



**BHEL**  
Tenders

Government eProcurement System

Tender Details

Date : 16-Dec-2023 08:57 AM



Basic Details			
Organisation Chain	Bharat Heavy Electricals Limited   HPVP - Vaizag		
Tender Reference Number	H212300016		
Tender ID	2023_BHEL_31223_1	Withdrawal Allowed	Yes
Tender Type	Open Tender	Form of contract	Supply
Tender Category	Goods	No. of Covers	2
General Technical Evaluation Allowed	No	ItemWise Technical Evaluation Allowed	No
Payment Mode	Not Applicable	Is Multi Currency Allowed For BOQ	No
Is Multi Currency Allowed For Fee	No	Allow Two Stage Bidding	No

**Cover Details, No. Of Covers - 2**

Cover No	Cover	Document Type	Description
1	Fee/PreQual/Technical	.pdf	Enquiry Terms and Conditions
		.pdf	Technical Specification
2	Finance	.xls	BOQ Details

**Tender Fee Details, [Total Fee in ₹ \* - 0.00]**

Tender Fee in ₹	0.00		
Fee Payable To	Nil	Fee Payable At	Nil
Tender Fee Exemption Allowed	No		

**EMD Fee Details**

EMD Amount in ₹	0.00	EMD through BG/ ST or EMD Exemption Allowed	No
EMD Fee Type	fixed	EMD Percentage	NA
EMD Payable To	Nil	EMD Payable At	Nil

[Click to view modification history](#)

**Work / Item(s)**

Title	H212300016				
Work Description	Supply of Paints and Thinner				
Pre Qualification Details	Refer Techno-commercial terms and conditions.				
Independent External Monitor/ Remarks	NA				
Show Tender Value in Public Domain	No				
Tender Value in ₹	2,00,000	Product Category	Consumables- Raw materials	Sub category	NA
Contract Type	Tender	Bid Validity(Days)	90	Period Of Work(Days)	7
Location	BHEL HPVP	Pincode	530012	Pre Bid Meeting Place	NA
Pre Bid Meeting	NA	Pre Bid Meeting Date	NA	Bid Opening Place	Visakhapatnam

Address			
Should Allow NDA Tender	No	Allow Preferential Bidder	No

**Critical Dates**

<b>Publish Date</b>	15-Dec-2023 12:40 PM	<b>Bid Opening Date</b>	18-Dec-2023 03:40 PM
<b>Document Download / Sale Start Date</b>	15-Dec-2023 12:40 PM	<b>Document Download / Sale End Date</b>	18-Dec-2023 03:00 PM
<b>Clarification Start Date</b>	NA	<b>Clarification End Date</b>	NA
<b>Bid Submission Start Date</b>	15-Dec-2023 12:40 PM	<b>Bid Submission End Date</b>	18-Dec-2023 03:00 PM

**Tender Documents**

NIT Document	S.No	Document Name	Description	Document Size (in KB)
	1	Tendernotice_1.pdf	Techno-Commercial Terms and Conditions	472.84
	2	Tendernotice_2.pdf	Specification of Paint	2515.32

  

Work Item Documents	S.No	Document Type	Document Name	Description	Document Size (in KB)
	1	Tender Documents	H212300016.pdf	Techno-commercial Terms and Conditions	456.99
	2	Tender Documents	EILSPEC.pdf	Specification	2499.52
	3	BOQ	BOQ_32629.xls	BOQ	280.50

**Bid Openers List**

S.No	Bid Opener Login Id	Bid Opener Name	Certificate Name
1.	aaditya@bhel.in	ADITYA KUMAR	ADITYA KUMAR
2.	mvrmurthy@bhel.in	M V RAMANA MURTHY	METTA VENKATARAMANAMURTY
3.	rsprakash@bhel.in	R SURYA PRAKASH	RAVI SURYA PRAKASH
4.	sitaram@bhel.in	SITA RAM PENTAKOTA	SITA RAM PENTAKOTA

**GeMARPTS Details**

<b>GeMARPTS ID</b>	20UKMJ8NKIFG
<b>Description</b>	Supply of Paints and Thinner
<b>Report I nitiated On</b>	06-Dec-2023
<b>Valid Until</b>	05-Jan-2024

**Tender Properties**

<b>Auto Tendering Process allowed</b>	No	<b>Show Technical bid status</b>	Yes
<b>Show Finance bid status</b>	Yes	<b>Show Bids Details</b>	No
BoQ Comparative Chart model	Normal	BoQ Compartive chart decimal places	3
BoQ Comparative Chart Rank Type	L	Form Based BoQ	No
Show Bid Details in Public Domain stage	Technical Bid Opening		

**TIA Undertaking**

S.No.	Undertaking to Order	Tender complying with Order	Reason for non compliance of Order
1	PPP-MII Order 2017	Agree	
2	MSEs Order 2012	Agree	

**Tender Inviting Authority**

<b>Name</b>	Aditya Kumar
<b>Address</b>	BHEL HPVP

**Tender Creator Details**

<b>Created By</b>	ADITYA KUMAR
<b>Designation</b>	SR ENGINEER
<b>Created Date</b>	15-Dec-2023 10:12 AM



**BHARAT HEAVY ELECTRICALS LIMITED**  
 (A Government of India Undertaking)  
 Heavy Plates & Vessels Plant,  
 Visakhapatnam – 530 012, A.P. INDIA

Phone : 0891-288-1306 / 1311  
 E-mail : [aaditya@bhel.in](mailto:aaditya@bhel.in) ;  
[mvrmurthy@bhel.in](mailto:mvrmurthy@bhel.in)

**Annexure – A - Terms and Conditions**

**ACCEPTANCE OF TECHNO - COMMERCIAL TERMS AND CONDITIONS BY THE BIDDERS**

<b>Description of the Equipment and Scope of work:</b>	Supply of Paints and Thinner for SO 2439-Main Fractionator Column for PFCC Unit-HRRL Barmer.	
<b>Projects</b>	Main Fractionator Column for PFCC Unit-HRRL Barmer.( SO: 2439)	
<b>BHEL Tender No. &amp; Date</b>	H212300016 Dt. 14.12.2023	
<b>GeM AR&amp; PTS No.</b>	GEM/GARPTS/06122023/20UKMJ8NKIFG Dt. 06.12.2023	
<b><i>To be filled by bidder</i></b>		
<b>Name of the firm (Bidder)</b>	:	
<b>Offer reference</b>	:	
<b>Address</b>	:	
<b>Contact details</b>	<b><u>Contact person 1 Name:</u></b> <b>Designation:</b> <b>Office Phone:</b> <b>Mobile: e-mail:</b>  <b><u>Contact person 2 Name:</u></b> <b>Designation:</b> <b>Office Phone:</b> <b>Mobile: e-mail:</b>	
<b>Sl. No.</b>	<b>Terms and conditions</b>	<b>Vendor's confirmation</b>
1 (a)	<b>Pre-qualification requirement (PQR):</b> Bidder to submit at least one reference for similar works executed earlier to any BHEL unit in last 1 year from the date of bid opening.	

1 (b)	<p><b>Technical Requirements:</b> All tendered items with applicable Specifications/TDC are detailed at Annexure I. Items shall be supplied as per applicable TDC/ indicated specification Supplier to submit signed and Stamped copies of Specification as token of acceptance.</p> <p>Deviations, if any shall be indicated in Annexure III. Any Deviation indicated elsewhere in the offer shall not be considered for evaluation.</p>	
1 (c)	QAP: Not Applicable	
1 (d)	The actual production of material is permitted only after approval of all documents required for manufacturing / inspection / testing activities by BHEL.	<b>NA</b>
1 (e)	<p><b>Inspection :</b></p> <p>At Vendor Works : By Vendor</p> <p>After receipt of material at HPVP : BY BHEL HPVP based on Vendor MTC as per enclosed specification.</p>	
1 (f)	Dispatch clearance: NA	NA
1 (g)	Three sets of documents containing (i.) Test Certificates and respective test reports (ii.) copies of the approved quality documents, records and test procedures, (iii.) NCRs/DCRs (if any) etc. to be provided along with the supply of the tendered items. Final documentation shall also be submitted in soft form (pdf format) with proper indexing.	
1 (h)	<p><b>Evaluation method:</b></p> <p>01. The tender will be evaluated on Total Package wise evaluation basis</p> <p>02. Evaluation and L1 identification shall be on total landed cost to BHEL including all cost up to destination.</p>	
1 (i)	Vendor shall quote as per the enclosed Price Schedule format only.	
1 (j)	Quantities given in the tender may be revised based on BHEL requirements.	
2 (a)	<p><b>Price:</b></p> <p>01. The quoted / finalized rates shall be firm throughout the contract including extension, if any, for any reason whatsoever and no escalation is admissible for this contract.</p> <p>02. The basic Price should be inclusive of Inspection, Testing, Freight, Packing &amp; Forwarding, Transit Insurance, any other taxes excl. GST etc.</p> <p>03. GST % on the shall be indicated as % on the basic price.</p> <p>Offer with PVC clause will not be considered.</p>	

2 (b)	<p>The Tender will be operated in two-part bid system. One-part consisting of PQR, Technical bid with Commercial terms &amp; conditions and other part is Price Bid.</p> <p>Based on the PQR compliance, technical suitability, vendors will be short-listed. Final acceptance of the Technical Bid will however, is based on Customer's recommendation.</p> <p>The price Bid of short-listed vendors will be opened on a suitable date with due intimation to vendors.</p>	
2 (c)	<b>REVERSE AUCTION: Not Applicable</b>	
3 (a)	<p><b>Delivery term:</b> The quote shall be on F.O.R Stores, <b>BHEL Visakhapatnam</b> basis inclusive of Packing, forwarding, Freight, Transit Insurance is under supplier scope and shall be included in the basic price.</p>	
3 (b)	<p><b>Delivery Period:</b> <b>Paints are required to be delivered within 7 days from the date of PO</b></p>	
4 (a)	<p><b>Payment Terms :</b> 100% direct payment through EFT within 45 days for MSE Vendors from the date of receipt and acceptance of materials.</p> <p>100% direct payment through EFT after 60 days for Medium Category Vendors and 90 days for Non-MSME vendors from the date of receipt and acceptance of materials.</p> <p>However, GST portion of invoice shall be released only upon</p> <ol style="list-style-type: none"> <li>1. Vendor declaring the invoice in his GSTR-1.</li> <li>2. Receipt of Goods and Tax Invoice by BHEL.</li> <li>3. Confirmation of payment of GST thereon by vendor on GSTN Portal.</li> </ol> <p>Any deviation in the above payment term will attract loading as mentioned below.</p> <p>MCLR rate of SBI p.a. + 6% (as applicable on the date of bid opening. Techno-commercial bid opening in case of two-part bids) shall be considered for loading for the period of relaxation sought by bidders subject to competent authority approval</p>	
4(b)	<b>EMD (EARNEST MONEY DEPOSIT): NOT APPLICABLE.</b>	
4(c)	<b>CONTRACT EXECUTION BANK GUARANTEE (CEBG): Not Applicable</b>	
4(d)	<b>Performance Bank Guarantee: Not Applicable</b>	

5 (a).	<p><b>Liquidated damages (LD):</b></p> <p>a) Time is the essence of the contract.</p> <p>b) The ordered items shall be delivered as per the delivery period mentioned in the Purchase Order.</p> <p>c) In case the supplier supplies the ordered items beyond the delivery period specified, Liquidated Damages -LD - as detailed below shall be levied from the supplier without prejudice to any other relief /compensation available to BHEL, Visakhapatnam under any other condition of the contract/applicable legal provisions.</p> <p>d) Failure to dispatch the materials in time as per the delivery quoted in our Purchase Order(PO) would make the supplier liable to an un-conditional LD at the rate of 0.5% of the undelivered portion per week of the delay or part thereof subject to a maximum of 10% of Purchase order value.</p> <p>e) Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).</p> <p>f) Indigenous: For “FOR Delivery terms”, Lorry way bill date will be taken for LD calculation for cases where e-way bill is not mandatory. Wherever E Way Bill is involved, the date of commencement of movement of vehicle as reflected in E way Bill [the ‘Valid from’ date in the E way Bill] will be taken for LD calculation</p>	
6 (a).	<p><b>GUARANTEE</b></p> <p>Vendor should guarantee the material for performance for a period of shelf life from the date of last dispatch. If any defect is noticed during the above period, the same shall be rectified / replaced free of cost on FOR destination basis within a reasonable time.</p>	
6 (b).	<p><b>Repair &amp; replacements:</b></p> <p>Supplier shall replace defective items supplied free of cost (inclusive of all Testing, Inspection, TPI, Service charges etc.) up to destination (on DDP –Store BHEL Visakhapatnam) within 28 days from defect notification date.</p> <p>All incidental charges like freight, insurance and customs duty are to vendor’s account only. If the supplier fails to replace / rectify the defective/ damaged items on free of cost within 28 days of reporting from our end, the same shall be treated as failure to execute the contract and actions as per the Guidelines for Suspension of Business Dealings with Suppliers /Contractors available in the webpage: <a href="http://www.bhel.com/vender_registration/vender.php">http://www.bhel.com/vender_registration/vender.php</a>. would be taken against such supplier without prejudice to the other remedies available to BHEL under the contract and law in this regard.</p>	
7.	<p><b>Acceptance of materials supplied:</b></p> <p>i. The supply shall be strictly as per the specifications in the tender /purchase order.</p> <p>ii. Delivery of the ordered items as per the delivery terms in the Purchase Order does not automatically constitute acceptance of the delivered items.</p>	

	<p>iii. The acceptance or otherwise of the delivered items at BHEL HPVP will be separately communicated to the supplier by within 120 days from the delivery of items or delivery of the required test certificates /other documents whichever is later.</p> <p>In case of rejection of the delivered items at BHEL/Stores/ Visakhapatnam, either part or full, the vendor shall replace the rejected items as per the specification in the Purchase order/tender at their cost within specified days/months of communication of rejection to the supplier.</p> <p>v. In case of rejection of the delivered items, either part or full, if the supplier fails to replace the rejected items within the specified days/months of communication of the rejection, the same shall be treated as failure to execute the contract and actions as per the Guidelines for Suspension of Business Dealings with Suppliers /Contractors available in the webpage: <a href="http://www.bhel.com/vender_registration/vender.php">http://www.bhel.com/vender_registration/vender.php</a>. would be taken against such supplier</p>	
8.	<p><b>Risk Purchase clause:</b></p> <p>a. In the event of any successful Tenderer's failure to fulfil any of the tender / Contract obligations including supply of whole or any part of the ordered items as per Contract / Agreement, BHEL has the right to terminate the contract and purchase from elsewhere, at the risk and cost of the defaulted supplier, either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated in the contract or if the same were not available, the best and nearest available substitute thereof. The supplier shall be liable for the additional expenditure/difference in Cost, if any, including consequential losses which BHEL may sustain by reason of risk purchase in addition to the applicable LD as per the Purchase order/contract.</p> <p>The decision of BHEL with regard to the additional expenditure / difference in cost and consequential losses incurred by BHEL shall be final and binding on the supplier.</p> <p>c. The amount recoverable under risk purchase shall be recovered from the defaulted supplier in all or any of the following manners:</p> <ul style="list-style-type: none"> <li>• from dues available in the form of Bills payable to defaulted supplier, SD, BGs against the same contract.</li> <li>• from the dues payable to defaulted supplier against other contracts in the same Region/Unit /any other region/unit</li> <li>• In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier.</li> </ul> <p>b. GST is applicable on amount recoverable from vendors under risk purchase clause as per Govt. Circular.</p>	
9.	<p><b>Suspension of Business Dealings:</b></p> <p>The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the firms debarred across BHEL, shall be rejected. The list of firms debarred across BHEL is available on BHEL web site <a href="http://www.bhel.com">www.bhel.com</a>.</p>	

	<p>1.0 Integrity commitment, performance of the contract and punitive action thereof:</p> <p>1.1. Commitment by BHEL:</p> <p>BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.</p> <p>1.2. Commitment by Bidder/ Supplier/ Contractor:</p> <p>1.2.1. The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.</p> <p>1.2.2. The bidder/ supplier/ contractor 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 and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.</p> <p>1.2.3. The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms &amp; conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.</p> <p>If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in malpractices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings then, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on <a href="http://www.bhel.com">www. bhel.com</a> and/or under applicable legal provisions.</p>	
10.	<p><b>Documents are to be submitted along with technical bid (Part-1)</b></p> <p>01. Covering letter.</p> <p>02. Signed and Stamped of Enquiry as token of acceptance all terms and conditions.</p> <p>03. Signed and stamped Specification / data sheets as per TDC as token of acceptance. (Annexure I &amp; TDC)</p> <p>04. Filled up and signed Techno Commercial Terms and condition sheet (Annexure-A) and supporting documents.</p> <p>05. Filled up and Signed No Deviation Format (Anneure III)</p> <p>06. Unpriced offer. (Annexure IV)</p>	

	<p>07. Make in India self-certification in the attached format (if applicable) (Annexure V)</p> <p>08. Catalogue(s)</p> <p>09. GST Copy</p> <p>10. PAN Copy</p> <p>11. EFT Mandate from Bank with Account and RTGS details</p> <p><b>Documents are to be submitted along with Price bid (Part-2)</b></p> <p>01. Priced offer as per the format attached with enquiry.</p> <p><b>Note:</b> All the pages of documents are to be signed and sealed by authorized signatory of the company. Any query during enquiry stage shall be replied within 1 day failing which offer may be rejected as non-responsive.</p>	
11	<p><b>Offer Validity:</b></p> <p>90 days minimum from techno commercial bid opening ( Part-1) date.</p>	
12	<b>Kindly indicate the GST No of your Firm</b>	
13	<b>Kindly Indicate the HSN Codes (8digit)</b>	
14	<b>Please indicate the applicable GST %</b>	
15	<p>Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration Number (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 GSTN portal. The unregistered dealer as well as the composition dealer has to submit an undertaking stating that they will not claim GST during the execution of the contract even if their status under GST changes to regular tax payer. The dealer has to submit necessary documents if there is any change in status under GST.</p>	
16	<p>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) &amp; Shipped to party details, item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST &amp; UTGST) separately, HSN/ SAC Code, Place of Supply etc. Wherever E-Invoice is applicable, the tax invoice/ CN / DN submitted by the vendor must contain the QR code generated in E-Invoice Portal &amp; IRN.</p>	
17	<p>All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code)</p>	
18	<p>Invoices will be processed only upon completion of statutory requirement and further subject to following:</p> <p>i. Vendor declaring such invoice in their GSTR-1 Return/ IFF ii. Receipt of Goods or Services and Tax invoice by BHEL</p>	

19	As the continuous uploading of tax invoices in GSTN portal (in GSTR-1/ IFF) is available for all (i.e. both Small & Large) tax payers, all invoices raised on BHEL may be uploaded immediately in GST portal on dispatch of material /rendering of services. The supplier shall ensure availability of Invoice in GSTN 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 GSTR-2A/ GSTR-2B).	
20	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	
21	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	
22	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.	
23	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.	
24	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 will be generated in GSTN portal subsequent to vendor accepting the TDS deduction in the GSTN portal & the vendor can directly download the Certificate from the GSTN Portal.	
25	<p><b>NON-FILER OF INCOME TAX RETURN SHALL BE SUBJECT TO TDS/TCS AT HIGHER RATES (SECTION 206AB AND SECTION 206CCA):</b></p> <p>The Finance Act 2021 inserts these sections to provide for deduction and collection of TDS and TCS at the higher rates in case of non-filers of the income tax return for preceding two years (provided total TDS deducted / TCS collected exceeds Rs. 50,000 in each of the two preceding years). The rate of TDS/TCS shall be at the double of the specified rate or 5%, whichever is higher. These provisions shall not be applicable where the tax is required to be deducted under sections 192, 192A, 194B, 194BB, 194LBC or 194N of the Act. (w.e.f. 1st day of July 2021).</p>	

26	<p><b>NEW PROVISION (SECTION 194Q) REGARDING DEDUCTION OF TAX AT SOURCE @ 0.1% ON PURCHASE OF GOODS FROM RESIDENT:</b></p> <p>New Section 194Q is inserted for deduction of TDS by a person (whose turnover exceeds Rs. 10 crores) who is paying any sum to any resident for purchase of any goods of the value exceeding Rs. 50 lakhs in any previous year. This provision shall not be applicable where tax is deductible under any other provision of I.T Act or where tax is collectible under the provisions of section 206C other than a transaction to which sub-section (1H) of section 206C applies. The tax shall be deducted at the rate of 0.1%, which shall be increased to 5% if the seller does not provide his PAN. (w.e.f. 1st day of July 2021)</p>	
27	<p>Any change in applicable rates of Tax or any other statutory levies ( Direct / Indirect) or any new introduction of any levy by means of statute and its corresponding liability for the deliveries beyond the agreed delivery date for reasons not attributable to BHEL will be to vendors account. BHEL will not reimburse the same and any subsequent claim in this respect will be summarily rejected</p>	
28	<p><b>MSE VENDOR PREFERENCE:</b></p> <p><i>i. If L1 vendor is an MSE vendor entire enquiry will be ordered on L1 vendor.</i></p> <p><i>ii. If a Non MSE vendor is coming as L1, then L1 prices will be counteroffered on MSE vendor who is quoting price within the price band L1+15% and if they are agreeing, purchase order will be awarded for full/complete supply of total tendered value to MSE.</i></p> <p><i>iii. If more than one MSE vendors are available in the L1+15% price band then lowest of the MSE vendor will be selected for counteroffering. If lowest MSE vendor is not accepting it will be counteroffered to the next MSE vendor in the price band and so on.</i></p> <p><i>iv. Finally if none of the MSE vendor in the price band is not accepting it will be ordered on L1 non MSE vendor.</i></p> <p>Payment for MSE Indigenous vendors will be as per MSMED Act, 2006</p> <p>MSE suppliers can avail the intended benefits only if they submit along with the offer, attested/notarized copy of <i>Udyam Registration certificate</i>.</p> <p>Non-submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry, in case of any deficiency in the above required documents or in case the documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal even if submitted earlier.</p>	

29	<p><b><u>Make in India:</u></b> 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 opening of Part-II bids against this NIT.</p> <p>The 'Class-I local supplier'/ 'Class-II local supplier' shall be required to provide a declaration/certificate in this regard as per Govt. of India guidelines for Public Procurement.</p> <p>Being Package wise tender, MII preference will be applicable Package wise. Orders issued by Govt. of India with respect to Restriction under Rule 144 (xi) of GFR on procurement from bidders representing countries sharing land border will be applicable for this tender. In case of subsequent orders issued by Govt. of India regarding procurement from bidders representing countries sharing land border, the same shall be applicable even if issued after issue of this NIT</p>	
30	<p><b><u>Fraud Prevention Policy</u></b> Bidder along with its associate /collaborators /sub-contractors /subvendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <a href="http://www.bhel.com">http://www.bhel.com</a> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.</p>	
31	<p><b><u>Cartel Formation</u></b> All the firms should desist from forming cartel as the practice is prohibited under Section 3(3) (a) &amp; (d) of the competition Act 2002. If any such instance is observed during this tender will attract disciplinary action as per BHEL policies.</p> <p>The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). 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. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/guidelines.</p>	
32	<p><b><u>ARBITRATION:</u></b> Notwithstanding anything contained in any document whatsoever, all questions, matters, disputes and claims relating to and arising out of this contract, shall be referred to sole arbitrator, who shall be appointed by Head of the Unit, BHEL, HPVP, Visakhapatnam at his sole discretion. Such appointment of arbitrator shall not take place unless and until a written request for appointment of arbitrator from any of the parties to the contract has been received by Head of the Unit as aforesaid. The arbitrator shall give his reasoned award. It is a term of this</p>	

	contract that no person other than a person appointed by such Head of the Unit as aforesaid, shall act as arbitrator and if for any reason that is not possible, the matter is not to be referred to arbitration at all. The venue of arbitration shall be such place as may be Fixed by the arbitrator at his sole discretion. The award of arbitrator shall be final, conclusive binding on all the parties to the contract	
33	<b>JURISDICTION:</b> Not out of this contract including that arise out of arbitration and bank guarantees, shall be initiated, filed and tried only in the courts, tribunals and forums, situated at and having territorial jurisdiction over Visakhapatnam even though such jurisdiction also vests in courts, tribunals & forums situated elsewhere in the country	
34	<p><b><u>Force Majeure clause</u></b></p> <p>a. Notwithstanding the provisions contained in other clauses, the supplier shall not be liable for imposition of any such sanction so long the delay and/or failure of the supplier in fulfilling its obligations under the contract is the result of an event of Force Majeure. For purposes of this clause, Force Majeure means an event beyond the control of the supplier and not involving the supplier's fault or negligence and which is not foreseeable and not brought about at the instance of the party claiming to be affected by such event and which has caused the non – performance or delay in performance. Such events may include, but are not restricted to, wars or revolutions, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes excluding by its employees, lockouts excluding by its management, freight embargoes and Acts of GOD.</p> <p>b. If a Force Majeure situation arises, the supplier shall promptly notify the Purchaser/Consignee in writing of such conditions and the cause thereof within twenty-one days of occurrence of such event. Unless otherwise directed by the Purchaser/Consignee in writing, the supplier shall continue to perform its obligations under the contract as far as reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.</p> <p>c. If the performance in whole or in part or any obligation under this contract is prevented or delayed by any reason of Force Majeure for a period exceeding sixty days, either party may at its option terminate the contract without any financial repercussion on either side.</p> <p>d. In case due to a Force Majeure event the Purchaser/Consignee is unable to fulfil its contractual commitment and responsibility, the Purchaser/Consignee will notify the supplier accordingly and subsequent actions taken on similar lines described in above subparagraphs</p>	
35.	<b>Set off:</b> BHEL shall have the right to recover any money which in the sole opinion of BHEL is due from the supplier from any money due to the supplier under this Contract or any other contract or from the Security Deposit/BG furnished by the supplier under this Contract or any other contract.	

<p>36</p>	<p><b>Conflict of Interest Among Bidders/Agents:</b></p> <p>A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:</p> <ol style="list-style-type: none"> <li>a. they have controlling partner (s) in common; or</li> <li>b. they receive or have received any direct or indirect subsidy/ financial stake from any of them; or</li> <li>c. they have the same legal representative/agent for purposes of this bid; or</li> <li>d. they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or</li> <li>e. Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly! Assemblies from one bidding manufacturer in more than one bid; or</li> <li>f. In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:             <ol style="list-style-type: none"> <li>1. The principal manufacturer directly or through one Indian agent on his behalf; and</li> <li>2. Indian/foreign agent on behalf of only one principal; or</li> </ol> </li> <li>g. A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or</li> </ol> <p>In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business in the format given in Annexure III</p>									
<p>37</p>	<p><b>Linking up of Old issues:</b></p> <p>In case if you have any outstanding problem with earlier supplies, you should not link up against this enquiry or PO at later stages.</p>									
<p><b>Note.</b></p>	<ol style="list-style-type: none"> <li>1. In the event of our customer order covering this tender being cancelled /placed on hold / otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender at any stage of execution.</li> <li>2. BHEL may negotiate the L1 rate, if not meeting our budget / estimated cost. BHEL may re-float the tender opened, if L1 price is not acceptable to BHEL. Any deviation in specified commercial terms- Annexure-A, may lead to rejection of offer.</li> <li>3. BHEL <b>will not provide</b> End Use and End User Certificates for supplies of the Items covered in this enquiry.</li> <li>4. <b>Any other Techno–Commercial Terms indicated by the vendor in their offer elsewhere will be ignored. BHEL will proceed with tender evaluation as per Annexure-A only.</b></li> <li>5. BHEL reserves the right to reject offers with deviation from tender terms and condition.</li> <li>6. BHEL reserves the right to cancel the Enquiry / Tender at any stage without assigning any reasons thereof. Also, BHEL reserves the right to reject or accept one or any offer without assigning any reason</li> <li>7. <b>CONTACT DETAILS: -</b></li> </ol> <table border="1" data-bbox="373 1957 1299 2089"> <thead> <tr> <th data-bbox="373 1957 553 1995">Name</th> <th data-bbox="553 1957 895 1995">Email</th> <th data-bbox="895 1957 1062 2089">Ph. No (0891-288)</th> <th data-bbox="1062 1957 1299 1995">Remarks</th> </tr> </thead> <tbody> <tr> <td data-bbox="373 1995 553 2089"></td> <td data-bbox="553 1995 895 2089"></td> <td data-bbox="895 1995 1062 2089"></td> <td data-bbox="1062 1995 1299 2089"></td> </tr> </tbody> </table>	Name	Email	Ph. No (0891-288)	Remarks					
Name	Email	Ph. No (0891-288)	Remarks							

		Aditya Kumar	aaditya@bhel.in	1306	Commercial Related.	
		E Sainath Reddy	sainathevuri@bhel.in	1117	Technical Related.	

**Sub: Supply of Paints against PR 100010420 required for Main Fractionator Column for PFCC Unit of HRRL Barmer. (SO 2439)**

**RFQ/NIT Enquiry No.: H212300016 Dt 14.12.2023 [Two-Part Bid System]**

**Annexure I**

**Specification & QAP Details**

<b>Sl No</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Specification</b>	<b>QAP</b>
1	Matl. Code. : 180052340000 --- EPOXY HB POLYAMIDE CURED RESIN GAIL	Ltr	300	As per EIL Paint spec 6- 79-0020 (Rev- 00).Table 6.2, F-6A/B	NA
2	Matl. Code. : 180030950000 --- INORGANIC ZINC SILICATE PRIMER (F-9)	Ltr	100	As per EIL Paint spec 6- 79-0020 (Rev- 00).Table 6.3, F-9.	NA
3	Matl. Code. : 180020650000 --- THINNER FOR HIGH BUILD EPOXY RESIN MIO	Ltr	30	Thinner suitable to Paint.	NA
4	Matl. Code. : 180020750000 --- THINNER FOR TWO PACK INORGANIC ZINC SILI	Ltr	10	Thinner suitable to Paint.	NA
5	Matl. Code. : 180052240000 --- TWO PACK ACRYLIC POLYURETHANE - RAL9017	Ltr	250	As per EIL Paint spec 6- 79-0020 (Rev- 00).Table 6.2, F-2.	NA
6	Matl. Code. : 180020550000 --- Thinner for Acrylic PU finsh paint	Ltr	25	Thinner suitable to Paint.	NA

Sub: Supply of Paints against PR 100010420 required for Main Fractionator Column for PFCC Unit of HRRL Barmer. (SO 2439)

RFQ/NIT Enquiry No.: H212300016 Dt 14.12.2023 [Two-Part Bid System]

**Annexure II**  
**CHECKLIST**

<b><u>Sl No</u></b>	<b><u>Description</u></b>	<b><u>Vendor Remarks</u></b>
<u>1</u>	Whether Vendor has submitted Annexure A - ACCEPTANCE OF TECHNO - COMMERCIAL TERMS AND CONDITIONS BY THE BIDDERS	
<u>2</u>	Whether Vendor has submitted signed and Stamped: Annexure I and Specification	
<u>3</u>	Whether Vendor has submitted of Filled signed and Stamped: <b><u>Annexure III - Techno-Commercial Compliance Certificate</u></b>	
<u>4</u>	Whether Vendor has submitted of filled signed and Stamped: <b><u>Annexure IV- Unpriced Bid</u></b>	
<u>6</u>	Whether Vendor has submitted of filled signed and Stamped : <b><u>Annexure V - Declaration of Local Content by Local supplier</u></b>	
<u>7</u>	Whether Vendor has Declared list of sister / common business / management units in same / similar line of business for the quoted items in this tender in <b>Annexure VII.</b>	
<u>8</u>	Whether Vendor has submitted relevant <b>Catalogue(s)</b> / <b>Product data sheet</b> for the items quoted in this enquiry.	
<u>9</u>	Submission of PAN, GSTIN, EFT Mandate .	
<u>10</u>	Whether Vendor has submitted proof of Vendor Registration with BHEL.	

**Sub: Supply of Paints against PR 100010420 required for Main Fractionator Column for PFCC Unit of HRRL Barmer. (SO 2439)**

**RFQ/NIT Enquiry No.: H212300016 Dt 14.12.2023 [Two-Part Bid System]**

**Annexure III**

**Techno-Commercial Compliance Certificate**

Tender Document No. : H212300016 Dt. 14.12.2023

Tender Title: Supply of Paints against PR 100010420 required for Main Fractionator Column for PFCC Unit of HRRL Barmer. (SO 2439)

Bidder's Name \_\_\_\_\_

[Name and Contact Details (email & Phone)]

Bidder's Reference No. \_\_\_\_\_ Date.....

Sl. No.	Ref of Technical Specification and Quality Assurance Clause	Subject	Confirmation/ Deviation/ Exception/ reservation	Justification/ Reason

We shall comply with, abide by, and accept without variation, deviation, or reservation all Technical Specifications, Quality Assurance and Warranty requirements in the Tender Document, except those mentioned above. If mentioned elsewhere in our bid, contrary terms and conditions shall not be recognised and shall be null and void.

.....

(Signature with date)

.....

(Name and designation)

Duly authorized to sign bid for and on behalf of

.....

[name & address of Bidder and seal of company]

DA: Relevant documents like technical data, literature, drawings, and other documents

Sub: Supply of Paints against PR 100010420 required for Main Fractionator Column for PFCC Unit of HRRL Barmer. (SO 2439)

RFQ/NIT Enquiry No.: H212300016 Dt 14.12.2023 [Two-Part Bid System]

### Annexure IV

### Unpriced Bid

Sl No	Description	Unit	Quantity	Specification	Quoted / Not Quoted (Q / NQ)	GST %	HSN Code	Pack Size	Shade Offered	Shelf-Life in the Months
1	Matl. Code. : 180052340000 --- EPOXY HB POLYAMIDE CURED RESIN GAIL	Ltr	300	As per EIL Paint spec 6-79-0020 (Rev-00).Table 6.2, F-6A/B						
2	Matl. Code. : 180030950000 --- INORGANIC ZINC SILICATE PRIMER (F-9)	Ltr	100	As per EIL Paint spec 6-79-0020 (Rev-00).Table 6.3, F-9.						
3	Matl. Code. : 180020650000 --- THINNER FOR HIGH BUILD EPOXY RESIN MIO	Ltr	30	Thinner suitable to Paint.						
4	Matl. Code. : 180020750000 --- THINNER FOR TWO PACK INORGANIC ZINC SILI	Ltr	10	Thinner suitable to Paint.						
5	Matl. Code. : 180052240000 --- TWO PACK ACRYLIC POLYURETHANE - RAL9017	Ltr	250	As per EIL Paint spec 6-79-0020 (Rev-00).Table 6.2, F-2.						
6	Matl. Code. : 180020550000 --- Thinner for Acrylic PU finsh paint	Ltr	25	Thinner suitable to Paint.						



**BHARAT HEAVY ELECTRICALS LIMITED**  
(A Government of India Undertaking)  
Heavy Plates & Vessels Plant,  
Visakhapatnam – 530 012, A.P. INDIA

Phone : 0891-288-1306 / 1311

E-mail : [aaditya@bhel.in](mailto:aaditya@bhel.in) ;  
[mvrmurthy@bhel.in](mailto:mvrmurthy@bhel.in)

## Annexure V

### **Declaration of Local Content by Local supplier**

**Subject:** Public Procurement (Preference to Make In India)

**References:**

Preference to Make in India including counter offering will be as per the Public Procurement (Preference to Make in India), Order 2017 available in the following links:

<https://dipp.gov.in/publicprocurements>

[http://dipp.nic.in/sites/default/files/publicProcurement\\_MakeinIndia\\_15June2017.pdf](http://dipp.nic.in/sites/default/files/publicProcurement_MakeinIndia_15June2017.pdf)

[http://dipp.nic.in/sites/default/files/Revised-PPP-MII-Order-2017\\_28052018.pdf](http://dipp.nic.in/sites/default/files/Revised-PPP-MII-Order-2017_28052018.pdf)

[https://dipp.gov.in/sites/default/files/PPP-MII%20Order%20dt%2029th%20May%2019\\_0.pdf](https://dipp.gov.in/sites/default/files/PPP-MII%20Order%20dt%2029th%20May%2019_0.pdf)

<https://dipp.gov.in/sites/default/files/PPP%20MII%20Order%20dated%204th%20June%202020.pdf>

We hereby declare with reference to above subject and references that M/s -----(Tick whichever is applicable as below)

"Class-I local supplier" meeting the requirement of minimum local content equal to 50% (fifty percent) or more defined in the above government notification for the goods and services  
(or)

"Class-II local Supplier" meeting the requirement of local content 20% to less than 50% (fifty percent) defined in the above government notification for the goods and services  
(or)

Non Local supplier (If not belonging to Class-I & Class-II)

Please mention the details against the following:

Enquiry no: H212300016 Dt. 16.12.2023

Type of Supplier (Class-I/Class-II) .....

Product: Paints and Thinner

Project: Main Fractionator Column for PFCC Unit of HRRL Barmer. (SO 2439)

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

We also understand that the 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.

Authorized Signature M/s-----  
(Signature and seal)

Place:.....

Date:.....

**Sub: Supply of Paints against PR 100010420 required for Main Fractionator Column for PFCC Unit of HRRL Barmer. (SO 2439)**

**RFQ/NIT Enquiry No.: H212300016 Dt 14.12.2023 [Two-Part Bid System]**

**Annexure –VII**

Declare of sister / common business / management units in same / similar line of business for the quoted items in this tender.

**Bidder details:**

NIT Reference : **H212300016 Dt. 14.12.2023.**

Sl. No	Name of Sister / Common business / Management Units	Nature of the business with BHEL

## 6.0 PAINT MATERIALS

Paint manufacturers shall furnish the characteristics of all paints materials on original printed literature, alongwith the test certificate for all specified characteristics given in this specification. All the paint materials shall be of first quality and conform to the following general characteristics as per the tables 6.1, 6.2, 6.3 and 6.4.

### PAINT MATERIALS

TABLE No. 6.1 PRIMERS

Sl. No.	DESCRIPTION	P-2	P-4	P-6	P-7
1	Technical name	Chlorinated rubber Zinc Phosphate primer.	Etch primer/wash primer	Epoxy zinc phosphate primer	ZINGA, LOCKTITE or ZRC cold galvanizing
2	Type and composition	Single pack, air drying chlorinated rubber based medium plasticised with unsaponifiable plasticizer, pigmented with zinc phosphate.	Two pack polyvinyl butyral resin medium cured with phosphoric acid solution pigmented with zinc tetroxy chromate.	Two component polyamine cured epoxy resin medium, pigmented with zinc phosphate.	One pack Synthetic Resin based zinc galvanizing containing min 92% of electrolytic zinc dust of 99.95% purity.
3	Volume Solids %	40 ±3	10±1	50±1	37%
4	DFT (Dry Film thickness) per coat in microns	40-45	8-10	40-50	40-50μ
5	Theoretical covering capacity in M <sup>2</sup> /coat/ litre	8-10	8-10	8-10	4m <sup>2</sup> /kg
6	Weight per litre in kgs/litre	1.3±0.05	1.2±0.05	1.4±0.05	2.67 kg at 15°C
7	Touch dry at 30°C (minimum)	30 minutes	2 hrs.	After 30 min.	10 minutes
8	Hard dry at 30°C (maximum.)	8 hrs.	24 hrs.	8 hrs	24 hrs.
9	Overcoating interval	Min.: 8 hrs	Min: 4-6 hrs.	Min.:8hrs.	Min.:4 hrs
10	Pot life at 30°C for two component paints	Not Applicable	Not applicable	6 - 8 hrs.	Unlimited
11	Temperature (Resistance (minimum)	60°C Dry service	NA Dry service	80°C Dry service	50°C Dry service

PAINT MATERIALS

TABLE No. 6.2 FINISH PAINTS

Sl. No	DESCRIPTION	F-2	F-3	F-6A/B	F-6C	F-7
1	Technical name	Acrylic Polyurethane finish paint	Chlorinated rubber based finish paint	Epoxy-High Build coating	Solvent less epoxy coating	High build coal tar epoxy coating.
2	Type and composition	Two-pack aliphatic isocyanate cured acrylic finish paint.	Single pack plasticised chlorinated rubber based medium with chemical and weather resistant pigments.	F-6A Two-pack Aromatic amine cured epoxy resin medium suitably pigmented. F-6B: polyamine cured epoxy resin medium suitably pigmented	Two pack, cured with Amine Adduct; catalyzed epoxy resin suitably pigmented	Two pack polyamide cured epoxy resin blended with coaltar medium, suitably pigmented
3	Volume Solids %	40 ± 3	38±2	60±3	99±1	65±3
4	DFT (Dry Film thickness) per coat in microns	30-40μ	30-40	100-125μ	200-500	100-125μ
5	Theoretical covering capacity in M <sup>2</sup> /coat/litre	11-15	11-15	5-6	2-3	5.2-6.5
6	Weight per liter in kgs/litre	1.15±0.03	1.15±0.03	1.42±0.03	1.40±0.03	1.40±0.03
7	Touch dry at 30°C	30 minutes	30 minutes.	3 hrs.	3 hrs.	4 hrs.
8	Hard dry at 30°C (max) Full cure at 30°C (for immersion/ high temperature service)	8 hrs	8 hrs	16 hrs 5 days	16 hrs	48 hrs 5 days
9	Over-coating interval at 30 °C	Min.12 hrs.	Min.: Overnight	Min.: Overnight Max.: 5 days	Min.: 8 hrs. Max.: 48 hrs.	Min.: 24 hrs Max.: 5 days.
10	Pot life (approx.) at 30°C for two component paints	6-8 hrs.	Not applicable	4-6 hrs	30 minutes	4-6 hrs.
11	Temperature Resistance (minimum)	80 °C Dry service min	60 °C Immersion service	80°C Dry service	120°C(Dry service), 50°C (Immersion service)	125°C Immersion service

PAINT MATERIALS

TABLE No. 6.3 FINISH PAINTS

Sl. No	DESCRIPTION	F-8	F-9	F-11	F-12
1	Technical name	Self priming type surface tolerant high build epoxy coating (complete rust control coating).	Inorganic zinc silicate coating	Heat resistant synthetic medium based two pack Aluminium paint suitable upto 250°C dry temp.	Heat resistant silicone Aluminium paint suitable upto 500°C dry temp.
2	Type & composition	Two pack epoxy resin based suitable pigmented and capable of adhering to manually prepared surface and old coating.	A two pack air drying self curing solvent based inorganic zinc silicate coating with minimum 80% zinc content on dry film. The final cure of the dry film shall pass the MEK rub test.	Heat resistant synthetic medium based two pack Aluminium paint suitable upto 250°C.	Single pack silicone resin based medium with Aluminium flakes.
3	Volume Solids %	78±3	60±3	38±0.03	20±2
4	DFT (Dry Film thickness) per coat in microns	100-125	65-75µ	15-20µ	15-20µ
5	Theoretical covering capacity in M <sup>2</sup> /coat/litre	6.0-7.2	8-9	10-12	8-10
6	Weight per liter in kgs/litre	1.41±0.03	2.3±0.03	0.95±0.03	1.00±0.03
7	Touch dry at 30°C (maximum)	3 hrs.	30 minutes.	3 hrs.	30 minutes.
8	Hard dry at 30°C (maximum)	24 hrs	12	12 hrs	24 hrs
	Full cure 30°C (for immersion /high temperature service)	5days	NA	NA	NA
9	Over-coating interval	Min.: 10 hrs	Min.: 12 hrs.at 20°C & 50 % RH	Min. 24 hrs	Min.: 24 hrs
10	Pot life at 30°C for two component paints	90 minutes.	4-6 hrs.	Not applicable	Not applicable
11	Temperature Resistance (minimum)	80 °C Dry service	400 °C Dry service	250°C Dry service	500°C Dry service

PAINT MATERIALS

TABLE No. 6.4 FINISH PAINTS

Sl. No	DESCRIPTION	F-14	F-15	F-16	F-17
1	Technical name	Polyamine cured coal tar epoxy	Two-component Epoxy phenolic coating cured with Polyamine adduct hardner system (primer + intermediate coat + finish paint)	Ambient temperature curing Poly Siloxane coating/High build cold applied inorganic copolymer based aluminium coating suitable for under insulation coating of CS and SS piping for high temperature service.	Two component solvent free type high build epoxy phenolic/Novalac epoxy phenolic coating cured with Polyamine adduct hardner system
2	Type & composition	Specially formulated polyamine cured coal tar epoxy suitable for application under insulation	Two pack ambient temperature curing epoxy phenolic coating system suitable for application under insulation of CS/SS piping	Amercoat 738 from PPG Protective & Marine Coatings or Intertherm 751 CSA of International (Akzo Nobel). Note: 6	Two component solvent free type high build epoxy phenolic/Novalac epoxy phenolic coating cured with Polyamine adduct hardner system
3	Volume Solids %	70±3	70±3	60±2	98-100
4	DFT (Dry Film thickness) per coat in microns	100-125	75-100	75-100	125- 150
5	Theoretical covering capacity in M <sup>2</sup> /coat/ litre	5-8	4-5	7.0- 9.0	6.5 - 8
6	Weight per liter in kgs/litre (mix paint)	1.45±0.03	1.65±0.03	1.3	1.7
7	Touch dry at 30°C (maximum)	4 hrs	3 hrs	1 hr	2 hrs
8	Hard dry at 30°C (maximum) Full cure 30°C (for immersion /high temp. service)	24 hrs 168 hrs (7 days)	24 hrs 168 hrs (7 days)	16 hrs -	24 hrs 168 hrs (7 days)
9	Over-coating interval	Min. 6 hrs Max.5 days	Min. 36 hrs Max.21 days	Min.16 hrs Max. Not applicable	Min. 16 hrs Max.21 days
10	Pot life at 30°C for two component paints	4 hrs	4-6 hrs	1 hr	1 hr
11	Temperature Resistance	-45°C to 125°C under insulation And immersion	-45°C to 150°C under insulation & immersion (Note: 5)	a) upto 400 °C for C. Steel & S. Steel for Intertherm 751 CSA b) upto 480 °C for C. Steel & upto 600 °C for S. Steel for Amercoat 738	-45°C to 150°C for immersion service

**NOTES** (for tables 6.1 to 6.4):

1. Covering capacity and DFT depends on method of application. Covering capacity specified above are theoretical. Allowing the losses during application, min specified DFT should be maintained.
2. All primers and finish coats should be cold cured and air drying unless otherwise specified.
3. All paints shall be applied in accordance with manufacturer's instructions for surface preparation, intervals, curing and application. The surface preparation, quality and workmanship should be ensured. In case of conflict between this specification and manufacturer's recommendation, the same shall be clarified through EIL SMMS department.
4. Technical data sheets for all paints shall be supplied at the time of submission of quotations.
5. F-15: Two-component Epoxy phenolic coating cured with Polyamine adduct hardner system (primer + intermediate coat + finish paint) suitable upto 225°C (Intertherm 228 from M/s Akzo Nobel Coatings India Pvt Ltd. Bangalore). For all other companies, the temperature resistance shall be a maximum of 150°C.
6. F-16: Ambient temperature curing epoxy poly siloxane Coating or high build cold applied inorganic co-polymer based aluminium coating.

**Amercoat 738** from PPG Protective & Marine coatings. Mumbai, is suitable up to 480°C for CS surfaces and 600°C for SS surfaces.

**Intertherm 751** from Akzo Nobel Coatings India Pvt Ltd. Bangalore, Inorganic co-polymer cold applied Aluminium spray coating is suitable upto 400°C of CS & SS surfaces.