Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)
Piping Centre, 80, G. N. Chetty Road, CHENNAI – 600 017
Phone : 91 (044) 28161965, e-mail: poongkodi@bhel.in

REF: ENQ NO: 4012000008 DT: 07.11.2020

Sub: Request For Quotation (RFQ) for supply of Electric Fusion Welded Pipes ASME SA 671 Grade CC70 CL32 for NPCIL Kudankulam Project - Reg.

Ref: Enquiry No: 4012000008 dt 06.11.2020

BHEL/Piping Centre invites RFQ's for supply Electric Fusion Welded Pipes confirming to ASME SA 671 Grade CC70 CL32 for NPCIL Kudankulam Project. The offers should be submitted in the E-procurement portal. The offer will be opened at **14.30 hrs** on the **due date 23.11.2020**. Late tenders are liable to be rejected. Please find the following documents enclosed for you to submit offer in two parts

1. Tender documents – Pre-Qualification Requirement (PQR) with all supporting documents and Techno Commercial Terms and Conditions (T&C) **in e-procurement portal**
2. Annexure-A to Techno Commercial Terms and Conditions & Annexure-1 for Work order details.
3. Tech. delivery condition for pipes TDG:7430:001 Rev:01 dt 05.11.2020.
4. Pipe Drawings -3-N0-468-00035-R04 & 3-N0-468-00036-R04.
5. Edge Preparation Drawing 3-N0-468-00001-R01.
6. End cover Drawing 3-N0-468-00030-R00.
7. Reference Quality Plan 7430:QP:RM:01 dt 23.05.2020.
8. Unpriced bid Format
9. Integrity Pact
10. Make in India Format
11. Price bid Format **in e-procurement portal**

Please indicate enquiry no and date and due date in all correspondences. This is only a request for quotation and not an order.

All supporting documents called for in PQR and T&C should be enclosed in Part-I of the tender.

Ms. Poongkodi.V
Deputy Manager / Purchase
BHEL, Piping Centre
80, G.N.Road, T.Nagar, Chennai –600 017
Phone – 9488451450. Email: poongkodi@bhel.in

For any clarifications on the Enquiry you may also contact
Ms. Priya Balaji, DGM / Purchase, Phone – 044-28161244, Email: pb@bhel.in
Ms. R Prabha, AGM / MM, Phone – 044-28161902, Email: rprabha@bhel.in

ENQ REF: 4012000008 DT 06.11.2020 **PQR CRITERIA**

Sl No.	PQR Description	Documents to be submitted	Bidder Compliance with supporting documents (YES / NO)	Remarks
1	Bidder shall be manufacturer OR authorized agent of the manufacturer. However, agents submitting bid on behalf of original manufacturer/supplier shall not represent more than one manufacturer/supplier in the same Tender. In case bids are received from both – the manufacturer/supplier and the agent, the Bid by the agent shall be ignored. Bids from traders, distributors and stockists are not acceptable and will not be considered for evaluation.	1. Company Catalogue 2. Any Proof Certificate for being a manufacturer or Fabricator viz Certificate of Registration / Factory license etc 3. In case of Agent, authorization letter from Manufacturer / Fabricator (Bids from traders/stockists are not acceptable.)		
2	Bidder shall have basic in-house manufacturing facilities including testing facilities for NDE and Hydro to get the bid qualified for further evaluation. Bidder shall have necessary facilities for handling, space for storage & coating and Requisite personnel to fabricate the tendered items as per the Drawing and Technical requirements.	1. List of manufacturing facilities - details of rolling & welding, testing & handling facilities, storage area available and list of personnel at registered factory address.		
3	Bidder shall have necessary heat treatment facility, in-house or outsourced.	1. Valid furnace calibration certificate. 2. Please indicate if HT is done in-house or outsourced.		
4	Bidder should have experience in manufacturing Electric Fusion welded pipes through automatic welding process of any specification. Min size of execution shall be OD 400mm or more. Supply experience being furnished shall not be prior to 4 years from the date of the Enquiry.	1. Copy of PO, MTC's & invoice / Supply completion certificate copies containing Customer Name, Size & Quantity, Month and year of their supplies shall be furnished.		
5	**Financial details of the Bidder** Firm should have made a turnover of at least Rs. 3 Cr for anyone of last 3 audited Financial Years (or from date of incorporation whichever is less).	Bidders shall submit audited Company Financial statements (Balance Sheet and P&L statement) for the past 3 years meeting financial turnover criteria.		

**** Supporting documents to be enclosed without fail.**

Note –

1. Bids fulfilling the above criteria will be considered for further techno-commercial evaluation.
2. For Startups and MSE bidders, Annual Financial Turnover criteria (Sl. No: 5 above) is relaxed to Rs. 1.5 Cr and prior experience criteria (Sl No 4) is relaxed to last 5 years from the date of Enquiry. Relaxation is subject to bidder meeting technical and quality criteria of the PQR.
3. Vendors proposing to avail relaxation as above need to submit necessary document proof along with Pre-Qualification bid.

a) Startups - Certificate of Recognition by Department of Industrial Policy & Promotion

b) MSE - UAM No. (printed copy of UAM No) for MSE registration along with CA certificate

4. Bidder to submit all supporting documents in English language. If documents submitted by bidder are in a language other than English, a self-attested English translated document shall also be submitted.

ENQ REF: 4012000008 DT 06.11.2020 **TECHNO-COMMERCIAL TERMS AND CONDITIONS**

Sl No	BHEL requirement	Bidder's Response
A	Quotation no	
B	Quotation date	
C	Mill name (if applicable)	
D	Applicable GST % shall be indicated	
1	**SCOPE OF SUPPLY** i) Manufacture and supply of items as mentioned in unpriced bid for Electric Fusion Welded Pipes ASME SA671 GR CC70 CL32 meeting BHEL drawing & technical requirements for NPCIL Kudankulam Project. The pipes are intended for Nuclear Piping that comes under ASME Sec III Sub-section NC. ii) To be delivered at NPCIL Kudankulam project site (or) Ward 9, BHEL Trichy Stores - As per UN-PRICED BID annexed.	
2	**LIST OF ITEMS** As per UN-PRICED BID annexed. For all these items, PQR qualified and Techno-Commercially acceptable bidders will be taken up for Customer approval. Such bidders will be required to submit Customer questionnaire upon intimation from BHEL. Price bids of only such PQR qualified, Techno-Commercially acceptable and Customer approved bidders will be considered for price bid opening.	
3	**TECHNICAL REQUIREMENTS** i) Electric Fusion Welded Pipes ASME SA671 GR CC70 CL32 shall be manufactured as per BHEL Technical Delivery Condition TDG:7430:001 Rev:01 dt 05.11.2020. ii) Pipe shall be supplied as per Drawings 3-N0-468-00035-R04 & 3-N0-468-00036-R04. Specific length of pipes shall be as specfied in Annexure-1. Tolerance as per drawing, on length of each pipe is for manufacturing purpose only and Payment shall be made as per length mentioned in Annexure-1 only. iii) WPS/PQR to be submitted. iv) Bidder shall submit detailed process flow chart from raw material stage including manufacturing of pipe, Edge Preparation & testing. v) Bidder shall submit valid ISO 9001:2015 certificate or Quality Management system Certificate. vi) Deviation if any shall be clearly indicated in a separate sheet. UNDISCLOSED DEVIATIONS ARE NOT ACCEPTABLE.	
4	**QUALITY PLAN & TESTING REQUIREMENTS** After placement of Purchase order vendor shall submit Manufacturing quality plan for approval by BHEL & NPCIL immediately. The MQP shall be prepared and submitted in accordance to the Reference Quality Plan **QP Ref 7430:QP:RM:01 dt 23.05.2020** enclosed with the enquiry. NDE & testing procedure shall be submitted for review by BHEL & Customer on award of Contract.	
5	**INSPECTION** Inspection shall be as per Cl. 12 of TDG:7430:001 Rev:01 dt 05.11.2020. **BHEL/ BHEL approved third Party inspection agency and Customer** Inspection call shall be raised by the Bidder as per the inspection stages indicated in approved Quality Plan. Inspection call shall be given at least 7 days in advance to the required inspection for planning. Inspection call letter should contain all details pertaining to type of inspection, manufacturing schedule, inspection dates etc. Bidder to ensure the readiness of material on the date of visit by inspector.	

Sl No	BHEL requirement	Bidder's Response
6	**Two-part bid :** **Part-I TECHNICAL - CUM – COMMERCIAL PART (Un-priced):-** This part of the bid shall contain following technical and commercial points only (except price portion) 1. Bidder to submit duly filled '**Pre-Qualification Criteria**' & **'Techno-Commercial terms and conditions'** along with all supporting documents in e-procurement portal. 2. Duly filled, signed and stamped TDG:7430:001 Rev:01 dt 05.11.2020, Reference Quality Plan QP Ref 7430:QP:RM:01 dt 23.05.2020, Pipe Drawings and all supporting documents. 3. Copy of Unpriced bid (without price) clearly indicating quoted/not quoted against each line item. 4. Integrity Pact - To be filled and submitted with Part-1 without fail. The above documents form part of this tender document and bidder shall ensure that they have received all these along with tender and confirm.	
7	**PART II PRICE PART:** **Bidders to note that Ordering will be made on Item-wise L1 ONLY.** The unit price shall be quoted on FOR NPCIL Kudankulam project site basis (or) Ward 9, BHEL Trichy Stores basis - As per UN-PRICED BID annexed. (BASE PRICE and other components strictly as per price template attached) The price shall include all testing, inspection, packing and freight & insurance charges. PLEASE DO NOT QUOTE ON EX–WORKS BASIS. Price quoted by the Supplier item wise with break up as per the price bid template shall be furnished. a.Base Price shall include Cost of Raw Material plus conversion cost per Meter of pipe including edge preparation, end cover, dessicant material, Testing and Packing. b.External Painting shall be quoted as per the respective painting (Cl 10.1 or Cl 10.2 of BHEL TDG:7430:001 Rev:01 dt 05.11.2020), as indicated in the price format. c. Percentage of applicable GST shall be clearly indicated. d. Freight and transit insurance charges to be quoted extra. Ordering shall be on Free on Road, FOR – NPCIL Kudankulam project site basis (or) Ward 9, BHEL Trichy Stores basis - As per UN-PRICED BID annexed.	
8	Quantity mentioned against each item may vary. In such case, bidder shall be informed about the variation in quantity and subsequently bidder shall be asked to submit price impact if any in % of quoted price before opening of price bid.	
9	Tender shall be processed by **E-Procurement Mode** For E – Procurement , Please click this link to take you to the procurement site - **https://bhel.abcprocure.com,** you will be required to log in with user code and password allotted to you. (contact Abcprocure @ https://bhel.abcprocure.com/EPROC/contactus.	

Sl No	BHEL requirement	Bidder's Response
10	**EVALUATION OF BIDS** **Price Bids of the PQR and Techno-commercially qualified bidders (Customer approved) will only be opened. Finalization of prices shall be by sealed envelope bid opening only.** L-1 shall be arrived **item-wise** based on the total net cash outflow to BHEL, i.e, based on the total net cash outflow to BHEL (inclusive of all cost elements for the entire scope, taxes and duties). In the eventuality of any tie item / items during price evaluation, LI vendor will be ascertained as follows: 1. Snap bids will be invited from the applicable vendors and the same will be opened in presence of Finance and vendor representatives (if available). Revised CS will be prepared and LI will be arrived accordingly. 2. In case tie remains even after the snap bid, paper lot / lottery system will be resorted to for ascertaining the LI vendor.	
11	**TERMS OF DELIVERY** Dispatch of items shall be made to FOR NPCIL Kudankulam project site (or) Ward 9, BHEL Trichy Stores, based on Delivery instructions by BHEL-PC.	
12	**DELIVERY SCHEDULE:-** Supplies are to be completed **4 months from the date of LOI/ PO.** As delivery will affect our project requirements, kindly quote for the above delivery period only. Bidder has to strictly confirm to the delivery terms. **Bids not complying with the delivery period are liable for rejection.**	
13	**LD CLAUSE: -** If the bidder fails to deliver the item within the period specified in the contract the purchaser shall deduct Liquidated Damages, a sum equivalent to 0.5% of the price for each week of delay up to a maximum of 10% of the price of delayed/undelivered portion. For the purpose of LD, LR date will be taken as the delivery date.	
14	**LD LOADING:** If deviating with respect to BHEL's standard LD clause, loading will be applicable to the extent to which the bidder has not agreed (for eg. if bidder agrees for maximum LD of 6%, then the remaining portion ie. 4% shall be loaded on the quoted rate during price evaluating of the offer).	
15	**VALIDITY OF THE OFFER:** The quotation shall be valid at least for a period of 90 days from the date of technical bid opening / 60 days from the date of price bid opening. Offer with lesser validity may not be considered.	
16	**GUARANTEE:** Bidders shall guarantee the supplies for a period of 24 months from the date of dispatch of materials or 18 months from the date of their commissioning whichever is earlier. To this effect a Guarantee certificate should be sent along with the dispatch documents in the event an order is placed on you. Material shall be guaranteed against manufacturing defects or faulty workmanship for a period of 24 months from the date of receipt of pipes with coating at project site. Any defect noticed during this period shall be repaired/replaced free of cost, to the satisfaction of BHEL and the End User. No deviation in this regard shall be accepted.	

Sl No	BHEL requirement	Bidder's Response
17	**CANCELLATION / TERMINATION OF CONTRACT, DEFAULT / BREACH OF CONTRACT AND RISK PURCHASE:** As per BHEL's Standard Cost and Risk clause indicated in Annexure A enclosed. By submitting the bid, vendor explicitly accepts to BHEL's requirement. **Bids deviating from BHEL's standard condition will be rejected.**	
18	**TERMS OF PAYMENT:** No advance payment shall be made by BHEL. 100% NEFT payment after 60 days of receipt & acceptance of materials. **However preference in payment shall be given to MSE bidders as per MSMED Act 2006.** **No other payment term will be accepted. If bidders propose for any other payment term other than indicated above, such bids are liable for rejection.** Payment documents will be as per Annexure-A enclosed.	
19	**QUALITY DOCUMENTS** Three Original test certificates typed in English shall be sent to Purchase / Piping centre BHEL Chennai immediately after the shipment / despatch of Items along with the inspection report. The test certificate furnished shall contain the details as per point 12.4 of BHEL TDG:7430:001 Rev:01 dt 05.11.2020. All the quality documents are to be submitted in soft copy (in CD format) apart from the hard copy.	
20	**PURCHASE PREFERENCE FOR MAKE IN INDIA** If Make in India preference is applicable as per Annexure A to NIT, declaration format as per NIT shall be submitted. In the event of non-submission of declaration, purchase preference will not be extended to bidders. Considering operational difficulties in splitting the quantity, Enq Sl.Nos. 20, 30, 50, 60, 80, 100 & 110 are considered non-divisibile and Enq Sl.Nos 10, 40, 70, & 90 are considered divisible.	
21	**PURCHASE PREFERENCE FOR MSE SUPPLIERS** If MSE preference is applicable as per Annexure A to NIT, supporting documents as per NIT shall be submitted. In the event of non-submission of supporting documents, purchase preference will not be extended to bidders. Considering operational difficulties in splitting the quantity, Enq Sl.Nos. 20, 30, 50, 60, 80, 100 & 110 are considered non-divisibile and Enq Sl.Nos 10, 40, 70, & 90 are considered divisible.	
22	**SUSPENSION OF BUSINESS DEALING:** In order to protect the commercial interests of BHEL, it becomes necessary to take action against suppliers / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business / money / reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price etc. Suspension of Business Dealings could be in the form of "Hold" or "Banning" a supplier / contractor or a bidder or an applicant for registration as a registered supplier. For this purpose, the abridged version of guidelines hoisted at website http://www.bhel.com/vender_registration/vender.php (Suspension of business dealings with suppliers / contractors dt 22.07.2016) is being followed across all BHEL units. Vendors shall keep themselves aware of these guidelines before submission of their bid.	
23	The Bidder along with its associate/ collaborators/ sub-contractors/ sub-Bidders/ consultants/ service providers 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.	

Sl No	BHEL requirement	Bidder's Response
24	Bidders who are not registered with BHEL PC Chennai, will have to submit the Supplier Registration Form (SRF) after successful completion of techno-commercial evaluation and after getting intimation from BHEL for the same. The Supplier Registration Form (SRF) duly filled will be assessed for manufacturing capability, quality systems being followed, organizational soundness and financial worthiness. The Online Application may be submitted through following link https://supplier.bhel.in.	
25	**INTEGRITY PACT** – Format being sent. Your bid will be considered only after signing and submitting the Integrity pact. a) IP is a tool to ensure that activities and transactions between the Company and its Bidders / Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL Sl No IEM Email 1 Shri Arun Chandra Verma, IPS (Retd.) acverma1@gmail.com 2 Shri Virendra Bahadur Singh, IPS (Retd.), vbsinghips@gmail.com b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with Techno-Commercial bid (Part-I, in case of two / three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification. c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only. Note: No routine correspondence shall be addressed to the IEM (phone / post / email) regarding the clarifications, time extensions or any other administrative queries, etc on the tender issued. All such clarification / issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below. Ms. Poongkodi.V Ms. Priya Balaji Deputy Manager / Purchase DGM / Purchase Phone – 9488451450 Phone – 9445006517 Email: poongkodi@bhel.in Email: pb@bhel.in	
26	**GENERAL: -** i. The PO copy with all details will be given to successful bidders in soft mode also. ii. Acknowledgement for receipt of PO shall be sent within one week from the date of receipt. iii. BHEL reserves the right to cancel this tender without assigning any reasons what so ever. iv. Deviation taken after placement of order will not be accepted (Both technical as well as on delivery) v. Suppliers to analyze in detail, at the time of submission of offer with reference to our “delivery” requirement of item and confirm compliance. vi. BHEL reserves the right to negotiate or re-float the tender opened, if L1 price / other details are not acceptable to them. vii. Any other terms or conditions mentioned in your offer other than the above mentioned formats will not be evaluated and will be considered null & void. Hence your offer shall contain ONLY the above mentioned formats. viii. Bids not accepting to above conditions will be liable for rejection. ix. For verification of data submitted towards evaluation of bidder's capability, BHEL may decide to visit the bidder(s) works. Any fact found deviating from submitted data shall make the bidder liable to be disqualified. x. In the event of newly approved vendor becoming the successful bidder, manufacturing process of first lot of Pipes from raw material stage to end product with coating shall be witnessed by BHEL inspection. Balance PO quantity can be taken up for manufacture only after inspection and clearance of the first lot by BHEL / BHEL TPIA. BHEL reserves the right to cancel the order if the trial quantity is not meeting our requirement.	

Annexure A - Terms & Conditions

1. CANCELLATION / TERMINATION OF CONTRACT, DEFAULT / BREACH OF CONTRACT AND RISK PURCHASE

In case of abnormal delays (beyond the maximum late delivery period as per Penalty clause) in supplies / defective supplies or non-fulfilment of any other terms and conditions given in Purchase Order as enumerated subsequently in this clause, Purchaser shall be entitled to cancel the Order / Contract either in whole or portion thereof without compensation to Seller / Contractor and if the Purchaser so desires, may procure upon such terms and in such manner as deemed appropriate, stores not so delivered or others of similar description where stores exactly complying with particulars are not, in the opinion of the Purchaser, which shall be final, readily procurable, at the risk and cost of the Seller / Contractor and the Seller / Contractor shall be liable to the Purchaser for any excess costs provided that the Seller / Contractor shall continue the performance of the Order / Contract to the extent not cancelled under the provisions of this clause. The Seller / Contractor shall on no account be entitled to any gain on such repurchases. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer.

Risk & Cost Clause, in line with Conditions of Contract may be invoked in any of the following cases:

i. Contractor / supplier's poor progress of the work vis-à-vis execution timeline as stipulated in the Contract, backlog attributable to contractor/ supplier including unexecuted portion of work / supply does not appear to be executable within balance available period (#) considering its performance of execution.
ii. Withdrawal from or abandonment of the work by contractor before completion of the work as per contract.
iii. Non completion of work / Non-supply by the Contractor / supplier within scheduled completion / delivery period as per Contract or as extended from time to time, for the reasons attributable to the contractor / supplier.
iv. Termination of Contract on account of any other reason (s) attributable to Contractor / Supplier.
v. Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.
vi. Non-compliance to any contractual condition or any other default attributable to Contractor / Supplier.

Risk and Cost amount against Balance Work:

Risk & Cost Amount= **[(A-B) + (A x H/100)]**

Where,

A= Value of Balance scope of Work / Supply (*) as per rates of new contract

B= Value of Balance scope of Work / Supply (*) as per rates of old contract being paid to the contractor / supplier at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H= Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

***(Balance scope of work / supply)**

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work / Supply for calculating risk & cost amount.

Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute / extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute / extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

Note: In case portion of work is being withdrawn, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work / supply' for calculating Risk & Cost amount.

LD against delay in executed work / supply in case of Termination of Contract in case of Risk and Cost Option

LD against delay in executed work / supply shall be calculated in line with LD clause of the contract for the delay attributable to contractor / supplier. For limiting maximum LD value, contract value shall be taken as Executed Value of work / supply.

Method for calculation of "LD against delay in executed work / supply" is given below.

i. Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor / supplier= T1
ii. Let the value of executed work / supply till the time of termination of contract= X
iii. Let the Total Executable Value of work / supply for which inputs / fronts were made available to contractor / supplier and were planned for execution till termination of contract= Y
iv. Delay in executed work / supply attributable to contractor/supplier i.e. T2= (1- X/Y) * T1
v. LD shall be calculated in line with LD clause of the Contract for the delay attributable to contractor / supplier taking "X" as Contract Value and "T2" as delay attributable to contractor / supplier.

Note: In case portion of work / supply is withdrawn, no LD shall be applicable for portion of work / supply withdrawn.

Recovery from Supplier

Recoveries from contractor / supplier on whom risk & cost has been invoked shall be made from the following:

i. Dues available in the form of Bills payable to contractor / supplier, SD, BG's against the same contract.
ii. Dues payable to contractor / supplier against other contracts in the same Region / Unit / Division of BHEL.
iii. Dues payable to contractor / supplier against other contracts in the different Region / Unit / division of BHEL.

Legal Options for recovery of dues payable by the supplier / contractor.

2. PURCHASE PREFERENCE FOR MAKE IN INDIA

"For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non-local Supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before finalization of contract /

PO / WO against this NIT". In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and / or local content in respect of this procurement, same shall be applicable.

'Local content' means the amount of value added in l11dia which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the Item procured (excluding net domestic indirect taxes) minus the value of imported. Content in the item (including all customs duties) as a proportion of the total value, in percent.

'Class-I local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%, as defined under this Order.

'Class-Il local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this Order.

'Non - Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%, as defined under this Order.

In case item is divisible, following procedure will be followed-

- Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.
- If L1 bid is not a 'Class-I local supplier', 50% of the order quantity' shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to local supplier's quoted price falling within the margin for purchase preference (L1 + 20%), and contract for that quantity shall be awarded to 'Class-l local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some Quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.

In case item is not divisible, following procedure will be followed-

- Among all qualified bids, the lowest bid will be termed as L1. If L1 is from a 'Class-I local supplier', the contract will be awarded to L1.
- If L1 is not from a local supplier, the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to 'Class-I local supplier's' quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.
- In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, then the contract may be awarded to the L1 bidder.
- Any item wherein the net quantity is less than 2 (i.e. if qty is 1 No.) will be considered as not divisible for the purpose of operating purchase preference.

Annexure A - Terms & Conditions

"Class-II local supplier" will not get purchase Preference in any procurement.

Document certifying local content and penal action in case of wrong declaration by suppliers:

- The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall be required to provide self-certification on their letter head certified by the authorized signatory of the bidder that the item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made.
- In cases of procurement for a value in excess of Rs. 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
- False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
- A supplier who has been debarred by any procuring entity for violation of this order shall not be eligible for preference for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, the debarment takes effect prospectively from the date of uploading on the website(s) of The Department of Expenditure, GOI in such a manner that ongoing procurements are not disrupted.
- The onus of submission of appropriately certified documents lies with the bidder and BHEL shall not have any liability to verify the contents and will not be responsible for the same. However, in case BHEL has any reason to doubt the authenticity of the Local Content, BHEL reserves the right to obtain the complete back up calculations before award of contract failing which the bid shall be rejected.

3. PURCHASE PREFERENCE FOR MSE SUPPLIERS

- Purchase preference for local MSE's quoting in the tender will be 25%.
- Within the 25% reservation for local MSE's, 3% reservation will be applicable for women owned MSE's and 6.25% reservation will be applicable for MSE's owned by SC / ST.
- Payment for MSE Indigenous bidders will be as per MSMED Act, 2006

Methodology for Preference:

In case the item is divisible, the following methodology shall be followed:

- Among all qualified bids, the lowest bid will be termed as L1. If L1 is from MSE bidder, the contract for full quantity will be awarded to L1.
- If L1 bid is not from MSE bidder, 75% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the MSE bidders, will be invited to match the L1 price for the remaining 25% quantity subject to the MSE bidder's quoted price falling within the margin of purchase preference (L1 + 15%), and contract for that quantity shall be awarded to such MSE bidder subject to matching the L1 price. In case such lowest eligible MSE bidder fails to match the L1 price or accepts less than the offered quantity, the next higher MSE bidder within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded

accordingly. In case some quantity is still left uncovered on MSE bidders, then such balance quantity may also be ordered on the L1 bidder.

In case the item is non-divisible, the following methodology shall be followed:

- Among all qualified bids, the lowest bid will be termed as L1. If L1 is from MSE bidder, the contract for full quantity will be awarded to L1.
- If L1 bid is not from MSE bidder, the lowest bidder among the MSE bidders whose quoted price falls within the margin of purchase preference (L1 + 15%), will be invited to match the L1 price for 100% quantity and contract for 100% quantity shall be awarded to such MSE bidder subject to matching the L1 price. In case such lowest eligible MSE bidder fails to match the L1 price or accepts less than the offered quantity, the next higher MSE bidder within the margin of purchase preference shall be invited to match the L1 price for 100% quantity and so on, and contract shall be awarded accordingly. If all the MSE bidders within L1+15% band do not accept the non-MSE L1 price, 100% quantity will be ordered on the L1 bidder.

Document to be submitted as proof of MSE

MSE suppliers can avail the intended benefits only if they submit along with the offer, attested / notarized copies (by a Gazetted officer) of anyone of the following documents along with copy of UAM certificate-

- Valid EM II certificate having deemed validity (5 years from the date of issue of acknowledgement in EM II).
- Valid NSIC certificate.
- Copy of CA certificate (in BHEL's standard format) applicable for the relevant financial year (latest audited).

Date to be reckoned for determining the deemed validity will be the date of bid opening (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 benefit shall be applicable for the Enquiry if any deficiency in the above required documents are not submitted before price bid opening. However, credentials of all MSE suppliers will be verified before considering the intended benefits for MSE suppliers at the time of tender evaluation.

Note: - In case of L1 vendor is having any one of MSE OR Make in India preference, but vendor is falling in MSE/MII price range with both MSE and Make in India preference then quantity will be counter-offered to the vendor who is giving both the preferences.

4. PAYMENT DOCUMENTS

Payment shall be made against submission of the following documents-

a) Commercial Invoice in triplicate
b) Delivery Challan in triplicate whichever is applicable
c) Guarantee certificate
d) Lorry Way Bill (Original + Two copies)
e) Site Ack. Lorry Way Bill (Original + Two Copies) – GR in case of BHEL Trichy Stores
f) Quality documents (as per approved QP/PO).

If one original certificate / LR is applicable for more than one invoice quantity / invoice, Xerox copy is acceptable with original correlation details on the Xerox copy with attestation by suppliers Quality in charge.

Annexure A - Terms & Conditions

GST compliance-

1. Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration No (GSTIN) which should be clearly mentioned in the offer. If the dealer is exempted from GST registration, a declaration with due supporting documents need to be furnished for considering the offer. Dealers under composition scheme should declare that he is a composition dealer supported by the screen shot taken from GST portal. The dealer has to submit necessary documents if there is any change in status under GST.

2. Supplier shall mention their GSTIN in all their invoices (incl. credit Notes, Debit Notes) 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 SAP invoice no, commercial invoice no etc., then the Invoice No. which is linked/uploaded in GSTN network shall be clearly indicated), Billed to party (with GSTIN) & Shipped to party details, item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, Place of Supply etc.

3. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).

4. Invoices will be processed only upon completion of statutory requirement and further subject to following:
    a. Vendor declaring such invoice in Form GSTR1
    b. Receipt of Goods or Services and Tax invoice by BHEL

5. As the continuous uploading of tax invoices in GSTN portal (in GSTR1) is available for all (i.e. both Small & Large) tax payers under proposed new GST Return System, all invoices raised on BHEL may be uploaded immediately in GST portal on despatch of material /rendering of services. The supplier shall ensure availability of Invoice in GST portal before submission of invoice to BHEL. Invoices will be admitted by BHEL only if the invoices are available in GSTN portal (in BHEL's GSTR2).

6. In case of discrepancy in the data uploaded by the 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 or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims, within the calendar month informed by BHEL.

7. In cases where invoice details have been uploaded by the vendor but failed to remit the GST amount to GST Department (Form PMT-08 or Form GST RET-01 to be submitted) within stipulated time, then GST paid on the invoices pertaining to the month for which GST return not filed by the vendor will be recovered from the vendor along with the applicable interest (currently 24% p.a) and all subsequent bills of the vendor will not be processed till filing of the GST return by the vendor.

8. In case GST credit is denied to BHEL due to non-receipt or delayed receipt of goods and/ or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount claimed in the invoice shall be disallowed to the vendor.

9. Where any GST liability arising on BHEL under Reverse Charge (RCM), the vendor has to submit the invoices to BHEL well within the timeline prescribed in GST Law, to enable BHEL to discharge the GST liability. If there is a delay in submission of invoice by the vendor resulting in delayed

payment of GST by BHEL along with Interest, then such Interest payable or paid shall be recovered from the vendor.

10. Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contracts. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Tax Invoice will be issued by BHEL indicating the respective supply invoice number.

11. GST TDS will be deducted as per Section 51 of CGST Act 2017 and in line with Notification 50/2018 – Central Tax dated 13.09.2018. GST TDS certificate which will be generated in GST portal subsequent to vendor accepting the TDS deduction in the GST portal, will be issued to the vendor.

Annexure-1

SEA Water Piping - NPCIL Kudankulam

WORK ORDER DETAIL	MATERIAL CODE	MATERIAL DESCRIPTION	DRAWING_NO	SPECIFIC LENGTH IN METERS	Weight in MT
P74301N0468013	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
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Annexure-1

SEA Water Piping - NPCIL Kudankulam

WORK ORDER DETAIL	MATERIAL CODE	MATERIAL DESCRIPTION	DRAWING_NO	SPECIFIC LENGTH IN METERS	Weight in MT
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P74301N0468181	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194

Annexure-1

SEA Water Piping - NPCIL Kudankulam

WORK ORDER DETAIL	MATERIAL CODE	MATERIAL DESCRIPTION	DRAWING_NO	SPECIFIC LENGTH IN METERS	Weight in MT
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P74301N0468185	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468186	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468187	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
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P74301N0468203	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468206	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468207	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468208	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468209	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468210	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468211	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468212	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468213	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468214	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468215	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468216	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468217	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468218	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468219	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468220	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468221	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468222	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468223	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468224	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468227	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468228	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468242	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468243	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468244	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468245	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468246	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468248	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468249	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468250	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468251	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468252	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468253	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468254	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468255	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468256	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468257	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468258	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468259	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468260	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468261	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468262	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468263	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194

Annexure-1

SEA Water Piping - NPCIL Kudankulam

WORK ORDER DETAIL	MATERIAL CODE	MATERIAL DESCRIPTION	DRAWING_NO	SPECIFIC LENGTH IN METERS	Weight in MT
P74301N0468264	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468265	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468266	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468270	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468280	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468281	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468282	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468283	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468284	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468287	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468288	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468289	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468290	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468291	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468292	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468293	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468294	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468295	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468296	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468297	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468298	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468299	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468300	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468301	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468302	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468303	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468304	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468305	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468308	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468013	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468014	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468015	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468016	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468017	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468020	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468021	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468022	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468023	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468024	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468025	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468026	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468027	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468028	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468029	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468030	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468031	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468032	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468033	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468036	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468037	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468039	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468041	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468042	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468049	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468050	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194

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SEA Water Piping - NPCIL Kudankulam

WORK ORDER DETAIL	MATERIAL CODE	MATERIAL DESCRIPTION	DRAWING_NO	SPECIFIC LENGTH IN METERS	Weight in MT
P74311N0468051	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468052	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468053	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468054	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468057	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468058	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468059	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468060	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468061	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468062	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468063	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468064	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468065	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468066	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468067	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468068	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468069	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468070	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468073	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468074	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468079	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468086	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468087	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468088	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468089	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468090	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468091	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468095	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468096	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468097	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468098	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468099	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468100	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468101	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468102	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468103	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468104	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468105	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468106	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468107	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468111	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468112	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468114	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468115	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468116	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468128	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468129	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468130	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468131	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468132	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468135	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468136	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468137	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468138	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468139	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194

Annexure-1

SEA Water Piping - NPCIL Kudankulam

WORK ORDER DETAIL	MATERIAL CODE	MATERIAL DESCRIPTION	DRAWING_NO	SPECIFIC LENGTH IN METERS	Weight in MT
P74311N0468140	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468141	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468142	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468143	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468144	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468145	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468146	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468147	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468148	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468151	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468152	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468157	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468162	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468163	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468164	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468165	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468166	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468169	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468170	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468171	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468172	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468173	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468174	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468175	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468176	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468177	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468178	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468179	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468181	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468182	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468183	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468184	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468185	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468186	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468187	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468188	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468190	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468199	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468200	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468201	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468202	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468203	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468206	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468207	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468208	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468209	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468210	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468211	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468212	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468213	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468214	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468215	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468216	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468217	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468218	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194

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WORK ORDER DETAIL	MATERIAL CODE	MATERIAL DESCRIPTION	DRAWING_NO	SPECIFIC LENGTH IN METERS	Weight in MT
P74311N0468219	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468220	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468221	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468222	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468223	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468224	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468227	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468228	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468242	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468243	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468244	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468245	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468246	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468248	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468249	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468250	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468251	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468252	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468253	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468254	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468255	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468256	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468257	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468258	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468259	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468260	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468261	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468262	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468263	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468264	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468265	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468266	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468270	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468280	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468281	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468282	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468283	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468284	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468287	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468288	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468289	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468290	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468291	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468292	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468293	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468294	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468295	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468296	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468297	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468298	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468299	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468300	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468301	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468302	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468303	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194

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WORK ORDER DETAIL	MATERIAL CODE	MATERIAL DESCRIPTION	DRAWING_NO	SPECIFIC LENGTH IN METERS	Weight in MT
P74311N0468304	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468305	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74311N0468308	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	12.000	2.194
P74301N0468003	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.994	2.193
P74301N0468194	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.994	2.193
P74301N0468234	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.994	2.193
P74311N0468003	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.994	2.193
P74311N0468194	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.994	2.193
P74311N0468234	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.994	2.193
P74301N0468038	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.992	2.193
P74301N0468078	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.992	2.193
P74301N0468153	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.992	2.193
P74301N0468156	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.992	2.193
P74311N0468038	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.992	2.193
P74311N0468078	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.992	2.193
P74311N0468153	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.992	2.193
P74311N0468156	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.992	2.193
P74301N0468225	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.858	2.168
P74311N0468225	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.858	2.168
P74301N0468012	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.000	2.012
P74301N0468094	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.000	2.012
P74301N0468127	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.000	2.012
P74311N0468012	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.000	2.012
P74311N0468094	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.000	2.012
P74311N0468127	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	11.000	2.012
P74301N0468075	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	10.992	2.010
P74301N0468110	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	10.992	2.010
P74311N0468075	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	10.992	2.010
P74311N0468110	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	10.992	2.010
P74301N0468047	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	10.600	1.938
P74311N0468047	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	10.600	1.938
P74301N0468619	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	6.000	1.097
P74311N0468619	159387262001	PIPE OD-630X12-SA671GRCC70CL32	3-N0-468-00035	6.000	1.097
P74301N0468387	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468427	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468430	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468466	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468467	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468468	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468469	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468470	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468500	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468501	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468502	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468503	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468504	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468506	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468534	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468535	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468536	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468570	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468571	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468572	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468387	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468427	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839

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WORK ORDER DETAIL	MATERIAL CODE	MATERIAL DESCRIPTION	DRAWING_NO	SPECIFIC LENGTH IN METERS	Weight in MT
P74311N0468430	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468466	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468467	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468468	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468469	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468470	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468500	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468501	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468502	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468503	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468504	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468506	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468534	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468535	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468536	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468570	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468571	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74311N0468572	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	12.000	1.839
P74301N0468533	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	11.770	1.804
P74301N0468569	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	11.770	1.804
P74311N0468533	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	11.770	1.804
P74311N0468569	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	11.770	1.804
P74301N0468390	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	11.000	1.686
P74301N0468472	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	11.000	1.686
P74311N0468390	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	11.000	1.686
P74311N0468472	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	11.000	1.686
P74301N0468575	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	10.623	1.628
P74311N0468575	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	10.623	1.628
P74301N0468617	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	6.000	0.920
P74311N0468617	159387282001	PIPE OD-530X12-SA671GRCC70CL32	3-N0-468-00036	6.000	0.920

Records of Revn:00 : 21/03/2020 :- Fresh Issue.

Records of Revn:01 : 05/11/2020 :- Cl.No.1.1, 3.7, 4.3, 5.2 b), 9.2, 10.4 & 11.0 – Revised.
Cl.No.10.5, 12.2, 12.3 & 12.6 – Added.

1.0 SCOPE

1.1 This Technical Delivery Conditions specify the requirements for Seamless pipes **ASME SA 106 Gr B** and Electric Fusion Welded Pipes **ASME SA 671 Grade CC70 Class 32.**

1.2 The pipes are intended for Nuclear Piping coming under ASME Sec III Sub Section NC.

2.0 RAW MATERIAL

Steel shall be made by one or more of the following processes: Open hearth, electric furnace or basic-oxygen. Steel made by Acid Bessemer process shall not be acceptable.

Ladle Analysis: Ladle Analysis shall be done for all materials.

Plates used for SA 671 Gr CC70 Class 32 shall meet the mandatory requirements as per ASME SA 516 Grade 70. Impact test requirement for Plate shall be as per Clause 4.3 b).

100% UT for plates (all thickness) as per SA 578. Acceptance Standard: Level – B.

3.0 MANUFACTURING

3.1 The pipe shall be of longitudinally welded as indicated in the P.O. All longitudinal welded pipes shall employ only automatic welding. All welds shall be fusion welds made in accordance with qualified procedures as per ASME Sec IX.

3.2 In one random length, one welded circumferential seam of same quality as longitudinal weld is permitted. Circumferential weld seams shall be minimum 2500mm apart from each other and from ends.

3.3 The longitudinal seams of the two portions shall be staggered by 90 degree.

3.4 Fusion welded pipes of diameter less than 900NB shall not have more than one longitudinal joint.

3.5 The ends shall be edge prepared as indicated in the P.O.

3.6 All pipes shall be completely finished and free from surface, sub surface defects such as pits, cracks, weld spatters & laminations etc..

3.7 NPCIL approved brand of electrodes and NPCIL approved chemicals for Liquid Penetrant Examination shall be used. (Refer Annexure 1 & 2)

4.0 HEAT TREATMENT, CHEMICAL & MECHANICAL TESTS

4.1 Heat Treatment : As per respective Material specification.

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Prepared By	**Reviewed By**		**Approved By**

4.2 Product Analysis :

a) Seamless Pipes : Product Analysis as per S1 – Supplementary requirement of SA 106.

b) Welded Pipes : Product Analysis of Plate&Weld as per S4 – Supplementary requirement of SA 671.

4.3 Mechanical Test :

a) Seamless Pipes : Mechanical tests as per applicable material specification.

b) Welded Pipes : Mechanical tests as per applicable material specification.

Impact test shall be done as below :

Raw material SA 516 Gr 70 plate used for fabrication of plate formed pipes is exempted from Impact test according to ASME Sec III NC 2019, Clause NC 2311(a)-8. However, Impact test shall be done on the weld metal and welding procedure qualification as per ASME Sec III NF-2300. Impact Test Temperature = –3ºC , Minimum Average value : 27J. Minimum Individual value : 20J.

5.0 HYDRO TEST / NON DESTRUCTIVE TEST

5.1 Seamless Pipes : Each pipe shall be 100% Ultrasonically tested as per ASTM E 213.

5.2 Welded Pipes :

a) Each pipe shall be Hydro tested as per ASTM A 530

b) The full length of each butt weld (Longitudinal & Circumferential seam) shall be Radiography / Radioscopy examined in accordance with and meets the requirements of ASME BPVC Sec III Div.1 NC - 5320.

Incase of Radioscopy method, same shall be done after taking approval of the procedure (including the storage format of records) from NPCIL. The Records of radioscopy for regeneration of image for review shall be stored and retrievable for at least 5 years.

c) 5% of the butt welds shall be UT tested in accordance with and meets the requirements of ASME BPVC Sec III Div.1 NC - 5330.

d) 100% of the butt welds shall be dye penetrant tested - after root and final pass, in accordance with and meets the requirements of ASME BPVC Sec III Div.1 NC - 5350.

6.0 DIMENSION & TOLERANCES

6.1 The tolerance limits shall be as per respective Drawing as mentioned in P.O.

6.2 Length and Quantity Tolerance as per P.O.

7.0 REPAIR

Seamless Pipes : Repair by welding is prohibited. The pipe shall meet the dimensional tolerance (Clause 6.0 above) after any mechanical repair as permitted in the standard.

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Prepared By	**Reviewed By**		**Approved By**

Welded Pipes : Number of weld repairs at the same spot shall be restricted to maximum two by NPCIL approved Repair procedure. All repaired welds shall be re-examined and re-tested as per the requirements of original weld and shall meet the requirements of the same.

8.0 WORKMANSHIP

The Inside & Outside surfaces of the pipes shall be free from any imperfections and defects like laminations, saps, seams, folds, cracks, pitting etc., Weld spatter, Cleats, Sharp corners, projections and indentations shall be removed. Localised imperfections, if any, may be removed by grinding or skin machining only, ensuring the wall thickness, inside and outside diameter to provide workmanship like finish. Local depressions or ground spots are not acceptable. Loose scales shall be removed by blast cleaning in both inside and outside surface.

Internal weld profile of Welded pipes shall be ground smooth to make it suitable for application of Coating (done at Site). Weld finish requirements shall be as per Engineering Drawing.

9.0 MARKING

9.1 The pipes despatched to **BHEL Stores** shall be **paint stencilled & hard punched** with the following details.

1) PO Number 2) Supplier's emblem/code 3) Size & Specification 4) Heat number
5) Pipe number 6) Inspector's seal

9.2 The pipes despatched to Project site as per Enquiry/P.O., the following details (furnished in the P.O. or separately) shall be **paint stencilled & hard punched** on both ends of the pipes in addition to the above.

- Work order No
- DU No
- KKS Code as per Engineering drawing.
- Pipe Length (in mtr)
- Weight per Pipe length

9.3 ***Any other Marking & Identification which is not mentioned above Sl. No: 9.1 & 9.2 shall be as per Enquiry/P.O.***

9.4 Paint or Ink for marking shall not contain any harmful metal or metallic salts such as zinc, lead or copper which cause corrosive attack on heating.

10.0 PRESERVATION

10.1 The pipes if despatched to BHEL Stores shall be coated with resin type translucent rust preventive on the outside unless otherwise specified in the P.O. Thick black coating which camouflages the surface of the pipes is not permitted.

10.2 The pipes if despatched to project site directly shall be painted as following :
Surface preparation : Blast cleaning to Sa 2 1/2
Primer : One coat of Inorganic Zinc Silicate primer ; DFT = 70 microns min.
Total DFT = 70 microns min.

10.3 Desiccant material suitable for use in combination with steel (moisture absorbent) shall be placed inside closed pipe to enable corrosion prevention for atleast 2 years.

10.4 End Caps are to be provided on both ends of the pipes as per the drawing indicated in the enquiry / Purchase Order. Bevelled pipe ends shall be closed with Steel bevel protector, which shall be suitably tack welded to Pipes to ensure secure fit.

10.5 Painting and Packing procedure shall be submitted for BHEL and Customer - NPCIL review & approval.

11.0 QUALITY PLAN

Before start of manufacturing, vendor shall submit Manufacturing Quality Plan (MQP) for BHEL and Customer - NPCIL approval. The MQP shall be prepared and submitted in accordance to the Reference Quality Plan enclosed along with Enquiry.

12.0 INSPECTION & CERTIFICATION

12.1 Inspection shall be by BHEL and Customer – NPCIL as per the Approved Quality Plan.

12.2 ASME Certification mark on the pipes is not mandatory.

12.3 Supplier's Quality System shall meet the requirements of NCA-3800. However, Quality System Certificate (QSC) for material organization from ASME Society (one of the requirement of NCA-3800) is not required.

12.4 Three original test certificates typed in English shall be submitted along with the inspection report. The test certificate shall furnish the following details.

a. BHEL P.O Number & Amendment Number(if any)
b. BHEL P.O. Serial Number
c. Test Certificate number
d. Specification, grade with year of code, size, quantity
e. Steel & Pipe making process
f. Heat number of plate (or pipe number with traceability to heat number)
g. Chemical composition including incidental elements on Ladle & Product analysis
h. Heat Treatment details with actual temperature and soaking time
i. Mechanical properties including Impact test reports etc.
j. Hydrostatic test, Detailed NDT reports with reference norm, acceptance standard and Test results as applicable.
k. Dimensional report
l. Painting details

12.5 Mill test certificate for Raw material (Billet/Bloom/Plate) as per Clause 2.0.

12.6 Videography/Digital Photography carried out during manufacture, examination/ testing, loading/ unloading, shipment etc shall be made available to Purchaser as and when demanded. Same shall be transferred on CD and submitted to BHEL on completion.

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J. Nanthini Dy.Mgr/QA&BE	R. Prabha AGM/MM	C. Vaithianathan AGM/Engg,DTG &MS 05/11/2020	K V Ramani AGM/Q&BE 05/11/2020
Prepared By	**Reviewed By**		**Approved By**

ANNEXURE - I

न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

NUCLEAR POWER CORPORATION OF INDIA LTD.

(A Government of India Enterprise)

गुणवत्ता आश्वासन निदेशालय

Directorate of Quality Assurance

नाभिकीय ऊर्जा भवन, अणुशक्तिनगर, मुंबई-400 094

Nabhikiya Urja Bhavan, Anushaktinagar, Mumbai - 400 094.

Corporate Identification No. U40104MH1987GOI149458

आर.के. गुप्ता R.K. Gupta
अधिशासी निदेशक (गु.आ.) Executive Director (QA)

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सं.No. एनपीसीआईएलNPCIL/02500/क्यूएडी QAD/एमM/2019/161 दिनांक Date: December 17, 2019

विषय : वेल्डिंग कंज्यूमेबल्स के अनुमोदित ब्रांड की सूची।

Sub: List of approved brands of welding consumables

17/12/2019 की स्थिति में एनपीसीआईएल कार्यों के उपयोग हेतु वेल्डिंग कंज्यूमेबल्स के अनुमोदित ब्रांडों की सूची इसके साथ संलग्न है:

The lists of approved brands of welding consumables for use on NPCIL jobs as on 17/12/2019 are enclosed herewith.

1) अनुमोदित कार्बन स्टील एवं निम्न एलॉय स्टील वेल्डिंग इलेक्ट्रोड्स की सूची (2 शीट)
   List of Approved Carbon Steel & Low Alloy Steel Welding Electrodes (2 Sheets).
2) अनुमोदित स्टेनलेस स्टील एवं अन्य निकिल एलॉय इलेक्ट्रोड्स की सूची (2 शीट)
   List of Approved Stainless Steel & other Ni Alloy Electrodes (2 Sheets).
3) वायर के अनुमोदित ब्रांड एवं वायर फ्लक्स संयोजन की सूची (1 शीट)
   List of Approved Brands of Wire and Wire Flux Combination (1 Sheet).

वेल्डिंग कंज्यूमेबल्स (क्यूएडी/प्रापण/वेल्डिंग कंज्यूमेबल्स/002 संशो.: 2) के अनुमोदन के लिए प्रक्रिया में एवं एएसएमई खंड II भाग C के अद्यतन संस्करण में निर्धारित आवश्यकताओं के अनुसार अनुमोदन प्रदान किया जाता है। तथापि, विशेष मामलों में जहाँ कहीं भी बैच क्वालिफिकेशन अपेक्षित होगा, अलग से निष्पादित किया जाएगा।

The approvals are granted in conformance to the requirements stipulated in Procedure for approval of Welding Consumables (QAD/Proc/Welding Consumables/002 Rev:2) and latest edition of ASME Section II Part C. However, batch qualification wherever called for in specific cases, will have to be carried out separately.

राकेश कुमार गुप्ता
17.12.19

(आर.के. गुप्ता R.K. Gupta)
अधिशासी निदेशक (गु.आ.) Executive Director (QA)

न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
NUCLEAR POWER CORPORATION OF INDIA LTD.
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गुणवत्ता आश्वासन निदेशालय
Directorate of Quality Assurance
नाभिकीय ऊर्जा भवन, अणुशक्तिनगर, मुंबई-400 094
Nabhikiya Urja Bhavan, Anushaktinagar, Mumbai - 400 094.

1) LIST OF APPROVED CARBON STEEL & LOW ALLOY STEEL WELDING ELECTRODES

(2 pages)

As on 17-12-2019

Sr. No.	Manufacturers	Brand name	AWS No.	Valid up to
1.	ADOR WELDING LTD., SILVASSA	SUPABASE X PLUS	E7018	FEB2024
2.	ADOR WELDING LTD., SILVASSA	MOLYTEN	E7018-A1	APR2020
3.	ADOR WELDING LTD., SILVASSA	CHROMOTEN	E8018 B2	APR2020
4.	ADOR WELDING LTD., SILVASSA	CHROMOTEN-C	E9018 B3	APR2020
5.	ADOR WELDING LTD., SILVASSA	TENALLOY Z PLUS	E7018-1	JUN2022
6.	D&H INDIA LTD., INDORE	SUPER -CR-1	E8018 B2	DEC2020
7.	D&H INDIA LTD., INDORE	SUPER -CR-2	E9018 B3	DEC2020
8.	D&H INDIA LTD., INDORE	SUPER –LH (SPL)	E7018-1 (DCEP Only)	FEB2021
9.	D&H INDIA LTD., INDORE	STANDARD	E6013	FEB2021
10.	D&H INDIA LTD., INDORE	SUPER LH	E7018 (DCEP Only)	FEB2021
11.	D&H SECHERON, INDORE	MEDIO	E6013	JUN2020
12.	D&H SECHERON, INDORE	EXOBEL	E6013	JUN2020
13.	D&H SECHERON, INDORE	SUPERTHERME	E7018	JUN2020
14.	D&H SECHERON, INDORE	MOLYTHERME	E7018-A1	JUN2022
15.	D&H SECHERON, INDORE	SUPERTHERME(SPL)	E7018-1	NOV2023
16.	HONAVAR ELECTRODES, THANE	REGULAR S	E6013	JAN2020
17.	HONAVAR ELECTRODES, THANE	ULTIMATE - 18	E7018	JAN2020
18.	HONAVAR ELECTRODES, THANE	ULTIMATE – 18 SPL	E7018-1	JAN2020
19.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -13R	E6013	SEP2020
20.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -18	E7018	SEP2020
21.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -18 PLUS	E7018-1	SEP2020
22.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -1 CR	E8018-B2	JUN2024
23.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -2 CR	E9018-B3	JUN2024
24.	RAJ KESARI ELECTRODES, UDAIPUR	SUPERLET 18	E7018	AUG2022
25.	RAJ KESARI ELECTRODES, UDAIPUR	SUPERLET 18 (SPL.)	E7018-1	AUG2022
26.	RAJ KESARI ELECTRODES, UDAIPUR	RAJCORD 13S	E6013	AUG2022
27.	RAJRATNA ELECTRODES, AHEMEDABAD	RATNA 7018 SPL.	E7018-1	MAR2020
28.	RAJRATNA ELECTRODES, AHEMEDABAD	RATNA 7018	E7018	NOV2023
29.	ROYAL ARC ELECTRODES LTD, VASAI	ROYAL THERM SPL.	E7018-1	SEP2021
30.	ROYAL ARC ELECTRODES LTD, VASAI	ROYAL CHROM 1	E8018-B2	FEB2023
31.	ROYAL ARC ELECTRODES LTD, VASAI	ROYAL CHROM 2	E9018-B3	FEB2023
32.	ROYAL ARC ELECTRODES LTD, VASAI	ROYAL THERM MOLY	E7018-A1	MAR2023
33.	ROYAL ARC ELECTRODES LTD, VASAI	ROYAL THERM	E7018	DEC2023
34.	ROYAL ARC ELECTRODES LTD, VASAI	ROYAL S	E6013	DEC2023
35.	SUPERON SCHWEISSTECHNIK INDIA LTD. DELHI	GARANT MO	E7018-A1	SEP2020
36.	SUPERON SCHWEISSTECHNIK INDIA LTD., DELHI	SUPER CROMO 1B	E8018-B2	DEC2020

Sr. No.	Manufacturers	Brand name	AWS No.	Valid up to
37.	SUPERON SCHWEISSTECHNIK INDIA LTD., DELHI	SUPER CROMO 2B	E9018-B3	DEC2020
38.	VIJEY ELECTRODES & WIRES PVT. LTD., CHENNAI	VJ 6013 X	E6013	SEP2020
39.	VIJEY ELECTRODES & WIRES PVT. LTD., CHENNAI	VJ 7018	E7018	SEP2020
40.	VIJEY ELECTRODES & WIRES PVT. LTD., CHENNAI	VJ 7018 - 1	E7018-1	SEP2020
41.	WELD FAST ELECTRODES, NAGPUR	WELDFAST LH 18	E-7018	MAR2020
42.	WELD FAST ELECTRODES, NAGPUR	WELDFAST LH-18-1	E-7018-1	MAR2020
43.	WELD FAST ELECTRODES, NAGPUR	WELDFAST CROMO 0500	E7018-A1	FEB2023
44.	WELD FAST ELECTRODES, NAGPUR	WELDFAST CROMO 1500	E8018-B2	FEB2023
45.	WELD FAST ELECTRODES, NAGPUR	WELDFAST CROMO 2251	E9018-B3	FEB2023

The approvals are granted in conformance to the requirements stipulated in latest edition of ASME Section II Part C. However, batch qualification wherever called for in specific cases, will have to be carried out separately.

17/12/19

(Anoop Singh)
ACE & Head QA (M-6)

Through: Shri A.K. Singh, AD (QA- Opns. & Group-1) 17/12/19 17/12/19

Executive Director (QA) 17.12.'19

न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड
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2) LIST OF APPROVED STAINLESS STEEL & OTHER NI ALLOY ELECTRODES

(2 Pages)

As on 17-12-2019

Sr. No.	MANUFACTURERS	BRAND NAME	AWS No.	VALID UPTO
1.	ADOR WELDING LTD., SILVASSA	BETANOX-DL	E 309L-16	SEP2020
2.	ADOR WELDING LTD., SILVASSA	SUPERINOX-2C	E 316L-16	SEP2020
3.	ADOR WELDING LTD., SILVASSA	SUPERINOX-1C	E 308L-16	SEP2020
4.	D&H INDIA LTD., INDORE	SV-308L	E 308L-15	DEC2022
5.	D&H INDIA LTD., INDORE	SV-309L	E 309L-15	DEC2022
6.	D&H INDIA LTD., INDORE	CROMALLOY-B	E 308L-16	DEC2022
7.	D&H INDIA LTD., INDORE	CROMALLOY 309L	E 309L-16	DEC2020
8.	ADOR FONTECH, BENGALURU	LH 511	E Ni Cu7	OCT2020
9.	ADOR FONTECH, BENGALURU	LH 521	E Ni Cr Fe 3	OCT2020
10.	D&H SECHERON, INDORE	CRONITHERME 25/12	E 309-16	JUN2022
11.	D&H SECHERON, INDORE	RUTOX-D	E 316L-16	JUN2022
12.	D&H SECHERON, INDORE	BATOX-B	E 308L-15	JUN2020
13.	D&H SECHERON, INDORE	RUTOX-B	E 308L-16	JUN2020
14.	D&H SECHERON, INDORE	D&H 309L	E 309L-16	NOV2023
15.	D&H SECHERON, INDORE	D&H 1250	E NiCu-7	JAN2021
16.	D&H SECHERON, INDORE	D&H 1212NS	E NiCr Fe-3	JAN2021
17.	D&H SECHERON, INDORE	RUTOX-A	E 308-16	NOV2023
18.	D&H SECHERON, INDORE	RUTOX-A St	E 347-16	NOV2023
19.	D&H SECHERON, INDORE	RUTOX-Mo	E 316-16	NOV2023
20.	HONAVAR ELECTRODES, THANE	SILVER SHINE 308L-15	E 308L-15	FEB2024
21.	HONAVAR ELECTRODES, THANE	SILVER SHINE 316L	E 316L-16	FEB2024
22.	RAJRATNA ELECTRODES, AHEMEDABAD	RATNA 308L	E 308L-16	MAR2020
23.	RAJRATNA ELECTRODES, AHEMEDABAD	RATNA 316 L	E 316L-16	MAR2020
24.	MAILAM INDIA LTD., PUDUCHERRY	MAILEX-A	E 308-16	JUN2024
25.	MAILAM INDIA LTD., PUDUCHERRY	MAILEX-AL	E 308L-16	JUN2024
26.	MAILAM INDIA LTD., PUDUCHERRY	MAILEX-AL-15	E 308L-15	JUN2024
27.	MAILAM INDIA LTD., PUDUCHERRY	MAILEX-25/12	E 309-16	JUN2024
28.	MAILAM INDIA LTD., PUDUCHERRY	MAILEX-25/12-L	E 309L-16	JUN2024
29.	MAILAM INDIA LTD., PUDUCHERRY	MAILEX-25/12-Mo	E 309 Mo-16	JUN2024
30.	MAILAM INDIA LTD., PUDUCHERRY	MAILEX Mo	E 316-16	JUN2024
31.	MAILAM INDIA LTD., PUDUCHERRY	MAILEX MoL	E 316L-16	JUN2024
32.	ROYAL ARC ELECTRODES, VASAI,	ROYAL 1C	E 308L-16	OCT2024
33.	ROYAL ARC ELECTRODES, VASAI,	ROYAL 2C	E 316L-16	OCT2024

Sr. No.	MANUFACTURERS	BRAND NAME	AWS No.	VALID UPTO
34.	ROYAL ARC ELECTRODES, VASAI,	ROYAL-D2L	E 309L-16	OCT2024
35.	WELD FAST ELECTRODES, NAGPUR	WELDFAST 308L	E 308L-16	JAN2021
36.	WELD FAST ELECTRODES, NAGPUR	WELDFAST 316L	E 316L-16	JAN2021
37.	WELD FAST ELECTRODES, NAGPUR	WELDFAST 309L	E 309L-16	JAN2021
38.	WELD FAST ELECTRODES, NAGPUR	WELDFAST 309MoL	E 309LMo-16	JAN2021

The approvals are granted in conformance to the requirements stipulated in latest edition of ASME Section II Part C. However, batch qualification wherever called for in specific cases, will have to be carried out separately.

17/12/19

(Anoop Singh)
ACE & Head QA (M-6)

Through: Shri A.K. Singh, AD (QA- Opns. & Group-1) 17/12/19 17/12/19

Executive Director (QA) 17.12.19

न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
NUCLEAR POWER CORPORATION OF INDIA LTD.
(A Government of India Enterprise)
गुणवत्ता आश्वासन निदेशालय
Directorate of Quality Assurance
नाभिकीय ऊर्जा भवन, अणुशक्तिनगर, मुंबई-400 094
Nabhikiya Urja Bhavan, Anushaktinagar, Mumbai - 400 094.

3) LIST OF APPROVED BRANDS OF WIRE AND WIRE FLUX COMBINATION

(1 Page)

As on 17-12-2019

Sr. No.	MANUFACTURERS	BRAND NAME	AWS No.	VALID UPTO
1.	ADOR FONTECH, BENGALURU	TIG 120	ER 308L	OCT2024
2.	ADOR FONTECH, BENGALURU	TIG 121	ER 316L	OCT2024
3.	ADOR FONTECH, BENGALURU	TIG 123	ER 309L	OCT2024
4.	ADOR FONTECH, BENGALURU	TIG 120S	ER 347	OCT2024
5.	ADOR FONTECH, BENGALURU	TIG 521	ER NiCr3	OCT2024
6.	ADOR WELDING LTD., SILVASSA	TIGFIL 70S-2	ER 70S-2	FEB2022
7.	ADOR WELDING LTD., SILVASSA	TIGINOX-308L	ER 308L	SEP2020
8.	ADOR WELDING LTD., SILVASSA	TIGINOX-309L	ER309L	SEP2020
9.	ADOR WELDING LTD., SILVASSA	AUTOMIG 70-S6	ER 70S-6	DEC2023
10.	ADOR WELDING LTD., SILVASSA	AUTOMELT-B71 AUTOMELT-EH 14 WIRE	F7A2-EH14	FEB2024
11.	D&H INDIA LTD., INDORE	SUPER TIG 308L	ER 308L	DEC2020
12.	D&H INDIA LTD., INDORE	SUPER TIG 309L	ER 309L	DEC2020
13.	D&H SECHERON, INDORE	FILLER WIRE FW 308L	ER 308L	FEB2021
14.	D&H SECHERON, INDORE	FILLER WIRE FW 309L	ER 309L	FEB2021
15.	D&H SECHERON, INDORE	F 70 S2	ER 70S-2	JUN2022
16.	RAJRATNA ELECTRODES, AHEMEDABAD	RAAJTIG ER 308L	ER 308L	MAR2020
17.	RAJRATNA ELECTRODES, AHEMEDABAD	RAAJTIG ER 316L	ER 316L	MAR2020
18.	VENUS WIRES, KHOPOLI	VENUS 308L	ER 308L	SEP2021
19.	VENUS WIRES, KHOPOLI	VENUS 316L	ER 309L	SEP2021
20.	VENUS WIRES, KHOPOLI	VENUS 309L	ER 316L	SEP2021
21.	VENUS WIRES, KHOPOLI	VENUS 347	ER 347	SEP2021
22.	WELD FAST ELECTRODES, NAGPUR	TIG FAST-3	ER 70S-2	JAN2021
23.	WELD FAST ELECTRODES, NAGPUR	MIG FAST-1	ER 70S-6	JAN2021

The approvals are granted in conformance to the requirements stipulated in latest edition of ASME Section II Part C. However, batch qualification wherever called for in specific cases, will have to be carried out separately.

17/12/19

(Anoop Singh)
ACE & Head QA (M-6)

Through: Shri A.K. Singh, AD (QA- Opns. & Group-1) 17/12/19 17/12/19

Executive Director (QA) 17.12.19

ANNEXURE -2

न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

NUCLEAR POWER CORPORATION OF INDIA LTD.

(A Government of India Enterprise)

गुणवत्ता आश्वासन निदेशालय

Directorate of Quality Assurance

नाभिकीय ऊर्जा भवन, अणुशक्तिनगर, मुंबई-400 094

Nabhikiya Urja Bhavan, Anushaktinagar, Mumbai - 400 094.

Corporate Identification No. U40104MH1987GOI149458

आर.के. गुप्ता R.K. Gupta
अधिशासी निदेशक (गु.आ.) Executive Director (QA)

Phone: 022- 25995030/25558487
Fax.No.: 022-25565354
e-mail: rk_gupta@npcil.co.in

सं. No. एनपीसीआईएलNPCIL/02500/क्यूएडीQAD/ईडीED(क्यूएQA)/एमM/2019/160 December 17, 2019

विषय : वेधी पदार्थों के अनुमोदित ब्रांड की सूची।

Sub: List of approved brands of penetrant materials

17-12-2019 की स्थिति में एनपीसीआईएल के उपयोग हेतु वेधी पदार्थों के अनुमोदित ब्रांड की सूची इसके साथ संलग्न है। यह अनुमोदन हमारी प्रक्रिया संख्या QAD/NDT-PROC-PT-05 (तरल वेधी परीक्षण के लिए उपयोग में आने वाले रसायन परिवार के अनुमोदन हेतु प्रक्रिया) कें अुनसार आवश्यकताओं के अनुरूप प्रदान किया जाता है।

The list of approved brands of penetrant materials for use on NPCIL jobs as on 17-12-2019 is enclosed herewith. The approvals are granted in conformance to the requirements as per our procedure no. QAD/NDT-PROC-PT-05 (Procedure for approval of Family of Chemicals used for Liquid Penetrant Examination).

(आर.के. गुप्ता R. K. Gupta)
अधिशासी निदेशक (गु.आ.) Executive Director (QA)

न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
NUCLEAR POWER CORPORATION OF INDIA LTD.
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Nabhikiya Urja Bhavan, Anushaktinagar, Mumbai - 400 094.

LIST OF APPROVED PENETRANT TESTING MATERIAL

(As on 17-12-2019)

Sr. No.	Manufacturers	Brand name	Description	Valid up to
1.	DYEGLO PVT. LTD, PUNE	RP-81	Red Coloured Solvent Removable Penetrant	DEC2023
2.	DYEGLO PVT. LTD, PUNE	RP-90	Red Coloured Water Washable Penetrant	DEC2023
3.	DYEGLO PVT. LTD, PUNE	CL-01	Solvent Cleaner	DEC2023
4.	DYEGLO PVT. LTD, PUNE	RD-01	Solvent Base Developer suitable for RP-81 & RP-90	DEC2023
5.	DYEGLO PVT. LTD, PUNE	FP-01	Fluorescent Solvent Removable Penetrant	DEC2023
6.	DYEGLO PVT. LTD, PUNE	WD-01	Solvent Base Developer suitable for FP-01.	DEC2023
7.	FERROCHEM NDT SYSTEM PVT. LTD. PUNE	FC-911, FC-811 FC-711	Solvent Removable (Visible)	FEB2022
8.	FERROCHEM NDT SYSTEM PVT. LTD. PUNE	FC-931, FC-811	Water Washable (Visible)	FEB2022
9.	FERROCHEM NDT SYSTEM PVT. LTD. PUNE	FC-941, FC-821	Water washable (Fluorescent)	FEB2022
10.	FERROCHEM NDT SYSTEM PVT. LTD. PUNE	FC-921, FC-821, FC-721	Solvent removable (Fluorescent)	FEB2022
11.	MAGNAFLUX ITW INDIA PVT.LTD.SECUNDERABAD	SKL-SP 1	Red Coloured Solvent Removable Penetrant	JUL2024
12.	MAGNAFLUX ITW INDIA PVT.LTD.SECUNDERABAD	SKC-1	Solvent Cleaner	JUL2024
13.	MAGNAFLUX ITW INDIA PVT.LTD.SECUNDERABAD	SKD-S2	Solvent Base Developer	JUL2024
14.	MAGNAFLUX ITW INDIA PVT.LTD.SECUNDERABAD	SKL-WP2	Red Coloured Water Washable Penetrant	JUL2024
15.	MAGNAFLUX ITW INDIA PVT.LTD.SECUNDERABAD	SKL-SP2	Red Coloured Solvent Removable Penetrant.	JUL2024
16.	MR CHEMIE INDIA PVT. LTD., HYDERABAD.	MR(R) 62	Solvent Removable Penetrant–Red	JAN2021
17.	MR CHEMIE INDIA PVT. LTD., HYDERABAD.	MR(R) 68 NF	Solvent Removable and Water Washable Penetrant–Red	JAN2021
18.	MR CHEMIE INDIA PVT. LTD., HYDERABAD.	MR(R) 67	Solvent Removable and Water Washable Penetrant–Red	JAN2021
19.	MR CHEMIE INDIA PVT. LTD., HYDERABAD.	MR(R) 672 F	Solvent Removable and Water Washable Penetrant–Fluorescent	JAN2021
20.	MR CHEMIE INDIA PVT. LTD., HYDERABAD.	MR(R) 85	Solvent Remover suitable for MR(R) 68NF, MR(R) 67, MR(R) 672F and MR(R) 62.	JAN2021
21.	MR CHEMIE INDIA PVT. LTD., HYDERABAD.	MR(R) 70	Non-Aqueous Developer suitable for MR(R) 68 NF, MR(R) 67 and MR(R) 672F	JAN2021

Sr. No.	Manufacturers	Brand name	Description	Valid up to
22.	MR CHEMIE INDIA PVT. LTD., HYDERABAD.	MR(R) 70 I	Non-Aqueous Developer suitable for MR(R) 62.	JAN2021
23.	P-MET HIGH TECH CO. PVT. LTD., VADODARA	PP-15/PP-15B	Red Coloured Solvent Removable Penetrant	SEPT2021
24.	P-MET HIGH TECH CO. PVT. LTD., VADODARA	PP-19/PP-19B	Red Coloured Water Washable Penetrant	SEPT2021
25.	P-MET HIGH TECH CO. PVT. LTD., VADODARA	PC-21/PC-21B	Solvent Cleaner	SEPT2021
26.	P-MET HIGH TECH CO. PVT. LTD., VADODARA	PD-31/PD-31B	Solvent Base Developer	SEPT2021
27.	P-MET HIGH TECH CO. PVT. LTD., VADODARA	PP-110/ PP110B	Red Coloured Solvent Removable Penetrant	SEPT2021
28.	P-MET HIGH TECH CO. PVT. LTD., VADODARA	PC 120/ PC-120B	Solvent Cleaner	SEPT2021
29.	P-MET HIGH TECH CO. PVT. LTD., VADODARA	PD 130 /PD-130B	Solvent Base Developer	SEPT2021
30.	P-MET HIGH TECH CO. PVT. LTD., VADODARA	FPS46/FPS46B	Solvent Removable Fluorescent Penetrant	SEPT2021
31.	P-MET HIGH TECH CO. PVT. LTD., VADODARA	FPS49/FPS49B	Water Washable Fluorescent Penetrant	SEPT2021
32.	PRADEEP METAL TREATMENT CHEMICALS PVT. LTD., THANE	Flaw Guide Penetrant (NP Grade)	Red Coloured Solvent Removable Penetrant.	OCT2024
33.	PRADEEP METAL TREATMENT CHEMICALS PVT. LTD., THANE	Flaw Guide Cleaner (NP Grade)	Solvent Cleaner	OCT2024
34.	PRADEEP METAL TREATMENT CHEMICALS PVT. LTD., THANE	Flaw Guide Developer (NP Grade)	Solvent Base Developer	OCT2024
35.	PRADEEP METAL TREATMENT CHEMICALS PVT. LTD., THANE	Flaw Guide Red Dye Penetrant-W	Water Washable Dye Penetrant	OCT2024

Note:-

1. Halogen content in Penetrant, Cleaner and Developer is 25ppm (max) and Sulphur content is 500ppm (max). However when using penetrant materials for Austenitic Stainless Steel, Titanium, Nickel base or other high temperature alloys, Halogen and Sulphur content shall not exceed 25ppm. Manufacture has to mention for each batch, the Sulphur and Halogen content in the label of each container for selection of Penetrant materials for the stated application.
2. Developer is to be used in Aerosol can to get the best results.

17/12/19

(Anoop Singh)
ACE & Head QA (M-6)

Through: Shri A.K. Singh, AD (QA- Opns. & Group-1) 17/12/19 17/12/19

Executive Director (QA)

17.12.19

DRAWING No 3-NO-468-00035

NOTES(CONT): –

5 IF PIPE LENGTH HAS TO BE BUILT UP USING A CS WELD JOINT, THE LONGITUDINAL WELD JOINTS SHALL BE STAGGERED BY 90°.

6 FOR MANUFACTURING AND SUPPLY REFER NPCIL APPROVED BHEL QUALITY PLAN DOCUMENT NO–7430: QP: RM: 01.

△04 7 AFTER EDGE PREPARATION OF PIPES, METALLIC END COVER AS PER DRAWING 3–NO–468–00030 SHALL BE USED TO PROTECT THE BEVELED PIPE ENDS. THE END CAP SHALL BE SUITABLY TACK WELDED TO PIPE TO ENSURE SECURE FIT.

8 THE GENERAL METHOD OF MANUFACTURE SHALL BE AS PER ASME BPVC SECTION IIA SPECIFICATION SA671.

△01 9 UNLESS OTHERWISE MENTIONED, ALL TOLERANCES SHALL BE AS PER ASME BPVC SECTION IIA SPECIFICATION SA671.

△01 ~~10 FOR WELD JOINTS, LOW AND SMOOTH PROFILE SHALL BE MAINTAINED WITH THE FOLLOWING CONDITIONS, (a) MAXIMUM WELD REINFORCEMENT THICKNESS ON INSIDE SURFACE OF PIPE IS 0.5MM. (b) MAXIMUM WELD REINFORCEMENT THICKNESS ON OUTSIDE SURFACE OF PIPE IS 3MM. THIS IS AS PER PAINTING/COATING MANUFACTURER RECOMMENDATION.~~

NOTES: –

△04 1 THE INTERNAL WELD PROFILE OF THE PIPES SHALL BE IN THE FORM OF SMOOTH CURVE WITHOUT ANY SHARP EDGE FOR APPLICATION OF COATING. WELD SPATTER, CLEATS, SHARP CORNERS, PROJECTIONS AND INDENTATIONS SHALL BE REMOVED. THE ABOVE REQUIREMENT IS AS PER THE RECOMMENDATION OF PAINTING/COATING MANUFACTURER.

2 ~~NDT REQUIREMENTS SHALL BE AS PER NPCIL APPROVED BHEL QUALITY PLAN–7430: QPC: 05.~~

3 FOR SHOP PAINTING/COATING/GRIT BLASTING DETAILS AND NDT REQUIREMENTS REFER NPCIL APPROVED BHEL QUALITY PLAN DOCUMENT NO–7430: QP: RM: 01.

4 (a) ONLY ONE LONGITUDINAL WELD JOINT IS ALLOWED.
(b) ONLY ONE CIRCUMFERENTIAL(CS) WELD JOINT IS ALLOWED AND CS WELD JOINT SHALL BE ATLEAST 2500MM FROM EITHER END.FOR LENGTH OF PIPING LESS THAN 5100MM, NO CS WELD JOINT IS PERMITTED.

VAR NO	LENGTH (L) (IN MM)	WEIGHT (IN kg)
01	12000	2194.560
02	11994	2193.463
03	11992	2193.097
04	11858	2168.591
05	11000	2011.680
06	10992	2010.217
07	10600	1938.528
08	9294	1699.687
09	8973	1640.982
10	8658	1583.375
11	7973	1458.102
12	7136	1305.032
13	7015	1282.903
14	6825	1248.156
15	6390	1168.603
16	6244	1141.903
17	5536	1012.424
18	5458	998.159
19	4588	839.053
20	4286	783.824

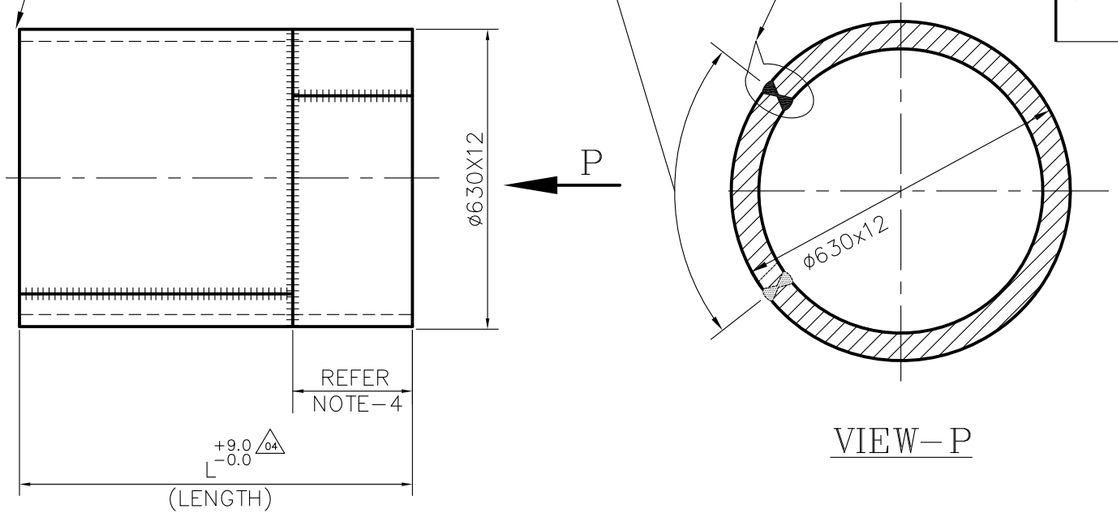
VAR NO	LENGTH (L) (IN MM)	WEIGHT (IN kg)
21	3496	639.348
22	3011	550.652
23	2100	384.048
24	1511	276.332
25	1411	258.044
26	1111	203.180
27	742	135.697
28	631	115.397
29	5242	958.657
30	7394	1352.215
31	370	67.666
32	4551	832.287
33	4353	796.077
34	1121	205.008
35	1211	221.468
36	8212	1501.811
37	7128	1303.569
38	265	48.463
39	1543	282.184
40	5226	955.731

VAR NO	LENGTH (L) (IN MM)	WEIGHT (IN kg)
41	2258	412.943
42	1944	355.519
43	6000	1097.280
44	1198	219.090
45	1798	328.818
46	8798	1608.978
47	7398	1352.946
48	1868	341.620
49	9128	1669.329
50	3034	554.858
51	3998	731.154
52	6998	1279.794
53	3758	687.263
54	2398	438.546
55	5498	1005.474
56	8098	1480.962
57	2898	529.986
58	9196	1681.764
59	644	117.775
60	1846	337.596
61	6146	1123.980

EDGE PREPARATION AS PER DRG.NO: 3–NO–468–00001 STYLE–D, d1 =606.0 (TYPICAL)

MINIMUM 90° (REFER NOTE–5)

REFER NOTE–01



VIEW–P

01	EFW PIPE OD630X12	3–NO–468–00035		159387262001	C	---	---
				SA671GRCC70CL32		–	
SL NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	A – C	UNIT WT.	
			VAR NO.	MATERIAL SPEC.		QTY.	

CUSTOMER: NUCLEAR POWER CORPORATION OF INDIA LIMITED

NAME OF PROJECT: KUDANKULAM NUCLEAR POWER PROJECT
2 X 1000MWe (UNIT–03 & 04)
△04 WO No: 400 442 DATED 05.08.2019

BHARAT HEAVY ELECTRICALS LTD., PIPING CENTRE, CHENNAI

	NAME	SIGN	DATE
DRN	B.B.GHADAI	–SD–	25.02.20
CHD	R.BHARATH	–SD–	25.02.20
APPD	C.SARAVANAN	–SD–	25.02.20

DEPT.	GRADE OF UN TOL. DIM		SCALE	WEIGHT (Kg).	REFRENCE CUSTOMER DRAWING
CODE	C/M/F				PEB PIPING–TUNNEL NO(S) 31UQZ, 32UQZ 41UQZ, 42UQZ BHEL PSSR DOCUMENT: BHEL/KKNPP–3&4/TSS/WP/012–REV NO: 01

TITLE: EFW PIPE OD630X12 SA671GRCC70CL32

DRAWING No. 3–NO–468–00035 REV 04

REV	DATE	ALTERED : B.B. GHADAI / APPROVED : R.BHARATH	ZONE	NOTE NO–10 DELETED. NOTE NOS–01,07 ALTERED. TOLERANCE ON LENGTH REVISED. REVISIONS MARKED AS △04
04	02.11.20			
03	24.06.20	ALTERED : B.B. GHADAI / APPROVED : R.BHARATH		MATERIAL CODE INCORPORATED. REVISIONS MARKED AS △03
02	24.03.20	ALTERED : R.BHARATH / APPROVED C.SARAVANAN		VARIANT NOS–58 TO 61 ADDED REVISIONS MARKED AS △02
01	16.03.20	ALTERED : R.BHARATH / APPROVED C.SARAVANAN		DRAWING REVISED TO TAKE CARE OF NPCIL COMMENTS DATED 16.03.2020 NOTE NO–02 DELETED NOTE NOS–03,09,10 ALTERED REVISIONS MARKED AS △01

SIZE A3

FIRST ANGLE PROJECTION(ALL DIMENSIONS IN MILLIMETRES)

DRAWING No: 3-NO-468-00036

NOTES(CONT):-

5 IF PIPE LENGTH HAS TO BE BUILT UP USING A CS WELD JOINT, THE LONGITUDINAL WELD JOINTS SHALL BE STAGGERED BY 90°.
6 FOR MANUFACTURING AND SUPPLY REFER NPCIL APPROVED BHEL QUALITY PLAN DOCUMENT NO-7430:QP:RM:01.
7 AFTER EDGE PREPARATION OF PIPES, METALLIC END COVER AS PER DRAWING 3-NO-468-00030 SHALL BE USED TO PROTECT THE BEVELED PIPE ENDS. (04)
THE END CAP SHALL BE SUITABLY TACK WELDED TO PIPE TO ENSURE SECURE FIT.
8 THE GENERAL METHOD OF MANUFACTURE SHALL BE AS PER ASME BPVC SECTION IIA SPECIFICATION SA671.
9 UNLESS OTHERWISE MENTIONED, ALL TOLERANCES SHALL BE AS PER ASME BPVC SECTION IIA SPECIFICATION SA671. (01)
~~10 FOR WELD JOINTS, LOW AND SMOOTH PROFILE SHALL BE MAINTAINED WITH THE FOLLOWING CONDITIONS, (01)~~
~~(a) MAXIMUM WELD REINFORCEMENT THICKNESS ON INSIDE SURFACE OF PIPE IS 0.5MM.~~
~~(b) MAXIMUM WELD REINFORCEMENT THICKNESS ON OUTSIDE SURFACE OF PIPE IS 3MM.~~
~~THIS IS AS PER PAINTING/COATING MANUFACTURER RECOMMENDATION.~~

NOTES:-

1 (04) THE INTERNAL WELD PROFILE OF THE PIPES SHALL BE IN THE FORM OF SMOOTH CURVE WITHOUT ANY SHARP EDGE FOR APPLICATION OF COATING.
WELD SPATTER, CLEATS, SHARP CORNERS, PROJECTIONS AND INDENTATIONS SHALL BE REMOVED.
THE ABOVE REQUIREMENT IS AS PER THE RECOMMENDATION OF PAINTING/COATING MANUFACTURER.
2 ~~NDT REQUIREMENTS SHALL BE AS PER NPCIL APPROVED BHEL QUALITY PLAN-7430:QPC:05.~~
3 FOR SHOP PAINTING/COATING/GRIT BLASTING DETAILS AND NDT REQUIREMENTS REFER NPCIL APPROVED BHEL QUALITY PLAN DOCUMENT NO-7430:QP:RM:01.
4 (a) ONLY ONE LONGITUDINAL WELD JOINT IS ALLOWED.
(b) ONLY ONE CIRCUMFERENTIAL(CS) WELD JOINT IS ALLOWED AND CS WELD JOINT SHALL BE ATLEAST 2500MM FROM EITHER END.FOR LENGTH OF PIPING LESS THAN 5100MM, NO CS WELD JOINT IS PERMITTED.

VAR NO	LENGTH (L) (IN MM)	WEIGHT (IN kg)
01	12000	1839.480
02	11000	1686.190
03	10623	1628.400
~~04~~	~~9538~~	~~1462.080~~
~~05~~	~~9440~~	~~1447.058~~
06	7901	1211.144
07	7726	1184.319
08	7374	1130.360
~~09~~	~~6956~~	~~1066.285~~
10	6408	982.282
11	5186	794.962
12	4462	683.980
~~13~~	~~3356~~	~~514.441~~
~~14~~	~~3306~~	~~506.777~~
15	2923	448.067
16	2812	431.051
17	2358	361.458
~~18~~	~~1356~~	~~207.861~~
19	1323	202.803
20	1153	176.743

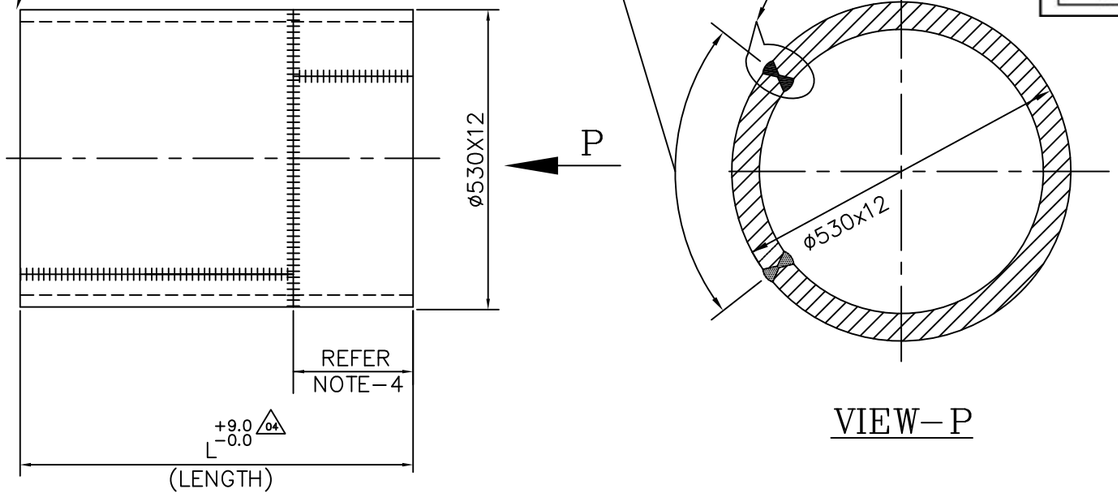
VAR NO	LENGTH (L) (IN MM)	WEIGHT (IN kg)
21	1147	175.824
22	1139	174.597
23	1083	166.013
24	1077	165.093
25	687	105.310
26	677	103.777
27	675	103.471
28	581	89.061
29	580	88.908
30	545	83.543
31	393	60.243
32	382	58.557
33	380	58.250
34	6000	919.740
35	3076	471.520
36	6726	1031.029
37	1126	172.605
38	3126	479.185
39	9210	1411.801
40	9298	1425.290

VAR NO	LENGTH (L) (IN MM)	WEIGHT (IN kg)
41	11770	1804.223
42	1069	163.867
43	2669	409.131
44	872	133.669
45	2872	440.249
46	9196	1409.655
47	1066	163.407

EDGE PREPARATION AS PER DRG.NO: 3-NO-468-00001 STYLE-D, d1 =506.0 (TYPICAL)

MINIMUM 90° (REFER NOTE-5)

(04) REFER NOTE-01



VIEW-P

SL NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATERIAL CODE	A/C	UNIT WT.
01	EFW PIPE OD530X12	3-NO-468-00036	VAR NO.	MATERIAL SPEC.	C	QTY.
				159387282001	C	----/---
				SA671GRCC70CL32		--

CUSTOMER: NUCLEAR POWER CORPORATION OF INDIA LIMITED

NAME OF PROJECT: KUDANKULAM NUCLEAR POWER PROJECT
2 X 1000MWe (UNIT-03 & 04)

BHARAT HEAVY ELECTRICALS LTD.,
PIPING CENTRE, CHENNAI

	NAME	SIGN	DATE
DRN	B.B.GHADAI	-SD-	25.02.20
CHD	R.BHARATH	-SD-	25.02.20
APPD	C.SARAVANAN	-SD-	25.02.20

DEPT.	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg).	REFRENCE CUSTOMER DRAWING
CODE	C/M/F			PEB PIPING-TUNNEL NO(S) 31UQZ, 32UQZ 41UQZ, 42UQZ BHEL PSSR DOCUMENT: BHEL/KKNPP-3&4/TSS/WP/012-REV NO:01

TITLE: EFW PIPE OD530X12 SA671GRCC70CL32

DRAWING No. 3-NO-468-00036 REV 04

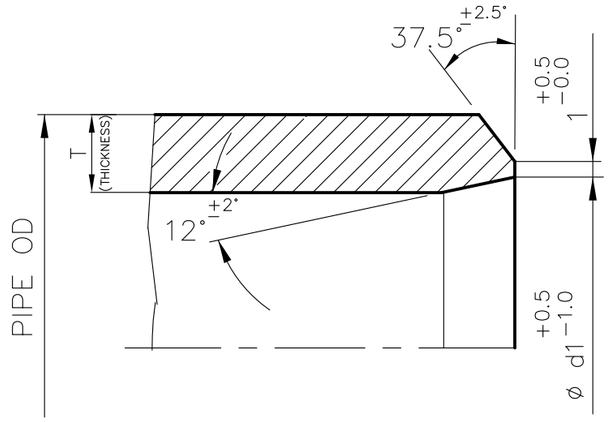
REV	DATE	ALTERED / APPROVED	ZONE	REVISIONS
04	02.11.20	ALTERED: B.B. GHADAI / APPROVED: R.BHARATH		NOTE NO-10 DELETED. NOTE NOS-01,07 ALTERED. TOLERANCE ON LENGTH REVISED. REVISIONS MARKED AS (04)
03	24.06.20	ALTERED: B.B. GHADAI / APPROVED: R.BHARATH		MATERIAL CODE INCORPORATED. REVISIONS MARKED AS (03)
02	24.03.20	ALTERED: R.BHARATH / APPROVED C.SARAVANAN		VARIANT NOS-42 TO 47 ADDED REVISIONS MARKED AS (02)
01	16.03.20	ALTERED: R.BHARATH / APPROVED C.SARAVANAN		DRAWING REVISED TO TAKE CARE OF NPCIL COMMENTS DATED 16.03.2020 NOTE NO-02 DELETED NOTE NOS-03,09,10 ALTERED REVISIONS MARKED AS (01)

SIZE A3

DRAWING No. 3-N0-468-00001

NOTES: -

01 1 THE MINIMUM THICKNESS AT WELD END SHALL NOT BE LESS THAN (0.875 X NOMINAL THICKNESS) FOR OD CONTROLLED PIPES



STYLE-D

REV	DATE	ALTERED : R.BHARATH
01	03.02.2020	APPROVED : I.BISWAS
ZONE	NOTES ADDED REVISIONS MARKED AS 01	

CUSTOMER: NUCLEAR POWER CORPORATION OF INDIA LIMITED

NAME OF PROJECT: KUDANKULAM NUCLEAR POWER PROJECT
2 X 1000MWe (UNIT-03 & 04)

BHARAT HEAVY ELECTRICALS LTD.,
PIPING CENTRE, CHENNAI

	NAME	SIGN	DATE
DRN	B.B.GHADAI		10.12.19
CHD	R.BHARAT		10.12.19
APPD	I.BISWAS		10.12.19

DEPT. / CODE	GRADE OF UN TOL. DIM	SCALE	WEIGHT (Kg).	REFRENCE CUSTOMER DRAWING
	C/M/F			PEB PIPING-TUNNEL NO(S) 31UQZ, 32UQZ 41UQZ, 42UQZ

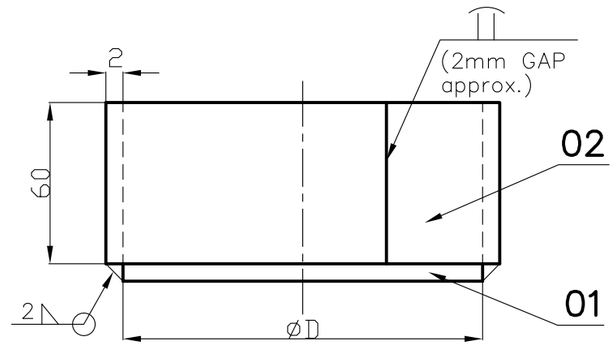
TITLE: EDGE PREPARATION DETAILS (PEB SYSTEM)

DRAWING No. 3-N0-468-00001 REV 01

SIZE A3

FIRST ANGLE PROJECTION (ALL DIMENSION IN MILLIMETRES)

DRAWING NO. 3-N0-468-00030



VAR NO	PIPE SIZE	ØD (IN mm)	WEIGHT (IN kg)	DEVELOPED LENGTH, L (IN mm)	WEIGHT (IN kg)	ASSEMBLY WEIGHT (IN kg)
03	OD406.4X12.7	414	2.113	1305	1.229	3.343
02	OD530X12	537	3.556	1691	1.593	5.149
01	OD630X12	637	5.003	2005	1.889	6.893

ITEM NO.	DESCRIPTION	DRAWING NUMBER	ITEM NO / VAR NO	MATERIAL CODE / MATERIAL SPECN	A/C	UNIT WEIGHT / QUANTITY
02	SHEET 2 x 60 x L	3-N0-468-00030		–		–
				IS1079FE330		1
01	SHEET 2xDIA-D	3-N0-468-00030		–		–
				IS1079FE330		1

CUSTOMER: NUCLEAR POWER CORPORATION OF INDIA LIMITED

NAME OF PROJECT: KUDANKULAM NUCLEAR POWER PROJECT
2 X 1000MWe (UNIT-03 & 04)

BHARAT HEAVY ELECTRICALS LTD.,
PIPING CENTRE, CHENNAI

	NAME	SIGN	DATE
DRN	B.B.GHADAI	-SD-	03.02.2020
CHD	R.BHARATH	-SD-	03.02.2020
APPD	I.BISWAS	-SD-	03.02.2020

REV	DATE	ALTERED
01		APPROVED
ZONE		

DEPT. / CODE
GRADE OF UN TOL. DIM: C/M/F
SCALE
WEIGHT (Kg).
REFRENCE CUSTOMER DRAWING: PEB PIPING-TUNNEL NO(S) 31UQZ, 32UQZ 41UQZ, 42UQZ

TITLE: METALLIC END COVER (PEB SYSTEM)

DRAWING No.: 3-N0-468-00030

REV: 00

SIZE A3

बी एच ई एल BHEL	NPCIL approved sub suppliers	**RAW MATERIAL QUALITY PLAN FOR SA106 Gr B PIPES & SA671 Gr CC70 Cl 32 PIPES** **SYSTEM : PEB (SCHEDULE NO : G.1)** **QP No:** 7430:QP:RM:01 **Rev No:** 01 **Date :** 23.05.2020	**PROJECT:** KUDANKULAM Unit 3&4 - 2x1000 Mwe **CUSTOMER :** NPCIL **MAIN-CONTRACTOR:** BHEL-PIPING CENTRE **BHEL CUSTOMER Nos:** 7430, 7431

S.No	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY				REMARKS
					M	C&N				D*	M	C	N	
1	2	3	4	5	6		7	8	9	10				11
1.0	**RAW MATERIAL:**													
1.1	Raw material - a) Billet - SA 106 GrB b) Plate - SA 516 Gr70	Steel making process, Chemical & Mech. Properties, Impact test for plate as applicable, NDE* & Heat treatment	Major	Review of Chemical & Mechanical properties	One sample per heat		Applicable Material Specification, SA 20		MTC	✓	P	H	W(R)	* 100% UT for plates of all thickness as per SA578. Acceptance : Level B
1.2	Welding Consumable	Chemical & Mech. Properties as per ASME Sec II C	Major	Verification	One sample per batch		As per applicable WPS/PQR	As per applicable WPS/PQR	TC	✓	P	H	W(R)	
2.0	**INPROCESS CONTROLS:**													
2.1	**SEAMLESS PIPE:**													
2.1.1	Non Destructive Examination - UT	Internal Soundness	Major	UT	100%		ASME E 213		UT report	✓	P	R	W(R)	
2.1.2	Product Analysis	Chemical Properties	Major	Chemical test	As per ASME Spec		As per S1 of ASME SA-106 Gr.B		Test Certificate	✓	P	R	R	
2.1.3	Heat treatment	Soaking time, ROH, ROC etc	Major	Heat treatment	100%		ASME SA-106 Gr.B	ASME SA-106 Gr.B	HT Chart	✓	P	R	R	
2.1.4	Mechanical Test	Tensile Test, bend test and other test as applicable	Major	Tension test	As per ASME Spec		ASME-SA-106 Gr.B	ASME-SA-106 Gr.B	Test Certificate	✓	P	R	R	

J.NANTHINI, Dy.MGR/QA	K V RAMANI, AGM/Q	LEGEND: * RECORDS, INDENTIFIED WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. M: MANUFACTURER; C:BHEL/BHEL AIA ; N: CUSTOMER-NPCIL. P: PERFORM R:REVIEW OF DOCUMENTS W: WITNESS & 100% REVIEW OF DOCUMENTS H: HOLD POINT W(R): WITNESS BY REVIEW OF DOCUMENTS.	FOR BHEL USE:	FOR NPCIL USE:	
MAIN CONTRACTOR	MAIN CONTRACTOR				
SIGNATURE			REVIEWED & APPROVED	REVIEWED & APPROVED	APPROVAL SEAL

बी एच ई एल BHEL	NPCIL approved sub suppliers	RAW MATERIAL QUALITY PLAN FOR SA106 Gr B PIPES & SA671 Gr CC70 Cl 32 PIPES SYSTEM : PEB (SCHEDULE NO : G.1) QP No: 7430:QP:RM:01 Rev No: 01 Date : 23.05.2020	PROJECT: KUDANKULAM Unit 3&4 - 2x1000 Mwe CUSTOMER : NPCIL MAIN-CONTRACTOR: BHEL-PIPING CENTRE BHEL CUSTOMER Nos: 7430, 7431

S.No	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY				REMARKS
					M	C&N					M	C	N	
1	2	3	4	5	6		7	8	9	D*	10			11
2.2	**WELDED PIPE :**													
2.2.1	Plate cutting layout for pipe rolling	Rolling Direction	Major	Dimensions & Orientation	100%		Approved drawings	Approved drawings	Inspection report	-	P	R	R	
2.2.2	Welding :Welding procedure qualification	Welding parameters, mech. & chem. Properties & soundness of weld	Major	Visual, NDE, Mech. & Chem.	100%		Approved WPS	ASME Sec IX	WPS, PQR	✓	P	W & H	W & H	WPS, PQR shall be furnished for NPCIL approval. Refer Note 1 & 2
2.2.3	Welder's performance qualification	Position, Soundness	Major	Visual, etching, NDE, Mech. & Chem.	100%		Approved WPQ	ASME Sec IX	WPQ	✓	P	H	V	
2.2.4	Edge preparation & joint fit up	LPI	Major	NDE + Visual	100%		ASME Sec V Article 6		NDT Report	✓	P	R	R	
2.2.5	All Butt welds (LS & CS)	Weld Quality	Major	RT	100%	10%	ASME Sec V Article 2 / ASME Sec III Div.1 NC5320		NDT Report	✓	P	W(R)	W(R)	Review of RT film
2.2.6	5% of Butt welds	Weld quality	Major	UT	100%		ASME Sec V Article 4 / ASME Sec III Div.1 NC5330		NDT Report	✓	P	V	V	
2.2.7	All butt welds	Root pass and final pass Weld quality	Major	PT	100%		ASME Sec V Article 6 / ASME Sec III Div.1 NC5350		NDT Report	✓	P	V	V	
2.2.8	Weld surface Profile and Smoothness of internal Surface	Check of Smoothness and spatter of weld surface	Major	Visual	100%		Approved procedure	Approved procedure	Inspection report		P	R	R	Refer Note 3
2.2.9	Heat treatment (after welding)	Stress Relieving	Major	verification	100%		Approved WPS / ASME Sec.III Div.1 NC		HT charts	✓	P	R	R	

J.NANTHINI, Dy.MGR/QA	K V RAMANI, AGM/Q	LEGEND:	FOR BHEL USE:	FOR NPCIL USE:	
MAIN CONTRACTOR	MAIN CONTRACTOR	* RECORDS, INDENTIFIED WITH "TICK" (∨) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. M: MANUFACTURER; C:BHEL/BHEL AIA ; N: CUSTOMER-NPCIL. P: PERFORM V: VERIFICATION R:REVIEW OF DOCUMENTS W: 10 % WITNESS & 100% REVIEW OF DOCUMENTS H: HOLD POINT & REVIEW OF DOCUMENTS. W(R): WITNESS BY REVIEW OF DOCUMENTS. S:SURVEILLANCE			
SIGNATURE			REVIEWED & APPROVED	REVIEWED & APPROVED	APPROVAL SEAL

BHEL		NPCIL approved sub suppliers	RAW MATERIAL QUALITY PLAN FOR SA106 Gr B PIPES & SA671 Gr CC70 Cl 32 PIPES						PROJECT: KUDANKULAM Unit 3&4 - 2x1000 Mwe CUSTOMER : NPCIL MAIN-CONTRACTOR: BHEL-PIPING CENTRE BHEL CUSTOMER Nos: 7430, 7431					
			SYSTEM : PEB (SCHEDULE NO : G.1)				QP No: 7430:QP:RM:01 Rev No: 01 Date : 23.05.2020							
S.No	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY				REMARKS
					M	C&N					M	C	N	
1	2	3	4	5	6		7	8	9	D*	10			11
2.2.10	Hydro test	Pressure Resistance	Major	Visual	100%	10%	As per SA 530 , SA 999		Inspection report	✓	P	W	W	HOLD POINT
2.2.11	Product Testing (Sample shall be identifed from attached coupon plate to pipe per heat/lot)													
	a) Product Analysis (Parent&Weld test coupon)	Chemical Properties	Major	Chemical test	Plate : 1 sample per heat ; Weld : 1 sample per heat per 150 meter.		As per S4 of ASME SA-671		Test Certificate	✓	V	W	W	HOLD POINT
	Transverse Tensile test of weld	Tensile strength of weld	Major	Mechanical test	1 sample per heat per 60 meter.		As per ASME SA-671 & ASTM A 370		Test Certificate	✓	V	W	W	HOLD POINT
	Transverse Guided Weld Bend test	Weld ductility	Major	Mechanical test	2 sample per heat per 60 meter.		As per ASME SA-671 & ASTM A 370		Test Certificate	✓	V	W	W	HOLD POINT
	Charpy V Notch Impact test	Toughness	Major	Mechanical test	1 set per heat per 60 meter.		As per ASME SA-671, ASTM A 370& SA-20	Test Temp: -50°C Min Avg value=15J. Min Individual value=12J.	Test Certificate	✓	V	W	W	HOLD POINT Refer Note 4
3.0	**FINAL INSPECTION**													
3.1	Overall dimensions, surface condition	Dimensional, visual surface condition straightness, end finish, bevel angle, root face, thickness, length, marking etc.	Major	Measurement	100%	10%	Approved drawings	Approved drawings	Inspection report	✓	P	W	W	HOLD POINT
3.2	Cleaning and Grit blasting, Painting	Surface preparation, Paint specification, DFT	Major	Visual + contaminatio n check , Measurement	100%	10%	If Direct to Site (DTS) : External : Primer of Inorganic Zinc Silicate DFT = 70microns min. Internal : Rust preventive coating or Rust Inhibitor inside.		Inspection report	✓	P	W	V	

J.NANTHINI, Dy.MGR/QA	K V RAMANI, AGM/Q	LEGEND: * RECORDS, INDENTIFIED WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. M: MANUFACTURER; C:BHEL/BHEL AIA ; N: CUSTOMER-NPCIL. P: PERFORM V: VERIFICATION R:REVIEW OF DOCUMENTS W: 10 % WITNESS & 100% REVIEW OF DOCUMENTS H: HOLD POINT & REVIEW OF DOCUMENTS. W(R): WITNESS BY REVIEW OF DOCUMENTS. S:SURVEILLANCE	FOR BHEL USE:	FOR NPCIL USE:
MAIN CONTRACTOR	MAIN CONTRACTOR			
SIGNATURE			REVIEWED & APPROVED	REVIEWED & APPROVED / APPROVAL SEAL

बी एच ई एल BHEL		NPCIL approved sub suppliers	RAW MATERIAL QUALITY PLAN FOR SA106 Gr B PIPES & SA671 Gr CC70 Cl 32 PIPES			SYSTEM : PEB (SCHEDULE NO : G.1)		QP No: 7430:QP:RM:01 Rev No: 01 Date : 23.05.2020		PROJECT: KUDANKULAM Unit 3&4 - 2x1000 Mwe CUSTOMER : NPCIL MAIN-CONTRACTOR: BHEL-PIPING CENTRE BHEL CUSTOMER Nos: 7430, 7431				
S.No	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY				REMARKS
					M	C&N					M	C	N	
1	2	3	4	5	6		7	8	9	D*	10			11
	Cleaning and Grit blasting, Painting	Surface preparation, Paint specification, DFT	Major	Visual + contaminatio n check , Measurement	100%	10%	**If Despatch to BHEL Stores : External : Resin type Rust preventive coating. Internal : Rust preventive coating or Rust Inhibitor inside.**		Inspection report	✓	P	W	V	
4.0	**MARKING, PACKING AND SHIPPING CONTROL**													
4.1	Verification of Marking	Marking	Major	Verification	100%		Approved drawings, Refer Note 7 & 8		Inspection report	✓	P	W	R	
4.2	Packing	Blanking of ends & packing	Major	Visual	100%		Approved drawings, Refer Note 9		Inspection report	✓	P	W	R	
4.3	Documentation Folder	QP Compliance	Major	Review	100%		MTCs, HT charts, NDE & Hydro reports etc		History Docket	✓	P	R	W(R)	HOLD POINT

General Notes:

1) Welded pipes : All longitudinal welded pipes shall employ only automatic welding. In one random length one welded circumferential seam of same quality as longitudinal weld is permitted. Cicrumferential weld seam shall be atleast 2.5m from either end. Longitudinal seams of two portions shall be staggered by 90°. Welded pipes of diameter less than 900NB shall not have more than one longitudinal seam joint.

2) WPS/PQR/WPQR shall be reviewed by BHEL & NPCIL. Only NPCIL approved brand of Welding Consumables shall be used. (Annexure 1). Impact test qualified WPS/PQR shall be used.

3) The Internal & External weld profile of pipes shall be ground smooth for coating application. Weld spatter, cleats, sharp corners, projections and indentations shall be removed. Internal and External Weld finish requirements shall be as per Engineering Drawing.

4) Impact test shall be done as per any one of the below option : **Option 1** : Raw material SA 516 Gr 70 plates used for fabrication of pipes shall be subjected to Charpy V-Notch Impact test as per S5 - Supplementary requirement of SA 516. Fabricated pipe SA671 Gr CC70 Cl32 shall be subjected to Charpy V-Notch Impact test as per S2 - Supplementary requirement of SA 671.
Option 2 : Raw material SA 516 Gr 70 plates used for fabrication of pipes is exempted from Impact test according to ASME Sec III NC 2019, Clause NC 2311(a)-8. Impact test shall be done on the weld metal and welding procedure qualification.
Impact values for the SA 516 Gr 70 Plates and Pipe made from SA 516 Gr 70 plates shall meet the requirements of SA 20.

5) Number of weld repairs in Welded pipes at the same spot shall be restricted to maximum two by NPCIL approved procedure. All repaired welds shall be re-examined and re-tested as per the requirements of original weld and shall meet the requirements of the same.

6) Calibrated Furnaces, instruments, Gauges shall be used during inspection, examination and testing

7) Non-Destructive examinations shall be carried out by personnel qualified to Level-II of ISNT or ASNT

8) Marking : Paint stencilling : PO no, Maker's emblem/code, Spec, Grade, Heat no, Size (OD/IDx thickness x Length in mm)
Hard Punching at 100mm from pipe end :Maker's emblem/code, Spec, Grade, Heat no, Size (OD/IDx thickness x Length in mm) , Inspector's seal.
Paint or Ink for marking shall not contain any harmful metal or metallic salts such as zinc,lead or copper which cause corrosive attack on heating.

9) Packing : End of pipes shall be secured with end caps to avoid storage & transit damages. Bevelled pipe ends shall be closed with a leak tight Steel bevel protector combined with plastic plug. Dessicant material suitable for use in combination with steel (moisture absorbent) shall be placed inside closed pipe to enable corrosion prevention for atleast 2 years.

J.NANTHINI, Dy.MGR/QA	K V RAMANI, AGM/Q	LEGEND: * RECORDS, INDENTIFIED WITH "TICK" (v) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. M: MANUFACTURER; C:BHEL/BHEL AIA ; N: CUSTOMER-NPCIL. P: PERFORM V: VERIFICATION R:REVIEW OF DOCUMENTS W: 10 % WITNESS & 100% REVIEW OF DOCUMENTS H: HOLD POINT & REVIEW OF DOCUMENTS. W(R): WITNESS BY REVIEW OF DOCUMENTS.	FOR NPCIL USE:	
MAIN CONTRACTOR	MAIN CONTRACTOR			
SIGNATURE			REVIEWED BY	APPROVED BY / APPROVAL SEAL

Annexure -1

NUCLEAR POWER CORPORATION OF INDIA LTD.

(A Government of India Enterprise)
Directorate of Quality Assurance
Phone: 022 – 2599 5045, Fax 022 – 2556 5354

1) LIST OF APPROVED CARBON STEEL & LOW ALLOY STEEL WELDING ELECTRODES (2 pages)

As on 25-01-2018

Sr. No.	Manufacturers	Brand name	AWS No.	Valid up to
1.	ADOR Welding Ltd., Silvassa	SUPABASE X PLUS	E7018	FEB2019
2.	ADOR Welding Ltd., Silvassa	MOLYTEN	E7018-A1	APR2020
3.	ADOR Welding Ltd., Silvassa	TENALLOY Z PLUS	E7018-1	JUN2022
4.	ADOR Welding Ltd., Silvassa	CHROMOTEN	E8018 B2	APR2020
5.	ADOR Welding Ltd., Silvassa	CHROMOTEN-C	E9018 B3	APR2020
6.	D&H SECHERON, Indore	MOLYTHERME	E7018-A1	JUN2022
7.	D&H SECHERON, Indore	MEDIO	E6013	JUN2020
8.	D&H SECHERON, Indore	EXOBEL	E6013	JUN2020
9.	D&H SECHERON, Indore	SUPERTHERME	E7018	JUN2020
10.	D&H SECHERON, Indore	SUPERTHERME(SPL)	E7018-1	SEP2018
11.	D&H India Ltd., Indore	SUPER –LH (SPL)	E7018-1 (DCEP Only)	FEB2021
12.	D&H India Ltd., Indore	STANDARD	E6013	FEB2021
13.	D&H India Ltd., Indore	SUPER LH	E7018 (DCEP Only)	FEB2021
14.	D&H India Ltd., Indore	SUPER -CR-1	E8018 B2	DEC2020
15.	D&H India Ltd., Indore	SUPER -CR-2	E9018 B3	DEC2020
16.	ESAB INDIA LTD, AMBATTUR, CHENNAI	ESAB 28	E6013	SEP2018
17.	ESAB INDIA LTD, AMBATTUR, CHENNAI	ESAB 36H	E7018	SEP2018
18.	ESAB INDIA LTD, AMBATTUR, CHENNAI	ESAB 36H(SPL)	E7018-1	SEP2018
19.	ESAB INDIA LTD, AMBATTUR, CHENNAI	ESAB PIPEWELD 6010R	E6010	SEP2018
20.	HONAVAR ELECTRODES, THANE	REGULAR S	E6013	JAN2020
21.	HONAVAR ELECTRODES, THANE	ULTIMATE - 18	E7018	JAN2020
22.	HONAVAR ELECTRODES, THANE	ULTIMATE – 18 SPL	E7018-1	JAN2020
23.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -13R	E6013	SEP2020
24.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -18	E7018	SEP2020
25.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -18 PLUS	E7018-1	SEP2020
26.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -1 CR	E8018-B2	DEC2018
27.	MAILAM INDIA LTD., PUDUCHERRY	MAILARC -2 CR	E9018-B3	DEC2018
28.	ROYAL ARC ELECTRODES, VASAI	ROYAL THERME	E7018	SEP2018
29.	ROYAL ARC ELECTRODES, VASAI	ROYAL S	E6013	SEP2018
30.	ROYAL ARC ELECTRODES, VASAI	ROYAL THERM SPL.	E7018-1	SEP2021
31.	ROYAL ARC ELECTRODES, VASAI	ROYAL THERM MOLY	E7018-A1	FEB2018*
32.	ROYAL ARC ELECTRODES, VASAI	ROYAL CHROM 1	E8018-B2	NOV2017*
33.	ROYAL ARC ELECTRODES, VASAI	ROYAL CHROM 2	E9018-B3	NOV2017*
34.	RAJ KESARI ELECTRODES, UDAIPUR	SUPERLET 18	E7018	AUG2022
35.	RAJ KESARI ELECTRODES, UDAIPUR	SUPERLET 18 (SPL.)	E7018-1	AUG2022
36.	RAJ KESARI ELECTRODES, UDAIPUR	RAJCORD 13S	E6013	AUG2022
37.	RAJRATNA ELECTRODES, AHEMEDABAD	RATNA 7018	E7018	FEB2018*

G. Bala Narayana 25/1/18

Sr. No.	Manufacturers	Brand name	AWS No.	Valid up to
38.	RAJRATNA ELECTRODES, AHEMEDABAD	RATNA 7018 SPL.	E7018-1	MAR2020
39.	SUPERON SCHWEISSTECHNIK INDIA LTD. DELHI	GARANT MO	E7018-A1	SEP2020
40.	SUPERON SCHWEISSTECHNIK INDIA LTD. DELHI	SUPERCITO	E7018	SEP2019
41.	SUPERON SCHWEISSTECHNIK INDIA LTD. DELHI	SUPERCITO 7018-S	E7018-1	SEP2019
42.	SUPERON SCHWEISSTECHNIK INDIA LTD. DELHI	OVERCORD S	E6013	SEP2019
43.	SUPERON SCHWEISSTECHNIK INDIA LTD., DELHI	SUPER CROMO 1B	E8018-B2	DEC2020
44.	SUPERON SCHWEISSTECHNIK INDIA LTD., DELHI	SUPER CROMO 2B	E9018-B3	DEC2020
45.	VIJEY ELECTRODES & WIRES PVT. LTD., CHENNAI	VJ 6013 X	E6013	SEP2020
46.	VIJEY ELECTRODES & WIRES PVT. LTD., CHENNAI	VJ 7018	E7018	SEP2020
47.	VIJEY ELECTRODES & WIRES PVT. LTD., CHENNAI	VJ 7018 - 1	E7018-1	SEP2020
48.	WELD FAST ELECTRODES, NAGPUR	WELDFAST LH 18	E-7018	MAR2020
49.	WELD FAST ELECTRODES, NAGPUR	WELDFAST LH-18-1	E-7018-1	MAR2020
50.	WELD FAST ELECTRODES, NAGPUR	WELDFAST CROMO 0500	E7018-A1	JAN2018*
51.	WELD FAST ELECTRODES, NAGPUR	WELDFAST CROMO 1500	E8018-B2	JAN2018*
52.	WELD FAST ELECTRODES, NAGPUR	WELDFAST CROMO 2251	E9018-B3	JAN2018*

The approvals are granted in conformance to the requirements stipulated in latest edition of ASME Section II Part C. However, batch qualification wherever called for in specific cases, will have to be carried out separately.

Note: * Indicates renewal of approval is under progress

G. Badri Narayana 25/1/18

(G. Badrinarayana)
AD (QA), QA Analysis & Gr.3

Part I - UnPriced bid (To be submitted with Techno-commercial bid)

Enquiry ref	4012000008 dt 06.11.2020
Vendor name	M/s
Project Name	NPCIL Kudankulam
Pipe Specification	Pipes to ASME SA671 GR CC70 CL32

Enq Sl. No	Material Code	Work Order Detail	Material Description	Specific Length in Meters	Qty in Meters	Total Wt in MT	Delivery Terms	Quoted / Not Quoted
10	159387282001	As per Annexure-1	PIPE OD-530X12-SA671GRCC70CL32	12	480	73.574	FOR NPCIL Kudankulam Site	
20	159387282001	As per Annexure-1	PIPE OD-530X12-SA671GRCC70CL32	6	12	1.839	FOR NPCIL Kudankulam Site	
30	159387282001	As per Annexure-1	PIPE OD-530X12-SA671GRCC70CL32	As per Annexure-1	112.326	17.217	FOR NPCIL Kudankulam Site	
40	159387262001	As per Annexure-1	PIPE OD-630X12-SA671GRCC70CL32	12	4656	851.443	FOR NPCIL Kudankulam Site	
50	159387262001	As per Annexure-1	PIPE OD-630X12-SA671GRCC70CL32	6	12	2.194	FOR NPCIL Kudankulam Site	
60	159387262001	As per Annexure-1	PIPE OD-630X12-SA671GRCC70CL32	As per Annexure-1	322.784	59.027	FOR NPCIL Kudankulam Site	
70	159387282001	NA	PIPE OD-530X12-SA671GRCC70CL32	12	192	29.428	FOR Ward 9, BHEL Trichy Stores	
80	159387282001	NA	PIPE OD-530X12-SA671GRCC70CL32	6	12	1.839	FOR Ward 9, BHEL Trichy Stores	
90	159387262001	NA	PIPE OD-630X12-SA671GRCC70CL32	12	588	107.526	FOR Ward 9, BHEL Trichy Stores	
100	159387262001	NA	PIPE OD-630X12-SA671GRCC70CL32	6	72	13.166	FOR Ward 9, BHEL Trichy Stores	
110	159387262001	NA	PIPE OD-630X12-SA671GRCC70CL32	4	4	0.731	FOR Ward 9, BHEL Trichy Stores	

Cells highlighted in green color have to be filled by the vendors

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for **4012000008 dt 06.11.2020 – Pipes to ASME SA671 GR CC70 CL32 for NPCIL Kudankulam Project.**

The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 - Commitments of the Principal

1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder(s) / Contractor(s)

2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.

4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

Section 5 - Previous Transgression

5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/ Contractors / Sub-contractors

6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.

6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders / Contractors / Sub contractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 -Independent External Monitor(s)

8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.

8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non- disclosure agreement.

8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.

8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.

8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.

8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.

8.9 IEM should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.

8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.12 The word `Monitor' would include both singular and plural.

Section 9 - Pact Duration

9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.

9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

POONGKODI V

Digitally signed by POONGKODI V
Date: 2020.11.06 15:38:30 +05'30'

For & On behalf of the Principal

For & On behalf of the Bidder/ Contractor
(Office Seal)

Place: **Chennai**
Date: **06.11.2020**

G.VINOTH

Digitally signed by G.VINOTH
Date: 2020.11.06 15:43:59 +05'30'

Witness:_____
Vinoth G, Dy.Manager, Purchase
BHEL, Piping Centre,
80, G.N.Road, T.Nagar,
Chennai – 17.

Witness:_____
(Name & Address) _____

Declaration to be issued on Company letter head

In line with Government Public Procurement Order (Preference to Make in India) Order (PPP-MII Order), 2017 vide No. P-45021/2/2017-PP (BE-II) dated 04.06.2020, issued by DPIIT, Ministry of Commerce and Industry, we hereby certify that we, …… (Supplier name) are

a) 'Class-I local supplier' meeting requirement of local content equal to or more than 50%,

b) 'Class-II local supplier' meeting requirement of local content more than 20% but less than 50%,

(Strike off whichever is not applicable)

As defined under above referred Order for the following Enquiry Item Sl Nos of BHEL Enquiry No 4012000008 dt 06.11.2020

- Enquiry Item No./(s) -

Details of location at which local value addition will be made is as follows:

……

……

By issuing this declaration, we understand and are in acceptance to the following-

- False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
- In case of debarment by any procuring entity for violation of the provisions of the Public Procurement (Preference to Make in India), Order 2017 we shall not be eligible for preference for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, the debarment takes effect prospectively from the date of uploading on the website(s) of The Department of Expenditure, GOI in such a manner that ongoing procurements are not disrupted.
- We undertake the onus of responsibility of submission of appropriately certified documents. We understand that BHEL is not at liability to verify the contents and will not be responsible for the declaration made by us. However, in case BHEL has any reason to doubt the authenticity of the local content, BHEL reserves the right to obtain the complete back up calculations before award of contract and we are liable to submit the same if requested by BHEL. We also understand that our bid is liable for rejection in case we fail to submit the details as requested by BHEL.

Seal and Signature of authorized signatory

Special Note-
In cases of procurement for a value in excess of Rs. 10 crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.