

**M/S. OPEN TENDER****DUE DATE****29-12-2022**

BHEL

HARIDWAR249403

**Vendor Code****00001**

INDIA

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SL	MATERIAL CODE ITEM DESCRIPTION	QUANTITY	UNIT	LOTNO	LOT DELIVERY QTY SCHEDULE
1	W90311938035	28728	KG	1	3591 28/02/23 <a href="#">Khurja unit-1</a>
	DRG: - REV:			2	3591 30/04/23 <a href="#">Patratu unit-1</a>
	FIRE RESISTANT FLUID (			3	3591 31/07/23 <a href="#">Patratu -unit-2</a>
	TRIXYLENYL PHOSPHATE (TXP),			4	3591 31/08/23 <a href="#">Khurja unit-2</a>
	CAS NUMBER 25155-23-1)			5	3591 30/09/23 <a href="#">Sagardighi</a>
	SPEC: ST22007 REV: 06			6	3591 30/11/23 <a href="#">Patratu unit-3</a>
	-			7	3591 31/12/23 <a href="#">Udangudi-unit-1</a>
	-			8	3591 31/03/24 <a href="#">Udangudi unit-2</a>

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**\*\* IMPORTANT:** This enquiry is 2 part tender. Techno-Commercial bid (Part-1) & Price Bids (Part-2) should be submitted in separate envelopes. These two envelopes should be submitted in a common sealed envelope. Techno-Commercial Bid shall contain detailed Technical Specification, Drawings Technical documents, Catalogues, taxes & duties, payment terms, delivery period, Validity of offer, Replica of Price Bid (Copy of price bid without price part) etc. The confirmation to the special terms & conditions must be submitted alongwith Techno-Commercial bid.

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**Special Instructions:**

1. The items are required for Khurja, Udangudi, Patratu and Sagardighi projects.
  2. "Special Conditions of tender Enquiry" and "GISTC" Revision-6 is to be necessarily filled and submitted alongwith the offer.
  3. Kindly ensure the timely submission of your offer (1345 HRS Ist by due date) and note that late offer will not be entertained under any circumstances as per BHEL policy.
  4. The offer / bid shall be signed and stamped on each page by authorized representative of the bidder.
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**General Instructions:**

Please visit our site [www.bhelhwr.co.in](http://www.bhelhwr.co.in) for latest version of General Instructions and Standard Terms & Conditions (GISTC) for Tender Enquiries. All the bidders/vendors must ensure compliance of latest GISTC. Terms & Conditions printed overleaf of this Standard Tender enquiry format are null & void.

For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued

MATERIAL CODE	QUANTITY	UNIT	LOTNO
ITEM DESCRIPTION			

after issue of this NIT but before finalization of contract / PO / WP 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.

Default purchase preference under Make in India order shall be 20% to suppliers with default minimum local content of 50% for all items / works / services.

For further details, please refer latest version of GISTC.

Procurements where the Estimated value to be procured is less than Rs. 5 lakhs shall be exempted from Public Procurement (Preference to Make in India),

Order 2017 dated 15.06.2017 & 28.05.2018

Kindly produce GeM seller Id with documentary proof along with your Bids/offers for case Value more than 25 Lacs.

**MANOJ KUMAR**  
**Manager**

**CORRIGENDUM****Buyers Specific Terms & Conditions****Item Name: Fire Resistance Fluid****Project: Udangudi unit-1 & 2, Patratu unit-1,2 &3, Khurja Unit-1 & 2 & Sagardighi****A. SCOPE OF ENQUIRY:**

E-bids on GeM are invited from bidders for the supply of **Fire Resistance Fluid (TRIXYLENYL PHOSPHATE (TXP) CAS NUMBER 25155-23-1** for Khurja, Udangudi, Patratu and Sagardighi as per requirement mentioned below:

Sl. No.	Project	Material Code & Item Description	Total Quantity	LOT Quantity	Revised Delivery Requirement
1	1X660MW Sagardighi Project	Material Code W90311938035 Fire Resistance Fluid (TRIXYLENYL PHOSPHATE (TXP) CAS NUMBER 25155-23-1) SPEC: ST22007 REV: 06	3591 Kg	3591 Kg (15 Drums)	30/09/2023
2	2X660MW Khurja unit-1 & 2 Project	Material Code W90311938035 Fire Resistance Fluid (TRIXYLENYL PHOSPHATE (TXP) CAS NUMBER 25155-23-1) SPEC: ST22007 REV: 06	7182 Kg	3591 Kg (15 Drums)	28/02/2023
				3591 Kg (15 Drums)	31/08/2023
3	2X660MW Udangudi unit-1 & 2 Project	Material Code W90311938035 Fire Resistance Fluid (TRIXYLENYL PHOSPHATE (TXP) CAS NUMBER 25155-23-1) SPEC: ST22007 REV: 06	7182 Kg	3591 Kg (15 Drums)	31/12/2023
				3591 Kg (15 Drums)	31/03/2024
4	3X8000MW Patratu unit-1,2&3 project	Material Code W90311938035 Fire Resistance Fluid (TRIXYLENYL PHOSPHATE (TXP) CAS NUMBER 25155-23-1) SPEC: ST22007 REV: 06	10773 Kg	3591 Kg (15 Drums)	30/04/2023
				3591 Kg (15 Drums)	31/07/2023
				3591 Kg (15 Drums)	30/11/2023
<b>Total Quantity</b>			<b>28728 Kg</b>	<b>28728 Kg (120 Drums)</b>	

**Buyers Specific Terms & Conditions****Item Name: Fire Resistance Fluid****Projects: Udangudi unit-1 & 2, Patrattu unit-1,2 &3, Khurja Unit-1 & 2 & Sagadighi**

Offer must be sent in two separate sealed envelopes containing Techno-commercial offer in one envelope marked "TECHNO-COMMERCIAL BID" and prices in second envelope marked "PRICED-BID". Both the envelope must be contained in the main envelope. Enquiry No., Name of Vendor and due date to be marked on all the envelopes. Please fill this Annexure –A & duly signed and stamped copy of this is to be submitted by you along with your offer.

General Instructions and Standard Terms & Conditions (GISTC), Revision: 6" for bidding against tender enquiry are a part of this enquiry and are enclosed. An endorsed copy of the same is to be submitted as a token of acceptance.

Sl. No.	Terms	Description	Bidder's Confirmation
1.	Special Instruction	This is global tender and bidders (local/non-local) are allowed to participate in this tender. However preference to class-1 local suppliers shall be given as per applicable guideline of PPP-MII order.	
2.	Submission of Offer	The offer/bid shall be signed and stamped on each page by authorized representative of the bidder.	
3.	Special Term	Techno-commercial terms as confirmed above in Annexure-B shall supersede the similar terms & conditions found contradictory written elsewhere in the offer. Kindly confirm the same.	
4.	<b>Documents Checklist:</b>	Kindly confirm that the following documents have been submitted along with your offer: <ol style="list-style-type: none"> <li>1. Requisite EMD</li> <li>2. Pre-Qualification Requirements (as defined in <b>Annexure-1</b>).</li> <li>3. Any other document as specified in "<b><u>Buyers Specific Additional Terms &amp; Conditions in addition to GTC</u></b>"</li> </ol>	
5.	<b>Pre-Qualification Requirements</b>	The Pre-Qualification Requirements have been compiled and placed at <b>ANNEXURE-1</b> . All the bidders should ensure submission of complete details and documents as called for in these requirements. The Offers submitted by the bidders would be scrutinized with respect to Pre-Qualification Requirements first. Techno-Commercial offer of only those bidders shall be evaluated who meet the Pre-Qualification Requirements.	
6.	<b>Special Instruction of Technical requirement</b>	1. Quantity of FRF has been updated corresponding to nearest whole number of drums considering supply of FRF 239.4 Kg per drum.	
		2. <b><u>For Khurja unit-1 &amp; 2, Udangudi- 1 &amp; 2, Patrattu-1 ,2 &amp; 3 and Sagardighi projects:</u></b> Please note that purchase order is to be placed for 15 no. drums tentatively against each TG unit irrespective of vendor. Vendor to provide details of their drum size.	
		3. Drums of FRF should be supplied on wooden pallets to avoid damage of drums during transit. Drums used for packing of FRF should have adequate strength for safe transportation and storage of FRF. Confirmation for the same to be furnished by the vendors in their offer.	
		4. Please submit priced offer of FRF as per tender enquiry unit i.e.	

			"rate Per KG".	
		5.	Please provide the quantity of Fire Resistant Fluid (FRF) filled in one drum in Kg.	
		6.	Please provide the conversion factor for converting quantity from liters to Kg.	
		7.	Please quote your valuable offer as per BHEL specifications – ST22007 Rev. 06.	
		8.	Please specifically confirm to comply all the requirements as mentioned in ST22007 Rev. 06	
		9.	Kindly ensure to furnish all relevant technical /quality documents to meet the requirement.	
		10.	Please submit storage & preservation manual applicable for Control Fluid along with your enquiry taking care of : Material storage condition (open area or closed shed or semi-closed shed), stacking of drum etc.	
		11.	<b>For Khurja, Udangudi, Patratu and Sagardighi projects:</b> Only TRIXYLENYL PHOSPHATE (TXP), CAS NUMBER 25155-23-1 TYPE Fire Resistant Fluid as per ST 22007 Rev .06 is acceptable. All the vendors to offer TRIXYLENYL PHOSPHATE (TXP), CAS NUMBER 25155-23-1 TYPE FRF ONLY.	
7.	Packing Details	Please inform following packing details: 1. Size of Drum: [OD X Height] 2. Net weight of each Drum (i.e. FRF in each drum in Kg): Gross weight of each Drum:		
8.	Basis of quotation	Confirm that Prices have been quoted on <u>Ex-Works with Freight pre-paid</u> basis up to Khurja, Patratu, Udangudi and Sagardighi projects. Please mention here the applicable GST rate quoted by you. The goods must be dispatched through any BHEL approved transporters which are posted at our website <a href="https://hwr.bhel.com">https://hwr.bhel.com</a> . Please note that if you dispatch the material by any BHEL un-approved transporter then you will be required to furnish the MRC (Material Receipt Certificate) / Receipted GR from "BHEL Site"/ "BHEL Authorized Agency" (confirming receipt of item at delivery address as mentioned above). No demurrage charges would be borne by BHEL. Kindly confirm that the prices have been quoted on firm basis. The offer of the vendors not quoting firm prices is likely to be rejected by BHEL. Transit insurance would be arranged by BHEL. Please send your offer keeping this in view. The price comparison will be on the basis of total cost involved for delivery up to Project Sites. Offers shall be loaded (if required) for applicable duties/taxes and other charges involved for delivery up to Site as per BHEL practice/ statutory rates. The evaluation currency for this Tender shall be "INR".		
9.	Validity	Confirm that validity of the offer shall be 120 days from the due date of opening of Techno-Comm. Offers. BHEL reserves the right to reject any or all quotations, quoting validity less than 120 days.		
10.	Evaluation criteria	Evaluation shall be done based on total landed cost (for complete quantity for all four projects) up to BHEL Project site considering total quantity together.  Please note that for evaluation prices will be considered on "per		

		KG” basis. Vendor shall have to quote prices on “Per KG” basis.  Please confirm.			
		However, PO will be placed for total quantity of FRF (in Kg) coming 15 no. drums tentatively. Bidder should be ready to accept PO with increased or decreased quantity accordingly. Please confirm.			
11.	Confirmation to General Instructions and Standard Terms & Conditions (GISTC), Version June-2021, Revision :06	Please submit signed and stamped copy of General Instructions and Standard Terms & Conditions (enclosed) as your acceptance to these terms and conditions.  Deviation to “General Instructions and Standard Terms & Conditions, Revision 6”, if any, shall be submitted along with offer in separate documents.  Please note that in case no- deviation sheet of “General Instructions and Standard Terms & Conditions, Revision : 6”, is received along with offer, it will be presumed that all terms and conditions mentioned in “General Instructions and Standard Terms & Conditions, Revision : 6”, shall be acceptable to you and your offer will be processed accordingly.			
12.	<b>MDCC clause</b>	Material shall be dispatched only after issue of material dispatch clearance certificate (MDCC) by BHEL. All test certificates and relevant documents are to be sent to BHEL before dispatch of material for issue of MDCC, which will be issued after review of test certificates etc. MDCC will be issued within 07 days of receipt of these documents once found complete in all respects. In case of any delay on account of BHEL in issuing MDCC, delivery shall be extended by no. of days in excess of 7 days taken by BHEL in issuing MDCC and delays shall be dealt on merit basis. Material is to dispatched within 07 days of receipt of MDCC from BHEL without waiting for PO amendment.			
13.	<b>Insurance</b>	Please note that transit insurance of materials shall be in BHEL scope only. Please quote your offer accordingly.			
14.	<b>Quality Requirements</b>	Testing and Certification as per ordering specifications. Please confirm.			
15.	<b>Guarantee</b>	Kindly confirm that Guarantee for the supplied FRF against all manufacturing defects for a period of “ <b>24 months from the date of shipment of FRF</b> ”. In case of any failure or trouble reported from site, the supplier should depute their representative immediately to attend the problem and replace the defective component/part if required, without any additional cost to BHEL.			
		Please note that offers with guarantee period lesser than above mentioned guarantee period may result in rejection of the offer.			
16.	<b>Delivery Period</b>	<b>Bidders are requested to quote their best possible delivery period</b> in terms of months/weeks from date of PO/manufacturing clearance/ documents approval.			
		<b>Project name</b>	<b>Project Quantity</b>	Possible delivery in number of weeks/months From the date of Purchase Order/documents approval/BOM approval.	
		Sagardighi	3591 Kg		

		Khurja	7182 Kg		
		Udangudi	7182 Kg		
		Patratu	10773 Kg		
		Material is required as per delivery schedule mentioned in the enquiry. However, you are requested to offer your best possible delivery in number of weeks/months from the date of Purchase Order/documents approval.			
17.	<b>Penalty / LD Clause :</b>	Penalty for Late Delivery would be applicable @0.5% of the "lot wise order value" per week of delay or part thereof subject to a maximum of @10% of the "lot wise order value". The date of GR would be treated as the date of delivery for penalty purposes.			
		The date of LR/GR would be treated as the date of delivery for penalty purposes.			
		<b>Loading for deviation in penalty for LD clause: -</b> Please note that, in case of deviation in penalty clause, BHEL will evaluate your offer after loading on account of deviation in penalty as per BHEL rules/policy. Loading will be done to the extent by which penalty clause is not agreed.			
18.	<b>Payment Terms</b>	<b>Payment terms:</b> 100% payment shall be made after receipt of material at projects site. Receipted LR from BHEL to be submitted by vendor.			
		<b>Mode of Payment:</b> The payment may be claimed by submitting receipted GR along with bill thru bank or directly to BHEL by submitting receipted GR & billing documents. In case of payment through bank, all bank charges shall be on either side i.e. your bank's charges shall be to your account and our bank's charges shall be to our account. In case documents are presented directly to our nominated Banks, bank charges shall be to your account.			
		<b>Loading for Deviation in Payment terms:</b> In case of deviation in above mentioned payment term, your offer would be evaluated with loading as per BHEL rules/policy.			
19.	Arbitration, Risk Purchase & FORCE AJEURE	Kindly confirm Arbitration, Risk Purchase & Force Majeure shall be applicable as per GISTC (copy enclosed).			
20.	<b>Quantity Variation</b>	BHEL reserves the right to cancel tender or reject any or all the quotations without assigning any reasons thereof. BHEL also reserves the right to Increase or decrease the tendered quantities. Vendors should be prepared to accept order for reduced Quantity without any extra charges. Vendor should also be prepared for giving discount in case of Increase in Quantity.  Vendor has to take dispatch clearance from BHEL before starting supplies of item. In case ordered quantity is reduced, then payment shall be made accordingly as per decreased quantity. Kindly confirm.			
21.	Deficiencies and Defective Supplies	Should, any deficiencies be established / suppliers be proved (found) defective, the same shall have to be made good / replaced by the suppliers under "Free of Charge" invoice, at suppliers cost, risk and responsibility.			
22.	General terms	Pl. Confirm that the prices will remain firm during the entire validity and execution of the Project.			
		Confirm that there is no deviation with respect to BHEL Specifications.			

		<p>However, deviations, if any, are to be listed as a separate attachment. The additional price, if any, for withdrawal of these deviations must be provided. The offers that do not meet the substantial requirements of our enquiry are liable to be ignored. The bidders shall be deemed to comply with all the requirements of bidding documents except for listed deviations without any extra cost irrespective of any mention to the contrary anywhere else in the bid.</p>	
		<p>Please note no revision in the prices or submission of supplementary price bid will be allowed during the validity of the offer. However if there is any change by BHEL w.r.t. original specifications/ requirement/ scope/terms and conditions, the bidders may be asked by BHEL to submit only the price impact bid for such changes only.</p>	
		<p>All envelopes to be marked with whether “Priced Bid” (Part – 2) or “Un-Priced Bid Cum Techno-Commercial Bid” (Part – 1). <b>The replica of Priced Bid (without prices) would be necessarily submitted along with Part-1 of the offer.</b></p>	
		<p>BHEL also reserves the right to Increase or decrease the tendered quantities. Vendor should be prepared to accept order for reduced Quantity without any extra charges. Vendor should also be prepared for giving discount in case of Increase in Quantity</p>	
		<p>Please note that in unlikely event of delay in dispatches (for reasons attributed to either side) your invoices would be processed after suitable deduction as per PO clause. Any issue/ dispute regarding deduction of penalty for LD can be settled later on. This would help in earlier processing of invoice.</p>	
23.	<b>Right of Acceptance:</b>	<p>BHEL reserves the right to reject any or all the quotations without assigning any reasons thereof. BHEL also reserves the right to Increase or decrease the tendered quantities. Vendors should be prepared to accept order for reduced Quantity without any extra charges. Vendor should also be prepared for giving discount in case of Increase in Quantity.</p>	
24.	<b>Order Acceptance:</b>	<p>In case of ordering, Ink signed order acceptance shall be furnished within 15 days of receipt of purchase order. In case, order acceptance is not received within 15 days of order placement, PO will be assumed to be deemed accepted by vendor.</p>	
25.	<b>Details of Contact Person</b>	<p>Details of Contact person Name, Designation, Department complete postal, E-mail address &amp; Fax no, phone, Mobile no. to be mentioned.</p>	
26.	<b>Action against Bidders / vendor / supplier / contractor in case of default</b>	<p>In order to protect the commercial interests of BHEL, BHEL shall take action against supplies / 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.</p> <p>Suspension of Business Dealings could be in the form of “Hold” or “Banning” a supplier/ contractor or a bidder and shall be as per “Guidelines for Suspension of Business Dealings with Suppliers/ Contractors” available at BHEL’s website <a href="https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors">“https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors”</a></p>	
27.	<b>Despatch documents</b>	<p><b>Following documents to be enclosed with dispatch documents of this item:</b></p> <p>a) Test certificates and guarantee certificates.</p> <p><b>Submission to BHEL-HEEP Haridwar of invoices for payment for material</b></p>	



		<b>shall be done along with:</b> a) Tax Invoice b) Original GR c) Packing list d) Test Certificates/Inspection Reports (TC/IR) e) Guarantee Certificate f) Original GST compliance certificate. <b>Kindly submit original GR to BHEL HEEP Haridwar for end customer billing.</b>	
28.	Sharing of Specification ST22007 Rev.06:	bidders shall submit endorsed copy of attached FCA to get soft copy of Specification ST22007 Rev.06.  Offers of those bidders will be considered for further processing which have submitted endorsed copy of FCA and cleared the technical scrutiny.	
29.	<b>Reverse Auction</b>	Please confirm your participation in Reverse Auction as per guidelines as available on BHEL portal for this tender. "BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on <a href="http://www.bhel.com">www.bhel.com</a> ) for this tender." RA shall be conducted among all the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder does not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking. The detailed guidelines and process of RA are available on our website linked as - <a href="http://www.bhel.com/index.php/vender">http://www.bhel.com/index.php/vender</a>	

#### **EARNEST MONEY DEPOSIT (EMD)**

1.1 Interested bidders must submit their offer along with the following Earnest Money Deposit (EMD) in a separate sealed envelope:

Details	Amount In INR	Amount in Foreign Currency	Type
EMD	INR 2,00,000/- (INR two Lakh)	Foreign currency equivalent to INR 2,00,000/-	Refundable

1.2 The EMD should be submitted in the form of demand draft / Pay Order/ cash (as permissible under income tax act). The Drafts shall be drawn in favor of "**BHEL Hardwar**". In case of foreign bidders, e-payment is also acceptable. For e-payment, RTGS details are as mentioned below:

Bank Details	SWIFT Details of bank	Contact Details of Banker
STATE BANK OF INDIA RANIPUR BRANCH, OPP: BHEL MAIN GATE, SECTOR-5, RANIPUR, HARIDWAR, UTTRAKHAND INDIA; PIN CODE : 249403	SWIFT NO: SBININBB225 CC ACCOUNT NO: 10667995458 IFSC CODE: SBIN0000586	Name: Sh. Sudhir Sharma Design: Chief Manager (IBD) Contact No. +91 1334 224201 +91 1334 226125 Fax: +91 1334 226512

1.3 The suppliers who are already registered in PMD (product Material Directory) of BHEL, HEEP Haridwar for supply of this item are exempted from submission of EMD.

#### **SPECIAL NOTE FOR BIDDERS:**

Following documents are an integral part of this tender enquiry and endorsed copies of these documents (duly signed and stamped on each page, as a token of acceptance) are to be uploaded along with offer on e-procurement portal.

1. Please submit signed & Stamped copy (each page) of duly filled of confirmation column of “Buyers Specific Terms & Conditions (Annexure-A)” and its clause wise supporting documents where required.
2. Please submit signed & stamped copy (each page) of PQR documents (Annexure-1) with proper filled information and related supporting documents as mentioned in PQR.
3. EMD and proof of submitting EMD/exemption proof as applicable in line with GEM GTC.
4. Please submit signed & stamped copy (each page) of FCA documents for obtaining BHEL specification ST22007 Rev. 06 from BHEL for subject NIT with proper filled information and related supporting documents as mentioned in FCA.
5. Bidders to note that quantity required for specific project is to be procured from same vendor and where project is having more than one unit then FRF for all units of that project is to be procured from same vendor.
6. Signed & Stamped copy (each page) of GISTC (Version June- 2021, Rev. 06).
7. Any other document required to be submitted as per your offer.
8. Catalog / Leaflet of the Equipment / Instrument.

**Pre-Qualification Requirements for “Fire Resistant Fluid”**

Sl. No.	Pre-qualification requirements	Vendor's Response
1	The vendor should have the experience of manufacturing, testing & supply of Fire Resistant Fluid (FRF) i.e. Triaryl Phosphate Ester (ISO-L-HFDR according to ISO 6743/4) having CAS No.-25155-23-1. The vendor to confirm and inform the details of offered FRF.	
2	Offered FRF should have been used as pressure transmitting medium in turbine governing system to operate electro hydraulic actuators of steam valves. The vendor to confirm.	
3	Physical & chemical properties of offered FRF shall be as per Annexure-1 (In line with Table A of Clause No.2.12 of ST22007). The vendor to confirm & furnish the details of properties along with test reports.	
4	Offered grade of FRF should be approved grade of Siemens, Germany <b>or</b> from any other OEM of steam turbine rating of 250 MW or above (like G.E, Toshiba and MHI etc.). In this regard, the vendor to furnish the OEM approval, if OEM is other than Siemens, Germany.	
5	Offered FRF should be in successful operation at least at two steam turbine unit having name plate rating 250 MW or above for a period of minimum one year as on date of issuance of enquiry. The vendor to confirm & furnish the following details:	
i	Name of Supplier	
ii	Brand name of FRF	
iii	Purchase Order No. & Date	
iv	Client name and it's address	
v	Name of the power station and its Location	
vi	Name plate rating of steam turbine unit in MW	
vii	Name, designation, e-mail ID & Phone No. of the responsible person in client's organization	
viii	Quantity of supplied FRF	
ix	Years of successful operation as on date of issuance of enquiry	
6	In case, the vendors are referring the successful operation experience of client other than BHEL Haridwar, then the vendor shall have to furnish the Client/End User certificate. The client/end user certificate should not be prior to 01.01.2014 and contain the following details: i. Name of supplier ii Brand name of FRF iii Purchase order No. iv. Name of power plant & name plate rating of steam Turbine unit (in MW) in which referred brand of FRF is in use v. Application in which FRF is in use vi. Performance status of FRF vii. Date from which FRF is in use viii. Date of issuance of certificate	

**Note:**

1. Against vendor's replies, BHEL reserves the right to ask for more information / documents/clarifications.
2. Vendor's offer shall not be considered if vendor fails to furnish the document / information / clarifications as mentioned above or vendor doesn't meet the acceptance criteria (mentioned above from sl. no. 1 to 6).
3. In case of information/data furnished by the vendor found false/incorrect, BHEL reserves the right to reject their offer for the above item.

**Annexure-1**

**A. For TXP FRF (CAS No. -25155-23-1):**

Sl. No.	Properties	BHEL Spec. requirement (Numerical Value)	Test Method	
			DIN/ISO	ASTM
1	Kinematic viscosity at 40°C (ISO VG 46)	41.4-50.6 mm <sup>2</sup> /s	DIN 51 562-1	D445
2	Air release at 50°C	≤ 6 minute	DIN ISO 9120	D3427
3	Neutralisation number	≤ 0.1 mg KOH/g	ISO 6619	D974
4	Water content	≤ 1000 mg/Kg	DIN EN ISO 12937	D1744
5	Foaming at 24°C Tendency Stability	≤ 100 ml ≤ 450 sec	ISO 6247 (Seq.- 1)	D892 (Seq.- 1)
6	Water Separability	≤ 300 sec	DIN 51 589-1	.....
7	Demulsification	≤ 20 minute	DIN ISO 6614	D1401
8	Density at 15°C	≤ 1250 Kg/m <sup>3</sup>	DIN 51757	D1298
9	Flash point (Cleveland open cup)	>235° C	ISO 2592	D92
10	Ignition temperature	>550° C	DIN 51794	.....
11	Manifold ignition test	≥ 700° C	ISO 20823	.....
12	Wick flame persistence time	≤ 10 sec	ISO 14935	.....
13	Pour point	≤ -18° C	ISO 3016	D97
14	Particle distribution	≤18/15/12	ISO 4406	.....
15	Chlorine content	≤ 50 mg/Kg	ISO 15597	.....
16	Oxidation stability	≤ 2.0 mg KOH/g	DIN EN 14832	.....
17	Hydrolytic stability, Change of neutralization number	≤ 2.0 mg KOH/g	DIN EN 14833	.....