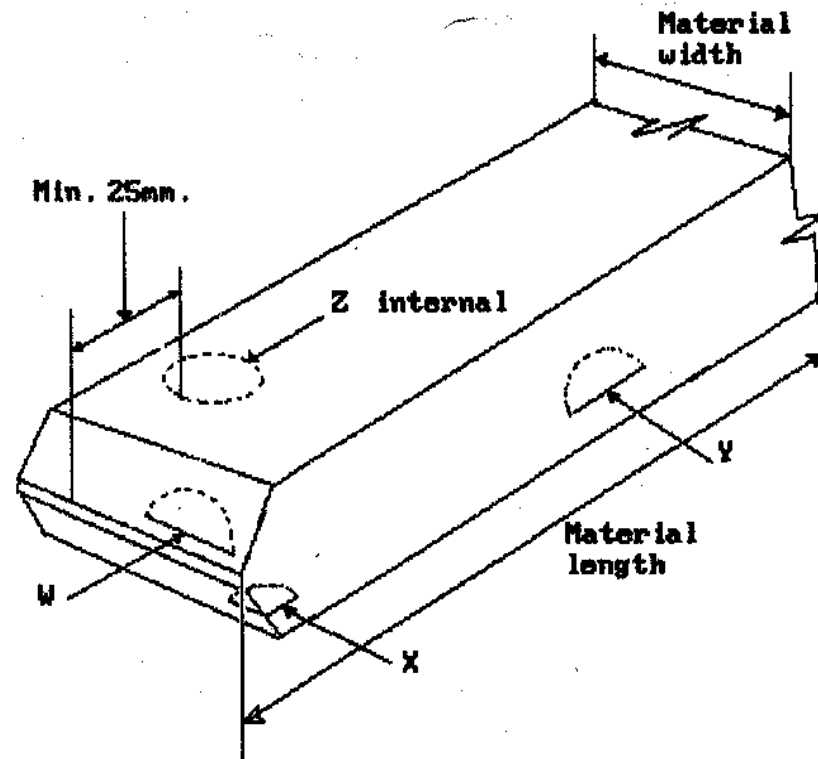
Description of Discontinuity	Repair Required
Any discontinuity 25mm in length or less	No repair required
Any discontinuity over 25mm in length and 3mm max. depth (after grinding & confirmation of depth on 10% of total such locations)	No repair required
Any discontinuity over 25mm in length with depth over 3mm but not greater than 6mm	Remove by grinding and weld.
Any discontinuity over 25mm in length with depth over 6mm but not greater than 25mm	Completely remove and weld.
Any discontinuity over 25mm in length with depth greater than 25mm.	Refer Clause 3.2

3.2 For discontinuities over 25mm in length with depth greater than 25mm, discovered by visual inspection (and subsequent grinding for depth assessment) of plate cut edges/ bevel edges before welding or during examination of welded joints by radiography or ultrasonic inspection, following procedure shall be followed:

3.2.1 Where discontinuities such as W, X or Y in Fig.1 are observed prior to completing the joint, the size, shape and area of the discontinuity shall be determined by UT.

3.2.2 The repair of the discontinuity by welding shall be allowed in case area of discontinuity does not exceed 4% of the cut area with the following exceptions: if the *length* of the discontinuity or the aggregate width of discontinuities on any transverse section, as measured perpendicular to the plate length, exceeds 20% of the plate width, the limit of 4% area shall be reduced by percentage amount of the width exceeding 20% (e.g., if the discontinuity is 30% of plate width, the area of discontinuity cannot exceed 3.6% of the plate area). The discontinuity on the cut edge of the plate shall be gouged out to a depth of 25mm beyond its intersection of the surface by chipping, or carbon arc gouging, or grinding and blocked off by welding with manual shielded metal arc process in layers not exceeding 3mm in thickness.

Fig.1

EDGE DISCONTINUITIES IN CUT PLATE

- 3.2.3 If discontinuity (Z) not exceeding the allowable area in Clause 3.2.2, is discovered after the joint has been completed and is determined to be 25mm or more away from the face of the weld, as measured on the plate surface, no repair of discontinuity is required. If the discontinuity (Z) is less than 25mm away from the weld, it shall be removed to a distance of 25mm from the fusion zone of the weld by chipping, air carbon arc gouging or grinding. It shall then be blocked off by welding with low hydrogen SMAW process in layers not exceeding 3mm in thickness for at least four layers. Submerged arc or other welding process may be used for remaining layers.
- 3.2.4 If the area of discontinuity (W), (X), (Y) or (Z) exceeds the allowable limits of Clause 3.2.2, the plate or sub-component shall be rejected and *replaced*.
- 3.2.5 The aggregate length of weld repair shall not exceed 20% of length of plate surface being repaired.

4.0 VISUAL INSPECTION OF WELDS

- 4.1 Visual examination of welds shall be performed after completion of welding and subsequent cooling to room temperature. However for ASTM A514 and A517 steels (*whenever used*), visual examination of welds shall be performed only after 48 hours of completion of welding.

4.2 All welds shall be cleaned to remove slag, spatter etc. and visually examined for defects like crack, undercut, porosity, lack of fusion etc.

4.3 The welds shall also be examined for size, shape and reinforcement.

4.4 **ACCEPTANCE CRITERIA AND DISPOSITION DETAILS ARE AS FOLLOWS:**

Sl.No.	Nature of defects	Acceptance norms	Disposition
1.	Crack, Lack of fusion, Overlap	Not accepted	Confirm by LPI/MPI, repair and retest.
2.	Crater (Except at the ends of stitch welds outside the required length)	Not accepted	Fill by weld deposit.
3.	<u>Under cut:</u> For T < 25 mm For T => 25 mm	Up to 1.0 mm accepted. (Up to 2.0 mm if within 50mm for any 300 mm weld Length.) Up to 2.0 mm accepted.	To be ground and merged/welded. >2.0mm to be ground and merged/welded.
4.	<u>Porosity:</u> Transverse Butt welds Porosity for other Groove/Fillet welds	Piping porosity not permitted. One pore of ≤ 2.5 mm for each 100 mm of Weld length is permitted (*). *sum of diameters of piping porosity in fillet welds in web to stiffener: 10mm for 25 mm weld & 20mm for 300mm weld is however acceptable.	
5.	<u>Weld profile:</u> (i) Face of fillet (ii) Size (Minimum) (iii) Reinforcement (groove)	Flat or concave (meeting the throat) accepted. convexity is acceptable as below: 2mm for weld width ≤ 8 mm 3mm for weld width > 8 mm < 25 mm 5mm for weld width ≥ 25 mm As per drawing. Under size permitted as below(#) 2mm for nominal size < 5mm 2.5mm for nominal size 6mm 3mm for nominal size > 8 mm #In all case, undersized weld length shall not exceed 10% of the total weld length. <i>3mm (max.) for $t \leq 25$mm ; 5mm(max.) for $t > 25$mm</i> <i>t= thickness of thicker plate for CJP; t= weld size for PJP</i>	

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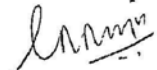
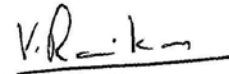
TIRUCHIRAPALLI 620 014

QUALITY ASSURANCE

QUALITY ASSURANCE

SIP: NP: 07/02

WELDING/WELDER QUALIFICATION FOR STRUCTURAL APPLICATIONS

REV.	DATE	PREPARED	REVIEWED	APPROVED
00	15/07/96	P.S.Narayanan	A.R.Reddy	V.Raghavendran
01	13/10/03	 A Francis	 GSN Murthy	 C R Raju
02	25/11/09	 T. Palanisamy	 Bikramaditya Roy	 Ravikumar V

Revision no	Clause no	Revision details
00	--	--
01	--	1.PR:QE:172/00 Renumbered as SIP:NP:07 2.Editorial corrections for better clarity
02	--	1.Completely modified

1.0 SCOPE

1.1 This procedure details out the requirements of Welding procedure qualification/ Performance Qualification tests for welders and welding operators/ Welding procedure specification and maintenance of records for the same at sub Vendor works for structural application.

1.2 REFERENCE DOCUMENTS

1.2.1 AWS D1.1/D1.1M:2008.

2.0 WELDING PROCESS

- SMAW** -Shielded Metal Arc Welding.
- SAW** --Submerged Arc Welding.
- GMAW** -Gas Metal Arc welding. (Note 1to3 to be strictly followed)

#Note,

- Prior approval for GMAW to be obtained from BHEL/quality.
- Gas Mixture of 80% Argon & 20% CO2 to be ensured.
- All Production welds shall be done inside the closed shed only.

3.0 WELDING PROCEEDURE QUALIFICATION

3.1 Prepare draft WPS and get it approved by BHEL WTC.

3.2 Consumable selected for draft WPS shall be as per BHEL approved brand.

3.2.1 All NDE and pre treatment for plate before/after cutting & during/ after welding shall be as per the respective QCP & SQP.

3.3 Test plate of size 180x380mm of Specified thickness-2 nos for all butt (fig 5), corner (Fig 9) & fillet (fig 2) weld joints.

3.4 Minimum procedure qualification test requirement for Structural Fabrication : Carbon Steel to IS 2062 E250 GR A OR B.

Sl. NO	Process	PL. thick	Pre-heat	PWHT	Type of Jt.	Test-position	Position qualified
1	SMAW	25mm	NIL	NIL	Groove butt weld	1G	1G,1F
2	SMAW	40mm	YES 100deg.C	NIL	Groove butt Weld	2G	1G,2G,1F,2F
3	SMAW	56mm	Yes 100deg.C	Yes	Groove Butt weld	1G	1G,1F
4	SMAW	10mm	NIL	NIL	Corner weld	3G	3G, 3F
5	SMAW	*	NIL	NIL	Fillet	3F	3F
6	SAW	25mm	NIL	NIL	Butt weld	1G	1G,1F
7	SAW	25	Yes 100deg.C	NIL	Butt weld	1G	1G & 1F
8	SAW	56mm	YES 100deg.C	NIL	Corner weld	1G	1G & 1F
9	SAW	*	NIL	NIL	Fillet	1F	1F
10	SAW	*	NIL	NIL	Fillet	1F	1F
11	GMAW	10mm	NIL	NIL	fillet	3F	1F
12	GMAW	10mm	NIL	NIL	Groove butt weld	2G	1G,2G,1F,2F

Note:

1.0 * Ref fig 8 for size of test plates for fillet welds.

- 2.0 For all other material combinations separate procedure to the relevant code/standard shall be qualified before start of production welds.
- 3.0 SAW corner groove weld qualification with 15°+30° groove angle (ref fig9) shall be done along with plate groove butt weld.
- 4.0 For pipe WPS qualification Dia. 2 inch of schedule 80 and 6 inch of schedule 120 are to be welded in 5G & 2G position respectively. This qualifies for all sizes, positions and unlimited thickness of pipes and tubes.

3.5 Base material other than Carbon steel, applicable welding process is SMAW only. In such cases PQR shall be qualified as per AWS D.1.1.

3.6 Test shall be done in presence of BHEL/ QC or BHEL nominated AIA.

4.0 **BASE MATERIAL.**

4.1 Test plate base material shall match with drawing or other engineering Documents.

4.2 Test plate weld surface shall be ground smooth and free from Oil & scales.

5.0 **WELDING REQUIREMENT**

5.1 Weld groove configuration and dimensions shall be as shown in the Draft WPS, drawing or Sketch authorized by engineering for processing.

5.2 All Procedure qualification and production welds of SAW process shall be done in 1G/1F position only.

5.3 Details of process and consumable used for welding such as Preheat, consumable size, brand name, AWS classification for electrode, Wire and flux, Shielding gas etc shall be recorded and maintained.

5.4 Details of the welding parameters Such as Welding current, voltage, travel speed, wire feed, shielding gas mixture & gas flow rate etc shall be recorded and maintained.

5.5 Details of number of layers and passes of groove or fillet welds (fig6) shall be recorded.

5.6 Back gouge/grind the second side as applicable and ensure weld soundness by MT/PT before second side weld.

5.7 Complete the weld and ensure weld soundness by applicable NDE (MT, PT, and RT or UT).

5.8 Necessary PWHT (as per draft WPS) shall be done before marking the test Specimen for mechanical test.

5.9 The defective portion of the welds in the test plate shall be discarded and not repaired

6.0 Test plate Specimen & test requirement:

6.1 Test Specimen for butt welded test plate as per fig 5 and Fillet/ corner welded test plate as per fig 7 shall be punched with inspecting engineer's stamp before cutting the test specimen. (No. of test specimen shall be as per table-2)

6.2 WPS test specimen requirement for mechanical test are as follows:

Table 2

Test pl. thickness & dia. In mm	Reduced Section tensile	Bend test 4t, 180°			Macro	thick qualified		Dia. Qualified
		Root	face	Side		Min.	Max.	
T 3 to 10	2	2	2	*	--	3mm	2T	--
T>10 T < 25	2	--	--	4	--	3mm	2T	--
T25 & over	2	--	--	4	----	3mm	Unlimited	--
Dia. 50 & t6	2	2	2	-	--	3mm	20mm	Dia. 20-100
Dia. 150 t12	2	2	2	-	--	5mm	Unlimited	Dia. >100mm
Corner/ fillet weld	--	--	--	--	3	5mm	Unlimited	--

*For 10mm plate or wall thickness, a side bend test may be substituted for each of the required face- and root- bend tests.

7.0 Mechanical test

7.1 Prepare the test specimen as per AWS D1.1 and move to BHEL Lab or NABL accredited lab for mechanical testing.

7.2 Mechanical test to be done in presence of BHEL/QC or BHEL nominated AIA.

8.0 Preparation of PQR & WPS

8.1 Generate qualified WPS and PQR (as per the format enclosed in page 9 and 10) indicating all process parameters, Mechanical/ NDE test results, reports as applicable and submit to inspection engineer for verification and approval.

9.0 Welder/ Welding operator qualification (WQ)

9.1 The welder/ welding operators engaged for procedure qualification tests are automatically qualified for production welding.

9.2 Test material: for carbon and alloy steel respective materials shall be used for test.

9.3 Test plate size: 200x200x25 mm or 200x200 and respective plate thicknesses.

9.4 WQ Test and production position qualified are as follows.

Table 3.

Weld type	Test Position	Production position qualified
Plate Groove	3G	1G, 2G, 3G, 1F, 2F & 3F
Plate groove	1G	1G & 1F
Plate fillet	1F	1F
Plate Fillet	3F	1F, 2F & 3F
Pipe Groove	2G & 5G	All position.
Pipe fillet	4F	1F, 2F & 4F

Note: Additional position can be qualified if required. Only qualified personnel shall be engaged in respective positions for production weld.

9.5 WQ Test requirement: Two Nos of side bend tests or 100% RT for butt welded test piece. Macro examination at three faces for fillet welds as per fig 7.

9.6 On successful test results WQR (as per the format enclosed in page 8) to be prepared & countersigned by inspection engineer and maintained for verification.

9.7 **WQ period of effectiveness:**

Qualification is effective unless : 1) The operator or welder is not engaged in welding for a period exceeding six months or unless 2) There is a specific reason to question his ability.

10 **Documentation:**

10.1 Prepare consolidated list of qualified WPS, Welder and Welding operator qualification records and maintain.

11 **Qualification-Types & Limitations**

11.1 Requalification of WPS is required in the following cases

S1. No	Welding variable	SMAW	SAW	GMAW
1.	Change from Low hydrogen to non low hydrogen electrode	Yes	--	--
2.	Change from wire & flux combination	--	Yes	--
3.	Change in nominal filler metal diameter by	>0.8mm	Increase	yes
4.	>7% Change in voltage each dia. used	--	Yes	Yes
5.	% change in travel speed	--	>15	>25
6.	Change in position qualified	Yes	Yes	Yes
7.	A decrease in Groove angle	Yes	Yes	Yes
8.	A decrease in Root gap	Yes	Yes	Yes
9.	An increase in root face	Yes	Yes	Yes
10.	Addition or deletion of PWHT	Yes	Yes	Yes

12 **PQR/ WPS requirement for Different strength Base materials**

12.1 For dissimilar composition of Low strength to high strength welded connections separate PQR and WPS shall be qualified.

12.2 In such cases Low hydrogen electrodes shall only be used.
(Preheat, Post heat and PWHT as per applicable SQP and draft WPS).

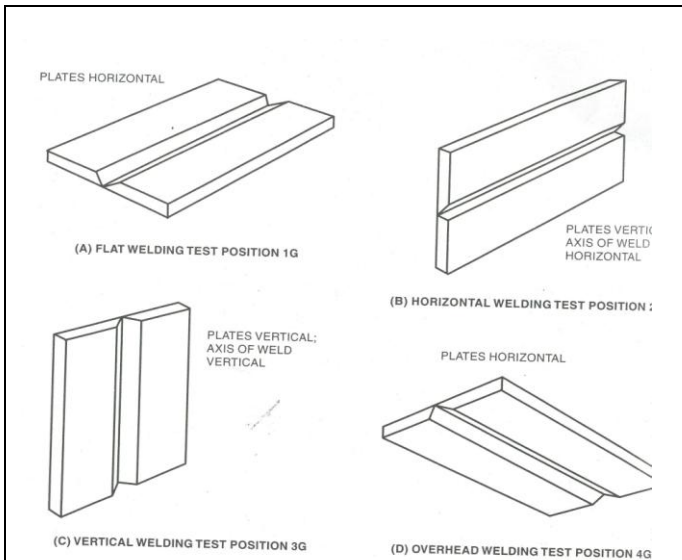


Figure 1

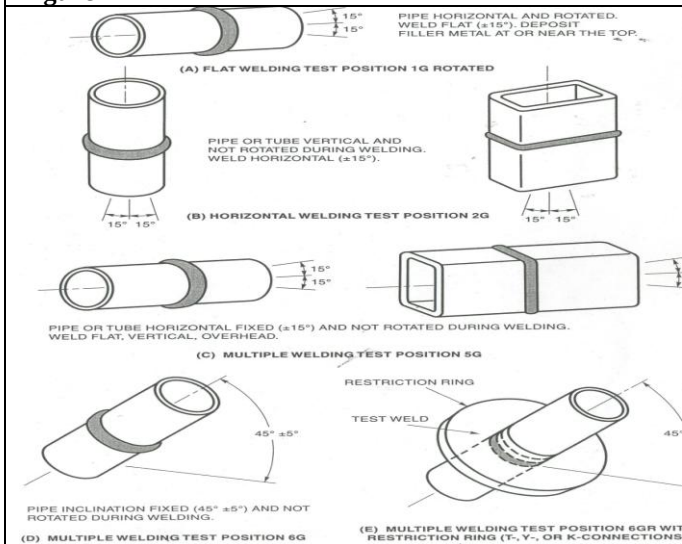


Figure 3

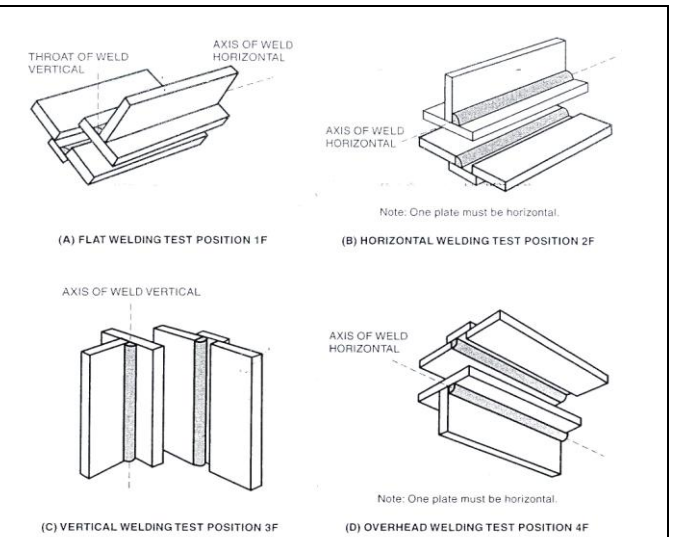


Figure 2

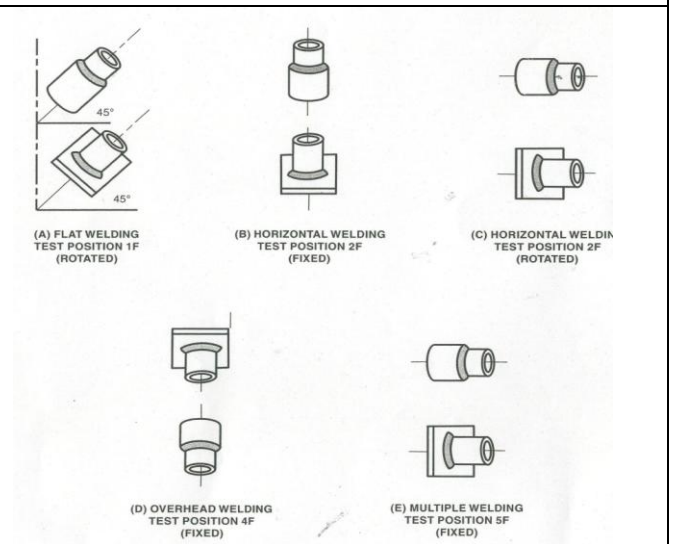


Figure 4

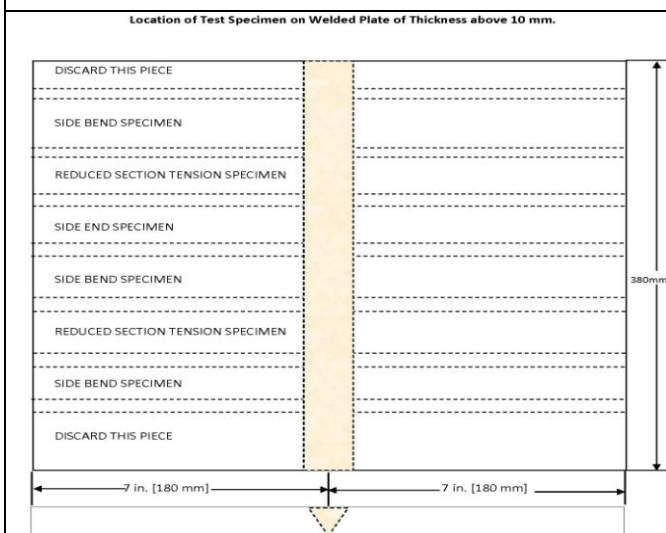
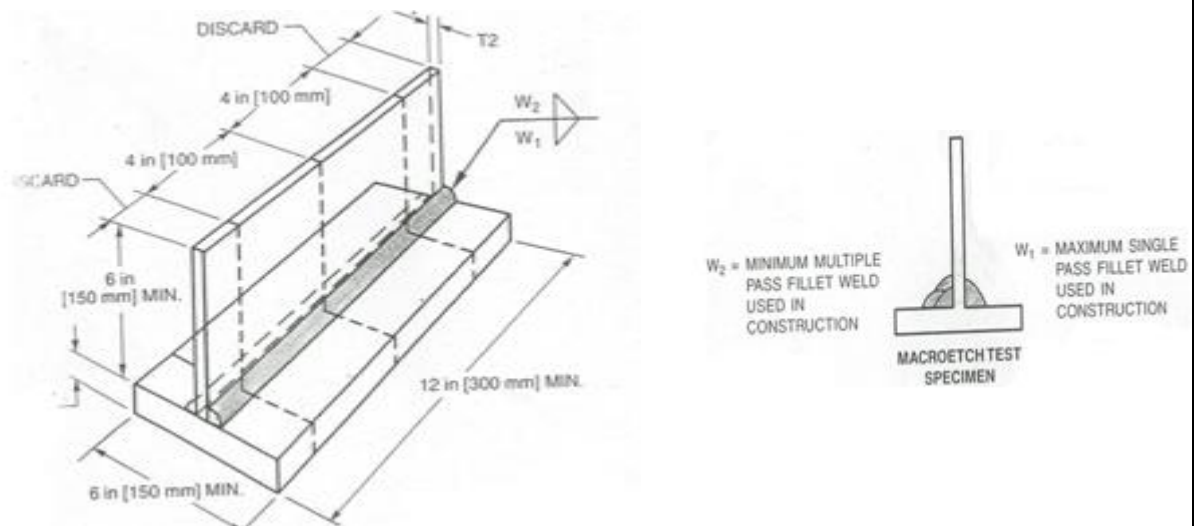


Figure 5

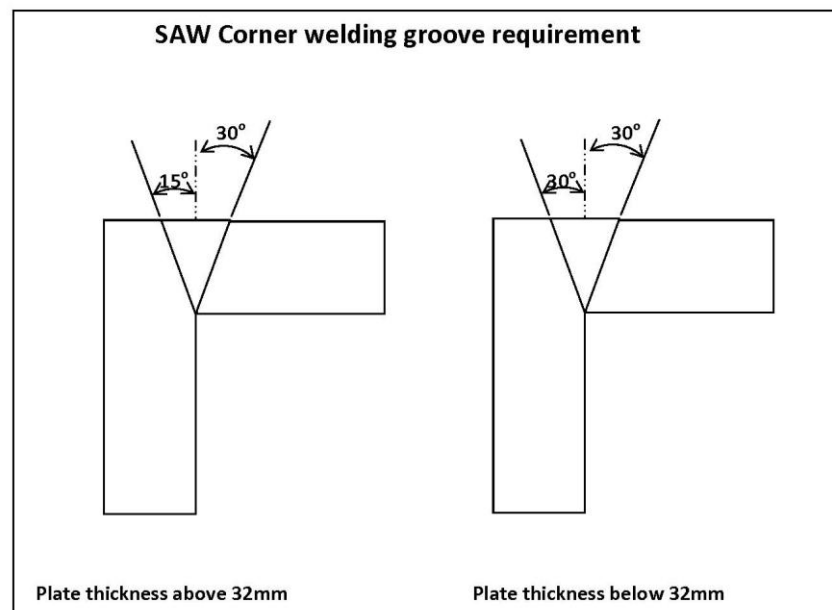
Fillet size	No. of layer	No. of Passes	Joint layer & passes
Up to 10mm	1	1	
12	1 2	1 2	
16	1 2 2	1 2 3	
20	1 2 3 3	1 2 3 4	
25	1 2 3 3 4 4 4	1 2 3 4 5 6 7	

Figure 6

Figure 7 Fillet weld test specimen Details**Figure 8 Fillet weld Test plate Selection details**

Weld Size in mm	T1 minimum	T2 minimum
5	12	5
6	20	6
8	25	8
10	25	10
12	25	12
16	25	16
20	25	20
>20	25	25

Note: Where the maximum plate thickness used in Production is less than the value shown above, the Maximum thickness of the production plates may be Substituted for T1 & T2.

Figure 9

WELDER, WELDING OPERATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder _____
 Name _____ Identification No. _____
 Welding Procedure Specification No. _____ Rev _____ Date _____

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.12, Item (1)]	_____	_____
Electrode (single or multiple) [Table 4.12, Item (7)]	_____	_____
Current/Polarity	_____	_____
Position [Table 4.12, Item (4)]	_____	_____
Weld Progression [Table 4.12, Item (5)]	_____	_____
Backing (YES or NO) [Table 4.12, Item (6)]	_____	_____
Material/Spec.	_____ to _____	_____
Base Metal	_____	_____
Thickness: (Plate)	_____	_____
Groove	_____	_____
Fillet	_____	_____
Thickness: (Pipe/tube)	_____	_____
Groove	_____	_____
Fillet	_____	_____
Diameter: (Pipe)	_____	_____
Groove	_____	_____
Fillet	_____	_____
Filler Metal (Table 4.12)	_____	_____
Spec. No.	_____	_____
Class	_____	_____
F-No. [Table 4.12, Item (2)]	_____	_____
Gas/Flux Type (Table 4.12)	_____	_____
Other	_____	_____

VISUAL INSPECTION (4.8.1)

Acceptable YES or NO _____

Guided Bend Test Results (4.30.5)

Type	Result	Type	Result
_____	_____	_____	_____
_____	_____	_____	_____

Fillet Test Results (4.30.2.3 and 4.30.4.1)

Appearance _____ Fillet Size _____
 Fracture Test Root Penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by _____ Test Number _____
 Organization _____ Date _____

RADIOGRAPHIC TEST RESULTS (4.30.3.2)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Interpreted by _____ Test Number _____
 Organization _____ Date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in conformance with the requirements of Clause 4 of AWS D1.1/D1.1M, (_____) *Structural Welding Code—Steel*.
 (year)

Manufacturer or Contractor _____ Authorized By _____
 Form N-4 Date _____

WELDING PROCEDURE SPECIFICATION (WPS) Yes ☐ PREQUALIFIED _____ QUALIFIED BY TESTING _____ or PROCEDURE QUALIFICATION RECORDS (PQR) Yes ☐								
Company Name _____ Welding Process(es) _____ Supporting PQR No.(s) _____				Identification # _____ Revision _____ Date _____ By _____ Authorized by _____ Date _____ Type—Manual ☐ Semiautomatic ☐ Machine ☐ Automatic ☐				
JOINT DESIGN USED Type: Single ☐ Double Weld ☐ Backing: Yes ☐ No ☐ Backing Material: _____ Root Opening _____ Root Face Dimension _____ Groove Angle: _____ Radius (J-U) _____ Back Gouging: Yes ☐ No ☐ Method _____				POSITION Position of Groove: _____ Fillet: _____ Vertical Progression: Up ☐ Down ☐				
BASE METALS Material Spec. _____ Type or Grade _____ Thickness: Groove _____ Fillet _____ Diameter (Pipe) _____				ELECTRICAL CHARACTERISTICS Transfer Mode (GMAW) Short-Circuiting ☐ Globular ☐ Spray ☐ Current: AC ☐ DCEP ☐ DCEN ☐ Pulsed ☐ Power Source: CC ☐ CV ☐ Other _____ Tungsten Electrode (GTAW) Size: _____ Type: _____				
FILLER METALS AWS Specification _____ AWS Classification _____				TECHNIQUE Stringer or Weave Bead: _____ Multi-pass or Single Pass (per side) _____ Number of Electrodes _____ Electrode Spacing Longitudinal _____ Lateral _____ Angle _____ Contact Tube to Work Distance _____ Peening _____ Interpass Cleaning: _____				
SHIELDING Flux _____ Gas _____ Composition _____ Electrode-Flux (Class) _____ Flow Rate _____ Gas Cup Size _____				POSTWELD HEAT TREATMENT Temp. _____ Time _____				
PREHEAT Preheat Temp., Min. _____ Interpass Temp., Min. _____ Max. _____								
WELDING PROCEDURE								
Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			

Form W-1 (Front)

Procedure Qualification Record (PQR) # _____**Test Results****TENSILE TEST**

Specimen No.	Width	Thickness	Area	Ultimate Tensile Load, lb	Ultimate Unit Stress, psi	Character of Failure and Location

GUIDED BEND TEST

Specimen No.	Type of Bend	Result	Remarks

VISUAL INSPECTION

Appearance _____
 Undercut _____
 Piping porosity _____
 Convexity _____
 Test date _____
 Witnessed by _____

Radiographic-ultrasonic examination

RT report no.: _____ Result _____
 UT report no.: _____ Result _____

FILLET WELD TEST RESULTS

Minimum size multiple pass Maximum size single pass
 Macroetch Macroetch
 1. _____ 3. _____ 1. _____ 3. _____
 2. _____ 2. _____

Other Tests**All-weld-metal tension test**

Tensile strength, psi _____
 Yield point/strength, psi _____
 Elongation in 2 in, % _____
 Laboratory test no. _____

Welder's name _____

Clock no. _____ Stamp no. _____

Tests conducted by _____ Laboratory

Test number _____

Per _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in conformance with the requirements of Clause 4 of AWS D1.1/D1.1M, (_____) *Structural Welding Code—Steel*
 (year)

Signed _____
 Manufacturer or Contractor

By _____

Title _____

Date _____

	BHEL – Tiruchirappalli - 620014, India. Quality Assurance Department TECHNICAL DELIVERY CONDITIONS	DOC No: TDC:0:301 Rev: 11 Effective Date: 15/11/2017 Page: 1 of 2
Product: STRUCTURAL QUALITY PLATES FOR BOILER STRUCTURES		

Revision record:

- Rev 01: Text Modified. IS 8500Fe 540, IS 2062 Gr B added.
- Rev 02: Shapes removed. UT>40mm IS 2062 Gr A introduced.
- Rev 03: 06/10/06 Cl.2.0, 3.0 & 4.0 modified.
- Rev.04: Revised in entirety merging IS 8500 with IS 2062 as per IS 2062-2006 and replacing BSEN 10113 with BS EN: 10025
- Rev.05: 01/10/09 - Cl.3.0, 4.0, 8.0: Normalized rolled clause included.
- Rev 06: 27/10/14 - TDC 313 Rev 02 merged with TDC 301, IS 2062 Gr E350, E450 and its requirements added in Cl1, Cl 2, 3, 4. Cl 7 modified, Note added.
- Rev 07: 20/12/14 - Cl 1, 4, 5, 7, 8 and note modified.
- Rev 08: 23/07/2016 - Cl 2, 3, 4, 7 and 8 modified.
- Rev 09: 23/09/2016 - Cl 2, 3 modified to include IS 2062 E350 Gr A; Cl 4(c), 8(e) modified to bring clarity regarding grain size.
- Rev 10: 01/08/2017 - Cl 2, 3 modified to include IS 2062 E250 Gr B0, C
- Rev 11: 15/11/2017 - Cl 3.a.i – thickness and heat treatment condition modified
Cl 3.a.ii – class removed
Cl 4.c – grain size specified for all grades of Normalised rolled condition

1. MATERIAL SPECIFICATION: {Latest on date of Purchase Order (PO)}

- PLATES : ASTM A 36, IS 2062, BS EN 10025-2, BSEN 10025-3 [applicable grades as per drawing]
- Additional Requirement** : **As listed below (Supplementary to Specification)**
- Size and Qty. : As per Purchase order (PO)

2. CHEMICAL COMPOSITION AND PROCESS:

- ASTM A36 shall be procured in killed condition.
- IS 2062 E250 A, B0, BR, E350 A, B0, BR up to 20mm thickness shall be in killed or semi killed condition. IS 2062 E250 A, B0, BR, E350 A, B0, BR 20mm and above thickness shall be in killed condition.
- IS 2062 E250 C and IS 2062 E350 C shall be in killed condition.
- BS EN 10025-2 S355 J2+N shall be in killed condition with Carbon: 0.20% max (in Product Analysis).
- IS 2062 E410 BR / BS EN 10025-3 S420N shall be in killed condition. Vanadium: 0.15% max; Carbon: 0.20% max (in Product Analysis).

3. HEAT TREATMENT:

- ASTM A36, IS 2062 E250 A, B0, BR, C and E350 A, B0, BR, C:
 - Thickness up to and including **20mm** in rolled condition. Thickness more than **20mm** shall be Normalized/ Normalized rolled.
- IS 2062 E410 BR/ BSEN 10025-3-S420N, BS EN 10025-2 Gr S355 J2 +N: Normalized condition.

4. MECHANICAL TESTS:

- All mandatory tests shall be as per the applicable materials specifications.
- Additionally, microstructure analysis for Grain size shall be carried out for Normalizing rolling plates above **20mm** thickness at the same frequency as the mechanical tests. Grain size: ≥ 5 at 100X magnification.

5. NON DESTRUCTIVE TEST:

Ultrasonic Test: For plates of thickness > 40 mm as per ASTM A435 or ASTM A578 (Acceptance Level A or B).

6. FINISH AND REPAIR:

Plates shall be free from all mill scales, edge crack and other injurious defects. Repairs by fusion welding is prohibited. Mechanical removal of defects permitted subject to meeting minimum thickness and smooth surface.

7. MARKING (by mill):

- Specification (IS specification designation for IS 2062 grades), 2. Grade, 3. Melt number, 4. Maker's emblem/Code/ Identification and 5. Plate number. PO No (BHEL PO only), buyer name & Weight to be painted on the product. Marking shall be done as indicated below:
 - All plates of thickness > 10mm: 1 to 4 shall be maintained by hard stamping and 5 by paint stenciling.

	BHEL – Tiruchirappalli - 620014, India. Quality Assurance Department TECHNICAL DELIVERY CONDITIONS	DOC No: TDC:0:301 Rev: 11 Effective Date: 15/11/2017 Page: 2 of 2
Product: STRUCTURAL QUALITY PLATES FOR BOILER STRUCTURES		

- ii. All plates of thickness $\leq 10\text{mm}$ (except made from strip in coil form): 1, 2, 3, 4 shall be maintained by paint stenciling.
- iii. Plates of thickness $\leq 10\text{mm}$ (produced from strip in coil form): 1, 2, 3, 4 by paint stenciling on the top of each pile/ packet.

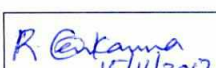
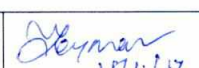
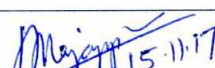
8. INSPECTION AND CERTIFICATION:

Products must be inspected & tested at supplier's works. Test certificate, in English, shall accompany each product with the following details:

- a) Purchase Order No. (BHEL PO only), TDC No. & its Revision No., Test certificate No. & Date, Size, Plate number and Quantity-Melt wise.
- b) Material Specification and Grade with applicable year of code, Heat Number, Steel making process, de-oxidation process.
- c) Chemistry, Carbon equivalent and Heat Treatment details.
- d) Mechanical test values, including impact values (where applicable), shall be reported.
- e) Grain size at 100X magnification for Normalizing rolling Plates of thickness above 20mm (Refer Cl. 4(b) of this TDC).
- f) NDE results with reference and acceptance standards.

Note:

1. This TDC shall be read along with SIP:NP:14 (latest revision), for POs placed by Outsourcing department on OVM/ACF vendors.

 15/11/2017	 15/11/17	 15/11/17	 15/11/17	 15/11/17	 15/11/17
Venkanna Rupani	M. Jeyaram	S Krishna Kumar	R Rajappan	N Vanangamudi	Amit Roy
Sr.Engineer/QA	DM/QA	DGM/QC	SDGM/MM	SDGM/OS	AGM/QA&BE
Prepared By	Reviewed By				Approved By