

Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	11-04-2025 16:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	11-04-2025 16:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	120 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Heavy Industries And Public Enterprises
Department Name/विभाग का नाम	Department Of Heavy Industry
Organisation Name/संगठन का नाम	Bharat Heavy Electricals Limited (bhel)
Office Name/कार्यालय का नाम	10110009-heep, Haridwar
क्रेता ईमेल/Buyer Email	buyer1259.bhelb.ua@gembuyer.in
Total Quantity/कुल मात्रा	20
Item Category/मद केटेगरी	VAPOUR EXHAUSTER WITH IE MOTOR
GeMARPTS में खोजी गई स्ट्रिंग / Searched Strings used in GeMARPTS	VAPOUR EXHAUSTER
GeMARPTS में खोजा गया परिणाम / Searched Result generated in GeMARPTS	Chemical Vapour Deposition System, Propeller Type AC Ventilating Fans - Exhaust Fans (V2) as per IS 2312, Smoke Exhauster cum Blower OR Air Exhausters, High Pressure Mercury Vapour Lamps - IS 9900, Fume Exhaust System with Scrubber or Fume Hood with Scrubber, High Pressure Sodium Vapour Lamps (HPSV Lamps) as per IS 9974 (Part 1 and 2), Vapour Pressure Dial Type Thermometer -as per EN 13190, Plastics Bib Taps Pillar Taps Angle Valves and Stop Valves as per IS 9763:2000 (Latest), Lamp Ballast for HPSV Lamps as per IS 15882:2009, IS 15885, PULLEY FOR EXHAUST FAN
अधिसूचना के लिए चयनित प्रासंगिक श्रेणियाँ / Relevant Categories selected for notification	<ul style="list-style-type: none"> Smoke Exhauster cum Blower OR Air Exhausters
MSE Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से एमएसई छूट	No
Startup Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से स्टार्टअप छूट	No
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	Yes
RA Qualification Rule	H1-Highest Priced Bid Elimination

Bid Details/बिड विवरण	
ITC available to buyer/क्रिेता के लिए उपलब्ध आईटीसी	Yes
Type of Bid/बिड का प्रकार	Two Packet Bid
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	3 Days
Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Payment Timelines	Payments shall be made to the Seller within 90 days of issue of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills (This is in supersession of 10 days time as provided in clause 12 of GeM GTC)
Evaluation Method/मूल्यांकन पद्धति	Total value wise evaluation
Arbitration Clause	No
Mediation Clause	No

EMD Detail/ईएमडी विवरण

Required/आवश्यकता	No
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ePBG Detail/ईपीबीजी विवरण

Required/आवश्यकता	No
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MII Purchase Preference/एमआईआई खरीद वरीयता

MII Purchase Preference/एमआईआई खरीद वरीयता	Yes
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MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. Preference to Make In India products (For bids < 200 Crore): Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which

no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023.

[OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

2. Purchase preference will be given to MSEs having valid Udyam Registration and whose credentials are validated online through Udyam Registration portal as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail themselves of the Purchase preference, the bidder must be the manufacturer / OEM of the offered product on GeM. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises and hence resellers offering products manufactured by some other OEM are not eligible for any purchase preference. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service and Buyer will decide eligibility for purchase preference based on documentary evidence submitted, while evaluating the bid. If L-1 is not an MSE and MSE Seller (s) has / have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such MSE Seller shall be given opportunity to match L-1 price and contract will be awarded for 40% (selected by Buyer) percentage of total quantity. The buyers are advised to refer the OM No. F.1/4/2021-PPD dated 18.05.2023 [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if seller is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.

3. Reverse Auction would be conducted amongst all the technically qualified bidders except the Highest quoting bidder. The technically qualified Highest Quoting bidder will not be allowed to participate in RA. However, H-1 will also be allowed to participate in RA in following cases:

- i. If number of technically qualified bidders are only 2 or 3.
- ii. If Buyer has chosen to split the bid amongst N sellers, and H1 bid is coming within N.
- iii. In case Primary product of only one OEM is left in contention for participation in RA on elimination of H-1.
- iv. If L-1 is non-MSE and H-1 is eligible MSE and H-1 price is coming within price band of 15% of Non-MSE L-1
- v. If L-1 is non-MII and H-1 is eligible MII and H-1 price is coming within price band of 20% of Non-MII L-1

If the buyer has mentioned MSE purchase preference in ATC then service provider is required to upload necessary documents for MSE purchase preference for verification by the buyer during evaluation.

VAPOUR EXHAUSTER WITH IE MOTOR (20 pieces)

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/कमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

Buyer Specification Document/क्रेता विशिष्टि दस्तावेज़	Download
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Input Tax Credit(ITC)/इनपुट कर क्रेडिट(आईटीसी) and/ तथा Reverse Charge(RCM)/रिवर्स प्रभार (आरसीएम) Details

ITC on GST/जीएसटी पर इनपुट कर क्रेडिट	ITC on GST Cess/जीएसटी उपकर कर क्रेडिट
100%	NA

Additional Specification Documents/अतिरिक्त विशिष्टि दस्तावेज़

DrawingDocument1	View
DrawingDocument2	View

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Delivery Schedule/डिलीवरी अनुसूची (In number of days from contract start days/अनुबंध प्रारम्भ होने की तारीख से दिनों की संख्या में)		
1	Ganesh Prasad	493225,Adani Power Limited Village: Raikheda Block: Tilda, Raipur 493225 Chhattisgarh	Quantit y/मात्रा	Delivery to start after/प्रारंभ होने की तारीख से डिलीवरी	Delivery to be completed by/डिलीवरी _____तक पूरी कर ली जाए
			2	100	518
			2	200	699
2	Mata Prasad Pandey	231304,Mirzapur Thermal Energy (UP) Private Limited Village: Dadri Khurd; PO: Darhi Ram Tehsil: Sadar, District: Mirzapur 231 304 Uttar Pradesh	Quantit y/मात्रा	Delivery to start after/प्रारंभ होने की तारीख से डिलीवरी	Delivery to be completed by/डिलीवरी _____तक पूरी कर ली जाए
			2	100	699
			2	200	882
3	Mohit Singh	325219,Adani Power limited, Kawai, 2 x 800 MW(Phase-II) Thermal Power project, Village - Kawai, Tehsil - Atru, Baran - District, Rajasthan	Quantit y/मात्रा	Delivery to start after/प्रारंभ होने की तारीख से डिलीवरी	Delivery to be completed by/डिलीवरी _____तक पूरी कर ली जाए
			2	100	882
			2	200	974
			2	300	1065
			2	301	1156

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Delivery Schedule/डिलीवरी अनुसूची (In number of days from contract start days/अनुबंध प्रारम्भ होने की तारीख से दिनों की संख्या में)		
4	Paras Kumar Ludu	486886, Mahan Energen Limited 2x800 MW (Phase-II) Thermal Power Project Village: Bandhaura, Karsualal Tehsil: Waidhan, District - Singrauli, Pin - 486886, Madhya Pradesh.	Quantit y/मात्रा	Delivery to start after/प्रारंभ होने की तारीख से डिलीवरी	Delivery to be completed by/डिलीवरी _____ तक पूरी कर ली जाए
			2	200	913
			2	300	1095

Buyer added Bid Specific Additional Scope of Work

S.No.क्र.सं.	Document Title	Description	Applicable/रिवर्स प्रभार के अनुसार जीएसटी i.r.o. Items
1	ATC View	ATC	VAPOUR EXHAUSTER WITH IE MOTOR(20)

The uploaded document only contains Buyer specific Additional Scope of Work and / or Drawings for the bid items added with due approval of Buyer's competent authority. Buyer has certified that these additional scope and drawings are generalized and would not lead to any restrictive bidding.

Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें

1. Generic

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity up to 25% of the contracted quantity during the currency of the contract at the contracted rates. The delivery period of quantity shall commence from the last date of original delivery order and in cases where option clause is exercised during the extended delivery period the additional time shall commence from the last date of extended delivery period. The additional delivery time shall be $(\text{Increased quantity} \div \text{Original quantity}) \times \text{Original delivery period (in days)}$, subject to minimum of 30 days. If the original delivery period is less than 30 days, the additional time equals the original delivery period. The Purchaser may extend this calculated delivery duration up to the original delivery period while exercising the option clause. Bidders must comply with these terms.

2. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

Sl. No.	Material Code & Item Description	Project Name	Qty	Lot No.	Lot Qty	Date for Supply Completion
			(SET)		(SET)	

1	Material Code W96415003127 Vapour Exhauster with IE 3 Motor SPEC: TG 60432 REV: 04	1. ADANI, RAIPUR PH H-2	4 Nos	1	2	31-10-2026
				2	2	30-04-2027
		2. MIRZAPUR UP PH -1	4 Nos	1	2	30-04-2027
				2	2	30-10-2027
		3. KAWAI-PH-2	4 Nos	1	2	30-10-2027
				2	2	30-04-2028
		4. KAWAI, PH-3	4 Nos	1	2	30-01-2028
				2	2	30-07-2028
		5. ADANI, MAHAN PH H-3	4 Nos	1	2	30-11-2027
				2	2	30-05-2028

3. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to

such representations.

All GeM Sellers / Service Providers are mandated to ensure compliance with all the applicable laws / acts / rules including but not limited to all Labour Laws such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972 etc. Any non-compliance will be treated as breach of contract and Buyer may take suitable actions as per GeM Contract.

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action

in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।

---Thank You/धन्यवाद---

Buyer Specific Special Terms and conditions
Item Name: Vapour Exhauster with IE3 Motor (20 Nos)
Projects: 2X800 MW ADANI Projects - (05 Nos)

1. Scope of Enquiry

E-bids on GeM portal are invited from bidders for the supply of **Vapour Exhauster with IE3 Motor for 2 x 800MW ADANI, Projects** (tabulated) as per requirement mentioned below:

Sl. No.	Material Code & Item Description	Project Name	Qty (SET)	Lot No.	Lot Qty (SET)	Date Supply Completion
1	Material Code W96415003127 <u>Vapour Exhauster with IE3 Motor</u> SPEC: TG 60432 REV: 04	1. ADANI, RAIPUR PH-2	4 Nos	1	2	31-10-2026
				2	2	30-04-2027
		2. MIRZAPUR UP PH-1	4 Nos	1	2	30-04-2027
				2	2	30-10-2027
		3. KAWAI-PH-2	4 Nos	1	2	30-10-2027
				2	2	30-04-2028
		4. KAWAI, PH-3	4 Nos	1	2	30-01-2028
				2	2	30-07-2028
		5. ADANI, MAHAN PH-3	4 Nos	1	2	30-11-2027
				2	2	30-05-2028

2. Project / Consignee Detail

Sl. No.	Project Name	Site/ Project Address
1.	ADANI, RAIPUR PH-2	Adani Power Limited, Village: Raikheda Block: Tilda, Raipur 493225, Chhattisgarh
2.	MIRZAPUR UP	Mirzapur Thermal Energy (UP) Private Limited Village: Dadri Khurd; PO: Darhi Ram Tehsil: Sadar, District: Mirzapur 231 304, Uttar Pradesh
3.	KAWAI-PH-2	Adani Power limited, Kawai, 2 x 800 MW(Phase-II) Thermal Power project, Village - Kawai, Tehsil - Atru, Baran -District, Rajasthan, Pin- 325219
4.	KAWAI, PH-3	
5.	ADANI, MAHAN PH-3	Mahan Energen Limited, 2x800 MW (Phase-III) Mahan Ultra Supercritical Thermal Power Project, Village: Bandhoura, Karsualal Tehsil: Waidhan, District-Singrauli, Pin - 486886, MP

3. EARNEST MONEY DEPOSIT (EMD): NIL

Annexure A: Buyers Specific Additional Terms & Conditions in addition to GTC

Sl. NO.	Terms	Description	Your confirmation
1.	<i>Confirmation to compliance of GeM GTC</i>	General terms and conditions on GeM 4.0 (Version 1.23) or subsequent rules/policies issued by GeM shall be applicable. Please confirm.	
2.	<i>Public Procurement (Preference to Make in India)</i>	For this procurement, the local content to categorize, a supplier as a Class-I local supplier/ Class-II local Supplier, purchase preference to Class-I local supplier, is as defined in Public Procurement (Preference to Make in India), PPP-MII Order No. P-45021/ 2/ 2017-PP (BE-II) dtd. 04/06/2020 issued by DPIIT. In case of subsequent Orders issued by the respective 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.	
		Vendor to submit tender specific self-certificate (Annex-B) in line with PPP-MII Order No. P-45021/ 2/ 2017-PP (BE-II) dtd. 04/06/2020 clearly indicating percentage of local content. Format Attached Annex-B. Please Confirm	
3.	Pre-Qualification Requirements (PQR)	Please note that procurement shall be done only from the vendors who full-fill the PQR requirement and accepted by our engineering. Bidders are required to fill the required data along with supporting document for BHEL review and approval. Offers of only those vendors will be considered who qualify the PQR before opening of price-bids. Filled Annex-C to be submitted with supporting documents.	
4.	Special Instruction of Technical requirement	<p>Please confirm that material specification as per Spec TG60432 rev 04 only is followed for concerned items of the enquiry.</p> <p>PAINTING – PRIMER PAINT: EPOXY BASED ZINC RICH PRIMER PAINT (1 COAT OF 75 MICRONS), INTERMEDIATE PAINT: HIGH BUILD EPOXY MIO COATING CURED WITH POLYAMIDE HARDNER (1 COAT 100 MICRONS), FINISH (FINAL) PAINT: ALIPHATIC ACRYLIC 2 PACK POLYURETHANE FINISH PAINT (1 COAT 50 MICRONS), TOTAL PAINT DFT - 225 MICRONS (MINIMUM), PAINT SHADE IS GREY RAL 9002 AS PER IS-5 OR EQUIVALENT</p> <p>Test and Guarantee certificates are required to be submitted. Operation and maintenance manual copy to be send with each packing box.</p> <p>Kindly confirm that quoted offer by you have been complied all technical requirements as given in tender documents and submit all documents to BHEL as per tender specifications and drawings without any deviations.</p>	
5.	Quality Requirements	<ul style="list-style-type: none"> ➤ Bidders to submit endorse copy of BHEL SQP QA/BE/QP/306, Rev-04. ➤ Bidders to confirm that inspection shall be by done by BHEL Nominated inspection agency (M/s QUEST) as per finally BHEL approved QP. ➤ BHEL approved QP shall be followed in totality. BHEL can modify / changes in above QP during QP approval. ➤ Please note that BHEL will pay directly to BHEL's nominated TPI. 	
6.	Motor Make	<p>Bidder to confirm that IE3 motor shall be used from following manufacturer only:</p> <ol style="list-style-type: none"> 1. CGL, Ahmednagar 2. ABB, Faridabad 3. BBL, Mumbai 4. KEC, Bangalore 5. BHEL 6. Siemens, Mumbai 7. Jyoti, Baroda 8. MARATHON ELECTRIC, Kolkata 9. NGEF, Hubli 	
7.	Evaluation criteria	Evaluation will be done on the basis of total landed cost to BHEL with cost involved for delivery up to all respective project site (considering material cost, taxes & duties, Freight etc.	
8.	Price basis, Evaluation Currency, Firm prices & Transit Insurance	<p>Prices should be quoted on door delivery basis up to respective site basis i.e. including freight, packing & forwarding charges, GST etc.</p> <p>The evaluation currency for this tender shall be INR.</p> <p>Price will remain firm and fixed during entire execution of tender/supply.</p> <p>Transit insurance shall be arranged by BHEL and not to be included in the prices.</p>	
9.	Consignee Address Declaration	Consignee mentioned in ATC/ GeM enquiry are mentioned as actual and may differ during ordering. However, material to be dispatched by vendor to respective site as actual.	
10.	BID to RA	Applicable as per GeM NIT	

11	Payment Terms	<p>The payment term shall be done after issue of consignee receipt-cum acceptance certificate (CRAC) as per the below details:</p> <table><tr><td>Type of Bidder</td><td>Payment Terms (Number of Days) from MRC</td></tr><tr><td>Micro & Small Enterprises (MSEs)</td><td>45 days</td></tr><tr><td>Medium Enterprises</td><td>60 days</td></tr><tr><td>Non MSME</td><td>90 days</td></tr></table> <p>Subject to submission of non-discrepant documents. MSE benefits shall be as per GeM/ GeM NIT.</p>	Type of Bidder	Payment Terms (Number of Days) from MRC	Micro & Small Enterprises (MSEs)	45 days	Medium Enterprises	60 days	Non MSME	90 days	
Type of Bidder	Payment Terms (Number of Days) from MRC										
Micro & Small Enterprises (MSEs)	45 days										
Medium Enterprises	60 days										
Non MSME	90 days										
12	Document submission for approval from BHEL	Drawings/Data sheets, Quality Plan etc. as called for in the specifications shall be submitted for approval to BHEL for BHEL approval within 30 days of purchase order. Approved documents/QP are to be followed by the supplier without any price implication. Any delay in delivery on account of late submission of drawings/data sheets/QAP/documents shall be to vendors account. BHEL will arrange the approval of the drawings/data sheets/ documents within 30 days of their receipt provided those are complete in all respect. Delays in approval shall be dealt on merit basis.									
13	Manufacturing clearance	In case of ordering, vendor has to take manufacturing clearance from BHEL before starting manufacturing of material. No manufacturing is to be started without getting clearance from BHEL. Kindly confirm.									
14	Manufacturing cum Delivery Period	<p>Kindly quote your minimum delivery period in no. of weeks. (time taken including manufacturing + Joint inspection + 07 days for MDCC issuance and up to Dispatch)</p> <p>From the date of manufacturing clearance.....</p> <p>Early delivery will be accepted as per BHEL site requirement.</p>									
15	MDCC clause	<p>Material shall be dispatched only after issue of material dispatch clearance certificate (MDCC) by BHEL/ Customer. 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.</p> <p>In case any material is dispatched without MDCC and any loss is incurred by Supplier/Vendor for any reason whatsoever, BHEL shall not be responsible in any manner to compensate the supplier in this regard.</p> <p>Material is to dispatched within 07 days of receipt of MDCC from BHEL without waiting for PO amendment.</p>									
16	Guarantee	<p>Kindly confirm that all equipment shall be guaranteed for trouble free & satisfactory operation for minimum period of 18 months from the date of delivery or 12 months from date of commissioning, whichever is earlier.</p> <p>Please note that offers with guarantee period lesser than above mentioned guarantee period may result in rejection of the offer.</p>									
17	Liquidated Damages	<p>If the Seller/Service Provider fails to deliver any or all of the Goods/Services within the original/re-fixed delivery period(s) specified in the contract, the Buyer will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, @ 0.5% of the contract value of delayed quantity (lot-wise) per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed lot quantity without any controversy/dispute of any sort whatsoever.</p> <p>The date of dispatch mentioned on LR/GR would be treated as the date of delivery for penalty purposes.</p>									
18	HSN Code & Other	<p>8 DIGIT GST HSN CODE OF ITEM MAY PLEASE BE FREEZED WITH VENDOR BEFORE PO PLACEMENT. PLEASE PROVIDE</p> <p>.....</p>									

	Instructions	<ol style="list-style-type: none"> 1. INVOICE, GR/LR, MDCC, PKG LIST ALONG WITH E-WAY BILL IS REQUIRED FOR BILLING. 2. DOCUMENTS (GR/LR, PACKING LIST, TEST CERTIFICATES) ARE REQUIRED IN ORIGINAL. 	
19	Packing Instructions	<ul style="list-style-type: none"> ➤ Material of unit-1, unit-2 and mandatory spares need to be packed in separate boxes. ➤ MSDS (Material Safety Data Sheet) is to be sent along with LR DOCs, If applicable. ➤ Vendor to ensure proper and sturdy packing suitable for handling during transportation up to site in healthy condition. ➤ Vendor to submit packing list (box-wise) for BHEL review before dispatch. 	
20	Settlement of Dispute, CONCILIATION & ARBITRATION:	<p>Settlement of Dispute If any dispute or difference of any kind whatsoever shall arise between BHEL and the Supplier/Vendor, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Officer / IEM for amicable resolution by the parties. Designated Officer / IEM who within 60 days after being requested shall give written notice of his decision to the contractor. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier/Vendor who shall proceed with the work with all due diligence, whether he or BHEL desires to resolve the dispute as hereinafter provided or not. If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier/Vendor being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the BHEL Conciliation Scheme 2018 as per 'CONCILIATION' Clause.</p> <p>CONCILIATION: Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per BHEL Conciliation Scheme 2018. The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in - "Procedure for conduct of conciliation proceedings" (as available in www.bhel.com).</p> <p>Note: Ministry of Finance has issued OM reference No. 1/2/24 dated 03.06.2024 regarding "Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurement. In the said OM it has been recommended that Government departments/ Entities/agencies are to encourage mediation under the Mediation Act. 2023. The said Act has not yet been notified by the Government. Therefore, the clause "Settlement of Disputes" shall be modified accordingly as and when the Mediation Act 2023 gets notified.</p> <p>ARBITRATION: Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided herein above or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, refer the disputes to Arbitral Institution and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the Rules of said Arbitral Institution.</p> <p>A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice') before referring the matter to arbitral institution. The Notice shall be addressed to the Head of the Region, Power Sector/ Unit, BHEL, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any.</p> <p>After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to the Arbitral Institutions (shall be identified by the contract issuing agency) and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd. Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.</p> <p>The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.</p> <p>The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be at the court(s) of Haridwar.</p>	

		<p>Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at Haridwar , shall have exclusive jurisdiction.</p> <p>Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or 'No Demand Certificate' has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor.</p> <p>It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the value of the dispute is less than Rs. 10 Crores.</p> <p>In case the disputed amount Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof as amended from time to time, shall apply to the arbitration proceedings under this clause.</p> <p>In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause mentioned above. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.</p>	
21	BREACH OF CONTRACT, REMEDIES AND TERMINATION:	<p>The following shall amount to breach of contract:</p> <p>I. Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time.</p> <p>II. The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period.</p> <p>III. The Supplier/Vendor delivers equipment/ material not of the contracted quality.</p> <p>IV. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause.</p> <p>V. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract.</p> <p>VI. Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.</p> <p>VII. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor.</p> <p>VIII. Any other reason(s) attributable to Vendor towards failure of performance of contract. In case of breach of contract, BHEL shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor.</p> <p>IX. Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise.</p> <p>X. Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall business of BHEL/ Owner.</p> <p>Note-Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days.</p> <p>In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract.</p> <p>Remedies in case of Breach of Contract.</p> <p>i) Wherein the period as stipulated in the notice issued under above clause has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to contractor.</p> <p>ii) Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of encashing the security instruments like performance bank guarantee etc available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued.</p> <p>iii) wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be encashed. In case no security instruments are available or the value of the</p>	

		<p>security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners:</p> <p>iv) In case the amount recovered under sub clause (a) above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor.</p> <p>v) If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount:</p> <p>a) from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract.</p> <p>b) If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD.</p> <p>vi) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor.</p> <p>vii) It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages.</p> <p>viii) In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.</p> <p>Note:</p> <p>1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting contractor shall mean and include:</p> <p>(a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor.</p> <p>(b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor.</p>	
22	Suspension of Business Dealings with Suppliers / Contractors:	<p>The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms / principal / agents, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com.</p> <p>If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award / execution / post-execution stage indulges in any act, including but not limited to, mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or tampers the tendering process or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860(Bhartiya Nyaya Samhita 2023) or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder / supplier / contractor as per extant guidelines of the company available on www.bhel.com and / or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage: http://www.bhel.com/vender_registration/vender.php.</p>	
23	CONFLICT OF INTEREST AMONG BIDDERS/ AGENTS	<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> <p>a) they have controlling partner (s) in common; or</p> <p>b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or</p> <p>c) they have the same legal representative/agent for purposes of this bid; or</p> <p>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</p> <p>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</p> <p>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:</p> <ol style="list-style-type: none"> 1. The principal manufacturer directly or through one Indian agent on his behalf; and 2. Indian/foreign agent on behalf of only one principal, - <p>or</p> <p>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</p> <p>h) 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. "</p>	
24	MICRO AND SMALL ENTERPRISES (MSE):	Any Bidder falling under MSE category shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.	

		<table border="1"> <tr> <td>Type under MSE</td><td>SC/ST owned</td><td>Women owned</td><td>Others (excluding SC/ ST & Women Owned)</td></tr> <tr> <td>Micro</td><td></td><td></td><td></td></tr> <tr> <td>Small</td><td></td><td></td><td></td></tr> </table> <p>Note: If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.</p> <p>a) MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration. Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non-submission of supporting document in GeM portal will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the above required documents are not uploaded at the time of bid submission. Documents submitted by the bidder shall be verified by BHEL for rendering the applicable benefits.</p>	Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women Owned)	Micro				Small				
Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women Owned)												
Micro															
Small															
25	JURISDICTION:	This contract shall be governed by the Law for the time being in force in the Republic of India. Subject to clause(s) mentioned above of this contract, the Civil Court having original Civil Jurisdiction at Haridwar shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract.													
26	Force Majeure	<p>"Force Majeure" shall mean circumstance which is: a) beyond control of either of the parties to contract, b) either of the parties could not reasonably have provided against the event before entering into the contract, c) having arisen, either of the parties could not reasonably have avoided or overcome, and d) is not substantially attributable to either of the parties And Prevents the performance of the contract, Such circumstances include but shall not be limited to: i) War, hostilities, invasion, act of foreign enemies. ii) Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war. iii) Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors. iv) Strike or lockout not solely involving the contractor's personnel and other employees of the contractor and sub-contractors. v) Encountering munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity. vi) Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc. vii) Epidemic, pandemic etc.</p> <p>The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party: a) any strike, work-to-rule action, go slow or similar labour difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.</p> <p>If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event.</p> <p>The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event.</p> <p>Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not</p> <p>i) Constitute a default or breach of the Contract. ii) Give rise to any claim for damages or additional cost expense occasioned thereby, if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.</p> <p>BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Supplier/Vendor cannot consider deemed short-closure after 1 year of imposition of Force Majeure</p>													
27	Cartel Formation	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.													
28	Fraud Prevention Policy:	Bidder along with its associate /collaborators /sub-contractors /sub-vendors / 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.													
29	Order of Precedence:	<p>In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:</p> <ol style="list-style-type: none"> Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL. Buyer Added Bid Specific ATC GeM Bid Technical Conditions of Contract (TCC) GeM GTC 													
30	Contact details	<p>Please provide 2 Nos of contact details (email id and contact no.) for clarifications.</p> <p>1.....</p> <p>2.....</p>													

Note: Please fill your acceptance/ comments in confirmation column. Blank column will be understood as accepted by bidder.

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 GeM procurement portal.

1. Please submit signed & Stamped copy (each page) of duly filled of confirmation column of "Buyers Specific Terms & Conditions and its clause wise supporting documents where required.
2. Please submit signed & stamped copy (each page) of PQR documents with proper filled information and related supporting documents as mentioned in PQR.
3. Please submit endorsed copy of quality plan QA/BE/QP/306 REV-04.
4. Please submit MSE certificate (if have) and self-declaration of MII class certificate as per Annex-B.
5. Please submit endorsed copy of respective BHEL product specification equipment drawing.

Annexure B:**Format for Self-Certification under preference to Make in India order****Certificate**

In line with Government Public Procurement Order No. P-45021/2/2017-PP (BE-II) dated 04.06.2020, we hereby certify that we M/s (supplier name) are local supplier. The percentage of local content in the items (Duplex Filter for Jacking Oil) for Suratgarh Project offered by us against Enquiry No. is% (percentage).

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

.....

.....

We also understand, 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.

Annexure C:

PQR/EME/BI025/60432/002

Dt. 31.07.2023

Mandatory Pre-Qualification requirements for Vapour Exhauster

Description

The Vapour Exhauster is required to handle mixture of turbine oil vapours, air & H₂ and for creating partial vacuum in generator bearing chamber & oil tanks of Tubogenerators. Vapour exhauster shall comprise of Centrifugal fan, Squirrel cage induction motor, base frame for mounting and motor terminal box.

Mandatory requirement for Pre-Qualification

1.0 Experience Requirement -

The Vendor should be a regular manufacturer of such Vapour exhauster & should source motor set from regular manufacturer. Vendor should have supplied at least Three (3) nos. of vapour exhauster with motor in last Ten (10) years (from the date of issuance of enquiry) with following technical details –

Sl No.	Parameter	Value
(i)	Exhauster & Motor Type	Centrifugal fan with squirrel cage 3 phase induction motor
(ii)	Flow medium	Mixture of Oil, Gases and Air.
(iii)	Material	Carbon Steel or Stainless steel
(iv)	Discharge Pressure	96 mmWC & above
(v)	Discharge Capacity	350 M3/Hr & above
(vi)	Motor Rating	0.75 KW & above
(vii)	Rated Speed	2820 RPM (approx)
(viii)	Rated Voltage	415V AC

In support of above, vendor to furnish information, as per the following format for previous supplied Vapour exhauster meeting the above technical requirement for the past Ten (10) years from the date of issuance of enquiry.

Sl. No.	Purchase order reference no.	Purchase order issue date	QTY.	Motor KW rating	Discharge Pressure (mmWC)	Discharge Capacity (M3/Hr)

Vendor to submit the following documents as an evidence of acceptance of supplied Vapour exhauster, for the above mentioned successfully executed order -

- Vendor to furnish copy of Un-Priced Purchase Orders executed for supply of at least Three (3) nos. of vapour exhauster with motor in last Ten (10) years (from the date of issuance of enquiry).
- Vendor to furnish the test certificate for Exhauster fan & motor set as per relevant standard for any one of the PO submitted. The submitted test certificates should have co-relation with PO.
- Vendor to furnish supporting document for the evidence of final acceptance from End customer/Third Party of supplied vapour exhauster with motor for any one of the submitted PO's. Acceptance certificate should contain information like item details, Quantity accepted and should also have correlation with PO reference no.


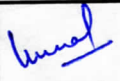
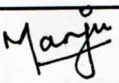
2.0 Vendor shall submit the proof of manufacturer i.e. Factory license, NSIC certificate


Note - BHEL reserves the right to verify information submitted by vendor. In case the information is found to be false / incorrect, the offer shall be rejected.


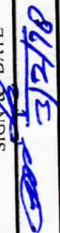
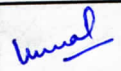
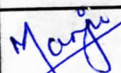
कुशल मिश्रा 31.07.23
Kunal Mishra
(Manager-EME)


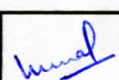
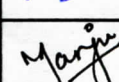
K.C. Panda
(SDGM-EME)




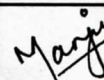
दिनांक एवं हस्ताक्षर SIGN & DATE	नवी एम ई एम BHEL	उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION	TG60432 पृष्ठ 8 का 1 Page 1 of 8
SUPERSEDES INVENTORY NO.	Based on BHEL's own experience		
मासिक सूची संख्या को अधिकृतिक करना है	<u>VAPOUR EXHAUSTER</u>		
COPYRIGHT AND CONFIDENTIAL <small>The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company</small>	1.0 SCOPE AND APPLICATION: This specification intended to cover design, manufacture, assembly testing & delivery of vapour exhauster, complete with motor, coupling, base plate and other accessories. The vapour exhauster is required to handle mixture of turbine oil vapours, air & H ₂ and for creating partial vacuum in generator bearing chamber & oil tanks of Turbo-generators.		
स्वत्व अधिकार एवं गोपनीय <small>इस संलग्न से दी गई सूचना भारत भारती एलईसी लिमिटेड की सम्पत्ति है इसका प्रयोग एवं अप्रयोग अन्य किसी भी तरह प्रयोग को कि कंपनी के हित में अधिकारक हो न किता जाय।</small>	2.0 DESIGNATION: The Vapour exhauster shall be designated as below: -		
2.1 ON DRAWINGS INDENTS:			
		:	TG-60432
(1) Material specification column		:	Vapour Exhauster
(2) Description Column		:	W 96415000578
(3) Material Code Column		:	
2.2 ON ENQUIRES AND PURCHASE ORDER:- In addition to incorporating the above details, a copy of the standard shall be enclosed along with enquiry.			
3.0 TECHNICAL REQUIREMENTS:			
3.1 TECHINCAL DATA OF VAPOUR EXHAUSTER:			
(1) Continuous discharge capacity at operating point		:	396 m ³ / hr
(2) Normal discharge pressure at operating point		:	96 mmWC
(3) Operating temp. of the medium		:	70°C
(4) Ambient temp.		:	50°C
(5) Speed		:	2820rpm
दिनांक एवं हस्ताक्षर SIGN & DATE	नाम NAME		
सामग्री सूची संख्या INVENTORY NO.	दिनांक एवं हस्ताक्षर SIGNATURE & DATE		
46855	3/11/18		
TSX	अनुवादक TRANSLATED BY		
PSC Member	निर्माणकर्ता WORKED BY		
QAX	जांचकर्ता CHECKED BY		
सहमत विभाग AGREED DEPT.	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	पर्यवेक्षणकर्ता SUPERVISED BY
SUPERSEDES		स्वीकृति APPROVED : Rakesh Kumar (AGM/EME)	
REV.NO.	04	निर्माणकर्ता PREPARED : EME	
Date.	11.01.18	जारीकर्ता ISSUED : TSX	
CHANGE ADVICE NO.	TGE-18- 02	दिनांक DATE : 09.09.92	


SIGN & DATE SUPERSEDES INVENTORY सामग्री सूची संख्या को अप्रतिबिंबित करना है		उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION		TG60432	
				पृष्ठ 8 का 2 Page 2 of 8	
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	3.2 DESIGN AND CONSTRUCTION OF VAPOUR EXHAUSTER				
	<p> 3.2.1 The material of the exhauster shall be such as to resist corrosion and shall give long trouble free service. 3.2.2 The design shall be such as to keep the friction and wear minimum caused by end thrust. Wear in mechanical seals bearings shall be minimum. The rotor of the exhauster shall be dynamically balanced as per ISO 1940, so that vibration of the exhauster is not greater than 25 micron peak to peak as per IEC 60034-14. The noise level shall not be greater than 85dB when measured at a distance of 1 meter from the base of the equipment, measurement should be done as per IEC 60034-9. 3.2.3 Seals must comply with the following: - (a) Easy access for maintenance work. (b) No contamination of the medium from materials abraded from the seals. (c) No seepage of lubricants into the flow medium. (d) No leakage of gases outside in the atmosphere (e) No seepage of oil toward, motor and outside along with the shaft. (f) Shaft shall be sealed with grease lubricated axial seal as shown in the figure. 3.2.4 Exhauster bearing shall be designed so as to ensure 50000 hours of continuous service. 3.2.5 The exhauster shall be provided with a drain plug. 3.2.6 Fan impeller is to be directly mounted onto rotor shaft as shown in the figure at page 8. 3.2.7 The critical speed of the exhauster shall not lie within $\pm 30\%$ of the operating speed (2820 rpm) of the exhauster. 3.2.8 Minimum clearance between impeller & casing shall be 2mm to ensure that there is no rubbing. 3.2.9 The construction, mounting and base frame dimensions shall be generally as per figure at page 8. 3.2.10 Materials of Construction:- (1) Casing : Carbon Steel as per IS:2062 E250 BR (2) Impeller : Carbon Steel as per IS:2062 E250 BR (3) Base Frame : Carbon Steel as per IS:2062 E250 BR (4) Sleeve : Brass (5) 'O' ring : Neoprene </p>				
स्वत्वधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत भारी एलेक्ट्रिकल्स की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि सम्पत्ति के हित में हानिकारक हो न किता जाय।					
दिनांक एवं हस्ताक्षर SIGN & DATE					
सामग्री सूची संख्या INVENTORY NO.					
REV. NO. 04	निर्माणकर्ता WORKED BY		Kunal Mishra		11/01/18
	जांचकर्ता CHECKED BY		Manju Azad		11/01/18

नमूना नं. SIGN & DATE		उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION		TG60432										
				पृष्ठ 8 का 3 Page 3 of 8										
SUPERSEDES INVENTORY	सामग्री नुमा संख्या को अतिरिक्त न करना है	<table border="1"> <tr> <th>MATERIAL CODE OF VAPOUR EXHAUSTER ASSEMBLY</th> <th>EFFICIENCY CLASS OF MOTOR AS PER IEC- 60034-30</th> <th>STARTING CURRENT (IN % OF FULL LOAD CURRENT) + 20% (Tolerance as per IEC: 60034-1)</th> </tr> <tr> <td>W96415000578</td> <td>IE-2</td> <td>650</td> </tr> <tr> <td>W96415003127</td> <td>IE-3</td> <td>700</td> </tr> </table>				MATERIAL CODE OF VAPOUR EXHAUSTER ASSEMBLY	EFFICIENCY CLASS OF MOTOR AS PER IEC- 60034-30	STARTING CURRENT (IN % OF FULL LOAD CURRENT) + 20% (Tolerance as per IEC: 60034-1)	W96415000578	IE-2	650	W96415003127	IE-3	700
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W96415003127	IE-3	700												
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company		<p> 3.3.6 Permissible voltage variation : $\pm 10\%$ 3.3.7 Permissible Frequency variation : $\pm 5\%$ 3.3.8 Combined voltage & frequency variation : $+ 10\%$ 3.3.9 Min. voltage required under starting : 85% 3.3.10 Conditions to bring driven equipment to rated speed 3.3.11 Starting Torque : Min. 1.3 times the rated torque. 3.3.12 Breakdown torque : Min. 2 times the rated torque. 3.3.13 Starting : DOL 3.3.14 Acceleration time with full load connected: $3.5 + 0.5$ sec. 3.3.15 Starting duty : 3 starts spread over on hour and 2 consecutive starts from hot 3.3.16 Condition without injurious heating to the winding. 3.3.17 Overload capacity : Motor shall be capable of running at full load with 80% of rated 3.3.18 Voltage for 10min. and 70% of rated voltage for 1 min. 3.3.19 Class of insulation : 'F' with temperature limited to Class B (70°C) 3.3.20 Ventilation : Totally enclosed & fan cooled 3.3.21 Enclosure protection : IP 55 as per IEC 60034-5 3.3.22 Explosion proof : Group II T4 as per IEC 60079 3.3.23 Bearing : as per suppliers design. Life not less than 50000hrs. 3.3.24 Earthing : Suitable arrangement to be provided at 2 places. 3.3.25 Terminal box : Terminal box shall be explosion proof as per Group II T4 IEC 60079. 3.3.26 Cable gland also to be provided in terminal box for 3 core Aluminium cable. 3.3.27 Fault level : 50 KA for 1 sec. </p>												
स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत भारती लिमिटेड की संपत्ति है। इसका प्रयोग एवं प्रसारण केवल केवल के निर्देशों के बिना ही नहीं किया जा सकता है।		<p> 4.0 PUMP DATA SHEET (TO BE FURNISHED ALONGWITH OFFER : 4.1 Capacity M3 / Sec. : 4.2 Head MWC : 4.3 Efficiency : 4.4 Rated speed : 4.5 Exhauster B.H.P. / kw at Rated Capacity : 4.6 Material: Casing Impeller base Frame 'o' ring : 4.7 Type of bearing used : 4.8 Type of coupling : 4.9 Type of Sealing : 4.10 Suction size : 4.11 Discharging size : </p>												
सामग्री नुमा संख्या INVENTORY NO. P-5894	REV. NO. 04	निर्माणकर्ता WORKED BY Kunal Mishra	जांचकर्ता CHECKED BY Manju Azad	11/01/18	11/01/18									

ब. हस्ताक्षर SIGN & DATE				उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION		TG60432	
SUPERSEDES INVENTORY		सामग्री सूची संख्या को अतिरिक्तित्व करता है		पृष्ठ 8 का 4 Page 4 of 8			
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.		4.12 Wt. of exhaustor with motors base frame 4.13 Wt. of exhaustor 4.14 General assy. & cross sectionals drawing enclosed with offer 4.15 Capacity Vs discharge pressure curve enclosed 4.16 Power consumption Vs discharge pressure curve enclosed 4.17 Capacity Vs efficiency curve enclosed 5.0 MOTOR DATA SHEET (TO BE FURNISHED ALONG WITH OFFER) 5.1 Manufacturer 5.2 Type 5.3 Frame size 5.4 Power absorbed by exhaustor at duty point (kW) 5.5 Rated power (kW) 5.6 Duty cycle 5.7 Rated voltage 5.8 No. of phase 5.9 Frequency 5.10 Allowable voltage variation 5.11 Allowable frequency variation 5.12 Allowable voltage & frequency variation 5.13 Current 5.14 Rated speed (RPM) 5.15 Full load efficiency 5.16 Full load power factor 5.17 Method of starting 5.18 Max. starting current 5.19 Class of insulation 5.20 Starting torque 5.21 Max. torque 5.22 Safe stall time a. Under hot condition b. Under cold condition 5.23 Type of enclosure 5.24 Enclosure protection 5.25 Frequency of starting 5.26 Temp. rise above 500C 5.27 By resistance method By thermometer method 5.28 Type & no. of terminals brought out 5.29 Type of connection during continuous running 5.30 Type and size of cable for when gland is provided in the terminal box. 5.31 Guaranteed min. voltage read at non terminals 5.32 System of earthing					
स्वीकृतिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की संपत्ति है, इसका प्रयोग एवं प्रसारण केवल उसी उद्देश्य के लिए ही किया जा सकता है जो कि कंपनी के हित में है। इसका प्रयोग अन्य किसी भी उद्देश्य के लिए नहीं किया जा सकता है।		निम्न पर हस्ताक्षर SIGN & DATE 		REV. NO. 04			
सामग्री सूची संख्या INVENTORY NO. P-5894				निर्माणकर्ता WORKED BY Kunal Mishra		11/01/18	
				जांचकर्ता CHECKED BY Manju Azad		11/01/18	

दिनांक एवं तिथि SIGN & DATE		उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION		TG60432	
				पृष्ठ 8 का 5 Page 5 of 8	
सामग्री सूची संख्या INVENTORY NO.	SUPERSEDES INVENTORY	5.33 Relevant standard : 5.34 Motor GD2 Valve : 5.35 Type of bearings (DE) : 5.36 Type of bearings (NDE) : 5.37 Type of lubricant : 5.38 Frequency of lubrication : 5.39 Wt. of motor : 5.40 Insulation class :			
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.		6.0 QUALITY ASSURANCE, INSPECTION AND TESTING. 6.1 The manufacture shall conduct all tests required to ensure that the exhauster conforms to the requirements of application codes and standards. 6.2 The bidder shall submit the particulars of proposed shop tests along with procedures for information. 6.3 The equipment shall be dispatched only after inspection and clearance by BHEL / owner. 6.4 The min. tests checks to be carried out on vapour exhauster, as envisaged by BHEL are given below:- 6.4.1 The material of Casing, Impeller, Base frame, Sleeve & O Ring shall be tested as per relevant standard for the chemical composition and mechanical properties. 6.4.2 TESTS DURING VARIOUS STAGE OF MANUFACTURING 1) Check for dimension and finish of the components. 2) D.P.T on all welding as per ASME section VIII. 3) Dynamic balancing of impeller as per ISO 1940 Gr. 6.3. 6.4.3 FINAL TESTS: - Following tests shall be carried out:- 1) Flow rate of air 2) Vibration test as per IEC 60034-14. 3) Noise : shall not be greater than 85dB when measured at a distance of 1 meter from the base of the equipment, measurement should be done as per IEC 60034-9 4) Speed 5) Dimensional check 6) Smooth running 7) Performance test as per ISO:5801 6.4.4 Type & Routine tests on motor as per IEC:60034-1 6.4.5 Vendor to furnish the test certificates for the following 1) Motor Enclosure certificate as per IP 55 as per IEC 60034-5 2) Explosion proof certificate for motor for Group II T4 as per IEC60079 3) Certificate for enclosure of Terminal box for explosion proof as per Group II T4 IEC 60079. 4) Certificate for minimum clearance of 2mm between impeller & casing.			
स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत भारी विद्युत निगम की संपत्ति है। इसका प्रयोग एवं प्रसारण के बिना भारत भारी विद्युत निगम की लिखित अनुमति के बिना न किया जाय।	निम्नलिखित पर हस्ताक्षर SIGN & DATE				
सामग्री सूची संख्या INVENTORY NO.	REV. NO. 04	निर्माणकर्ता WORKED BY	Kunal Mishra		11/10/18
सामग्री सूची संख्या INVENTORY NO.	REV. NO. 04	जांचकर्ता CHECKED BY	Manju Azad		11/10/18

न संख्या SIGN & DATE		उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION		TG60432	
				पृष्ठ 8 का 6 Page 6 of 8	
SUPERSEDES INVENTORY	<p>6.4.6 After testing the exhauster, all the surface and internal shall be thoroughly cleaned, dried and conserved. All the metallic surface except bright parts exposed to weather shall be given suitable primary coating.</p> <p>7.0 DOCUMENTS TO BE FURNISHED AT THE TIME OF OFFER</p> <p>7.1 Assembly drawings part list, nozzle size, their coordinates base plate details etc.</p> <p>7.2 Technical data sheet of pump as per clause 4.</p> <p>7.3 Technical data sheet of motor as per clause 5.</p> <p>7.4 Performance curves.</p> <p>7.5 Quality plan in BHEL format, incorporating checks/tests at material stages, in process & final testing.</p> <p>7.6 Clause wise confirmations of specification TG60432.</p> <p>8.0 DOCUMENT TO BE SUPPLIED</p> <p>8.1 AFTER PLACEMENT OF ORDER</p> <p>8.1.1 G.A. drawing with parts list & material details.</p> <p>8.1.2 Final quality plan.</p> <p>8.2 DOCUMENT FOR FINAL SUBMISSION</p> <p>8.2.1 Performance curves.</p> <p>8.2.2 Test certificates for all test checks in clause 6.4 shall be furnished.</p> <p>9.0 CLEANING, PAINTING, CONSERVATION AND PACKING</p> <p>The surface shall be cleaned and prepared for application of paint by shot blasting. The protective coating should be oil resistant. After testing the exhauster, its internals shall be thoroughly cleaned, dried and conserved before packing. The exhauster packing shall be strong enough to safeguard against any damage during transit. The exhauster shall be packed such that it is safe for at least 2 year of storage in damp atmosphere.</p> <p>10.0 GUARANTEE</p> <p>10.1 The supplier shall guarantee trouble free and satisfactory operation of the equipment for a period of 12 months after commissioning at site or 18 months from the date of dispatch, whichever is earlier.</p> <p>10.2 The supplier shall guarantee the tested capacity head and capacity of the exhauster.</p> <p>10.3 The supplier shall repair /replace the defective parts at his own cost during the guarantee period.</p>				
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	स्वामित्विकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत भारती लिमिटेड की संपत्ति है। इसका प्रयोग एवं प्रसारण केवल इसी उद्देश्य के लिए ही किया जा सकता है। इस दस्तावेज में दी गई सूचना को किसी भी तरह से बिना अनुमति के प्रसारित नहीं किया जा सकता।				
न संख्या SIGN & DATE					
न संख्या INVENTORY NO.	REV. NO. 04	निर्माणकर्ता WORKED BY	Kunal Mishra		11/01/18
न संख्या INVENTORY NO.	25894	जांचकर्ता CHECKED BY	Manju Azad		11/01/18

SIGN & DATE 11/01/18		उत्पाद क्रय विनिर्देश PRODUCT PURCHASE SPECIFICATION		TG60432 पृष्ठ 8 का 7 Page 7 of 8	
SUPERSEDES INVENTORY सामग्री सूची संख्या को अधिस्थान करता है	11.0 IDENTIFICATION A name plate of stainless steel with following information engraved on it, shall be affixed to the equipment at appropriate location – <ul style="list-style-type: none"> - Item description - Manufacturer's name - Year of manufacturing - Sl. No. - Main technical parameters i.e. Flow rate, Discharge pressure, Speed, Flow Medium, operating temperature, Motor KW Rating. - BHEL specification no. - BHEL material code. - BHEL P.O. No. 				
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	12.0 GENERAL Bidder shall furnish all the documents as per clause 7 of the specification along with offer. Any deviation shall be clearly spelled out. The offer may not be considered if all the technical particulars and information called for in the specification are not submitted along with the offer.				
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हेवी एलेक्ट्रिकल्स की संपत्ति है। इसका प्रयोग एवं अप्रत्यक्ष रूप से किसी भी तरह उपयोग ओ कि कंपनी के हित में होनेकारण ही न किया जाए।	13.0 CROSS REFERRED STANDARD ISO 1940, ISO 5801 IEC 60034-14, IEC 60034-9, IEC 60034-1, IEC 60034-5, IEC 60079 IS:2062				
SIGN & DATE 11/01/18					
सामग्री सूची संख्या INVENTORY NO. P-5896	REV. NO. 04		निर्माणकर्ता WORKED BY Kunal Mishra	जांचकर्ता CHECKED BY Manju Azad	11/01/18 11/01/18

PRODUCT PURCHASE SPECIFICATION



बं हस्ताक्षर
SIGN & DATE

**SUPERSEDES
INVENTORY**

सामग्री मूची संख्या को अधिकमित करता है

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स्वत्वाधिकार एवं गोपनीय

इस प्रवेश में ही गई मूकता भारत हेरी पलट्टिकनम की मर्यादा है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग जो कि कंपनी के हित में हानिकारक हो न किया जाय।

दिनांक एवं हस्ताक्षर

SIGN & DATE

सामग्री सूची संख्या
INVENTORY NO.

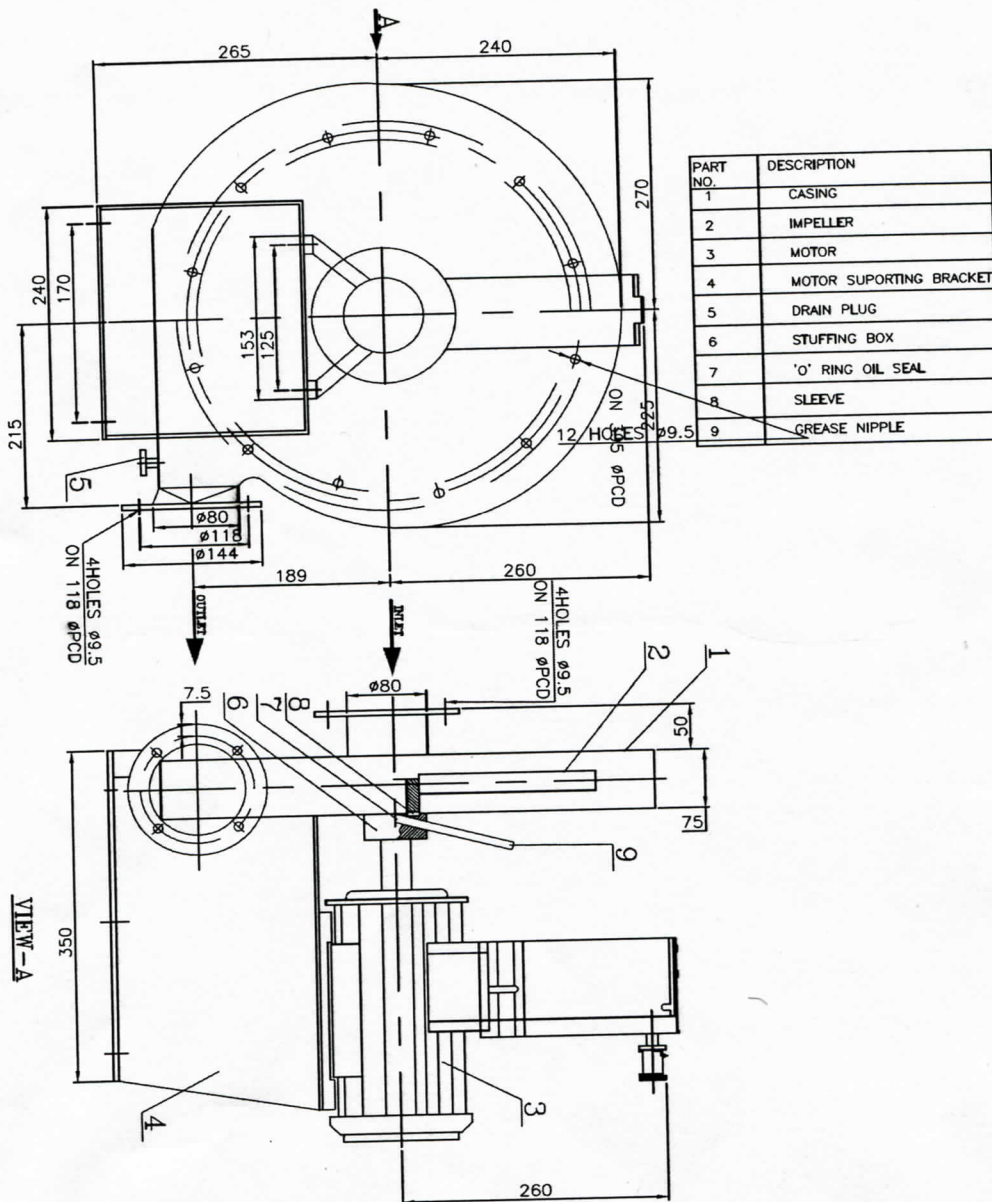
REV. NO. 04

निर्माणकर्ता
WORKED BY

Kunal Mishra


जांचकर्ता
CHECKED BY

Manju Azad



MANUFACTURER'S NAME AND ADDRESS			STANDARD QUALITY PLAN				TO BE FILLED BY BHEL		TO BE FILLED BY BHEL			
BHEL	VENDOR'S NAME	ITEM	VAPOUR EXHAUSTER		QP NO.	QA/BE/QP/306						
				DATED & REV	19.03.2025 04							
		DRG. NO.	AS PER PO									
		SPEC.	TG 60432									
		REV	AS PER PO			Page 1 of 2						
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
									M	B	N	
1	2	3	4	5	6	7	8	9	D	10		11

1.0	RAW MATERIAL												
1.1	CASING, IMPELLER, BLADES & BASE FRAME/ PLATE, SLEEVE, O-RING	CHEMICAL, MECHANICAL PROPERTIES & SIZE	MAJOR	TEST & MEASUREMENT	100%	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	MTC	✓	P	V	V	
1.2	NUTS & BOLTS	TRADE MARK & PRPERTY CLASS	MAJOR	VISUAL	100%	AS PER VENDOR'S PROCEDURE	AS PER VENDOR'S PROCEDURE	IR	✓	P	V	-	
1.3	AC INDUCTION MOTOR (Please specify make, degree of protection and rating)	ROUTINE & TYPE TESTS CERTIFICATE INCLUDING DEGREE OF PROTECTION AND EXPLOSION PROOFNESS	MAJOR	REVIEW	100%	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	TC	✓	P	V	V	Also Include Enclosure Certificate as per Spec
2.0	INPROCESS INSPECTION												
2.1	ALL WELDS	QUALITY OF WELDS	MAJOR	DPT	100%	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	IR	✓	P	V	-	NOTE:1
2.2	IMPELLER	DIMENSIONS	MAJOR	MEASUREMENT	100%	ORDERING DWG	ORDERING DWG	IR	-	P	-	-	
		DIMENSIONS AFTER MACHINING	MAJOR	MEASUREMENT	100%	ORDERING DWG	ORDERING DWG	IR	-	P	-	-	
		DYNAMIC BALANCING	MAJOR	MEASUREMENT	100%	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	TC	✓	P	V	V	
2.3	ASSEMBLY OF FAN	INTERNAL CLEARANCE BETWEEN IMPELLER & CASING	MAJOR	MEASUREMENT	100%	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. / DATA SHEET	IR	✓	P	V	-	
3.0	FINAL INSPECTION ON THE COMPLETE ASSEMBLY												
3.1		OVERALL DIMENSIONS	MAJOR	MEASUREMENT	100%	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	TC	✓	P	W	V	

MANUFACTURER/ SUBCONTRACTOR		LEGEND: RECORDS IDENTIFIED WITH '✓' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.	FOR CUSTOMER USE	APPROVED BY
		M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION		
		ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER		

MANUFACTURER'S NAME AND ADDRESS			STANDARD QUALITY PLAN				TO BE FILLED BY BHEL		TO BE FILLED BY BHEL				
BHEL	VENDOR'S NAME	ITEM	VAPOUR EXHAUSTER	QP NO.	QA/BE/QP/306								
				DATED & REV	19.03.2025 04								
		DRG. NO.		AS PER PO									
		SPEC.		TG 60432									
		REV		AS PER PO		Page 2 of 2							
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS		CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY		REMARKS
										M	B	N	
1	2	3		4	5	6	7	8	9	D	10		11


3.2		PERFORMANCE (INCLUDING AIR DELIVERY, PRESSURE & POWER CONSUMPTION)	MAJOR	PERFORMANCE	100%	IS:4894/ ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	IS:4894/ ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	TC	✓	P	W	V	
3.4		FAN SPEED, SMOOTH RUNNING, DIRECTION OF ROTATION	MAJOR	VISUAL	100%	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	IR	✓	P	W	V	
3.5		NOISE LEVEL	MAJOR	MEASUREMENT	100%	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	IR	✓	P	W	V	
3.6		VIBRATION	MAJOR	MEASUREMENT	100%	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	IR	✓	P	W	V	
3.7		APPEARANCE INCLUDING PAINT THICKNESS (DFT)	MAJOR	VISUAL & MEASUREMENT	100%	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	IR/TC		P	V	V	As per Customer/ BHEL Req. (if any)
3.8		COMPLIANCE OF TECHNICAL REQUIREMENTS	MAJOR	--	100%	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	COC		P	V	-	
3.9		COMPLETION OF DOCUMENTS	MAJOR	PHYSICAL	100%	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	DOCUMENTS	✓	P	V	-	
4.0	PACKING												
4.1		SOUNDNESS OF PACKING AGAINST TRANSIT DAMAGE	MAJOR	PHYSICAL	100%	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	ORDERING SPEC. / BHEL APPD. DRG. & DATA SHEET	INTERNAL RECORDS		P	-	-	


NOTE:1 - Welding to be done by qualified welder as per ASME IX WPS and PQR to be checked by inspecting agency.

Note 2: All pages of the inspection documents shall be numbered in chronology with the QAP clauses, duly mentioning the corresponding QAP clause no. at the top of each page.

Note 3: One 'index' page containing the document descriptions, their page no's & QAP cl no. shall be attached upfront the inspection documents.

Note 4: For any spares item, apart from 'visual inspection' the 'interchangeability fitment certificate' or 'material TC' are to be submitted, with specific mentioning of the 'part no/ item no of the approved GA/ x-sec drg.'.

MANUFACTURER/ SUBCONTRACTOR	 Digitally signed by RAJENDER SINGH DN: cn=RAJENDER SINGH, o=BHEL HEEP HARDWAR, ou=BHEL HEEP HARDWAR, email=rajender.singh@bhel hep.hrdw. Date: 2025.03.19 10:53:22 +05'30' Adobe Acrobat Reader version: 2025.001.20432	LEGEND: RECORDS IDENTIFIED WITH '✓' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.	FOR CUSTOMER USE	
		M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION	APPROVED BY	
		ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER		

		VENDOR LIST NO.	REV.	VALID
		QA/VENDOR/ELEC/001	00	TILL RELEASE OF NEXT REVISION
Section: Electrical				
Approved Vendor List of Electrical Items for Projects				
ELECTRICAL VENDOR LIST				
Sl. No	Item Name	Vendor Name	Location	BHEL Remarks (Category) A. BHEL Mfg. / B. Raw Material C. BOP Bought Outs
1.	Generator	Shanghai Electric Group Co., Ltd.	China	BHEL
		DOOSAN	KOREA	
		SIEMENS	GERMANY	
		L&T - MHPS TG COMPANY	HAZIRA	
		BHEL	HARIDWAR	
		Toshiba	Japan/China	
		GE	WORLDWIDE	
		Dongfang Electric Group Co., Ltd.	China	
2.	GENERATOR'S EXCITATION SYSTEM (STATIC)	GE	CHINA	BHEL
		ALSTOM	GERMANY / POLAND / NOIDA	
		EMERSON	NOIDA	
		ABB	BANGALORE	
		NARI	CHINA	
		TOSHIBA CO.	JAPAN	
3	400kV Disconnector	Xian Xd High Voltage Apparatus Co. ,Ltd.	China	Not In Scope
		Henan Pinggao High Voltage Switchgear Co. ,Ltd	China	
		New Northeast Electric Group High Voltage Switchgear Co., Ltd	China	
		Shandong Taikai Disconnecter Co. ,Ltd	China	
4	MV Cable	Jiangsu He gtong power cable co ltd	China	Not In Scope
		Qingdao Hanhe Cable Co., Ltd	China	
		Phelps Dodge Yantai Cable Co. Ltd	China	
		Jiangsu Dongfeng Cable Co. Ltd.,	China	
		Anhui Huaneng Cable Group Co. Ltd	China	
		Shangdong Hanhe Cable Co. Ltd	China	
5	LV Dry Transformer	Hainan Jinpan Electric Co. ,Ltd.	China	BHEL
		China Electric Equipment Group Corporat	China	
		Nanjing Daqo Transformer Co.,Ltd	China	
6	MV Switchgear	Daqo Group	China	Not In Scope
		Shandong Taikai SWGR	China	
		XD Baoji E ectric Co., Ltd	China	
7	Battery	Hoppecke Power System (Shanghai) Co., Ltd.	China	BOP Bought Outs
		ALCAD	China	
		Saft	France	
		HBL	China	
		Haze Battery Company Ltd	China	
8	DG Set	Perkins	China	Not In Scope
		Cummins	China	
		Mitsubishi	China	
9	Generator Circuit Breaker	ABB	Swiss	Not In Scope
		Ge(Alstom)	France	
		MHI	Japan	
10	UPS	Qingdao Pyramid Electric Engineering	China	BOP Bought Outs
		AEG	China	
		Emerson	China	
11	Generator transformer Protection Relays	Nanjing Nari-Relays Electric Co., Ltd.	China	Not In Scope
		ABB	China	
		SIEMENS	China	
		Guodian Nanjing Automation Co.Ltd	China	
		GE	China	
	Generator transformer, Station	Baoding Tianwei Baobian Electric Co., Ltd.	China	Not In Scope

30	LT SWITCHGEAR PANEL (MCC/PMCC/PC C)	DAQO GROUP	CHINA		
		SHndong Taikai	CHINA		
		Xd Baoji	CHINA		
		AKSHAR ELECTRIC PANEL	BARODA		
		MILSTONE	GURGAON/SAHIBABA D/RUDRAPUR		
		UNILEC ENGINEERS	GURGAON		
		ELECTO CONTROL SYSTEM	NOIDA		
		TRISQUARE SWITCHGEARS PVT LTD	SONIPAT		
		PYROTECH ELECTRONICS PVT LTD	UDAIPUR		
		SICHUAN ELECTRIC	CHINA		
SICHUAN CHUANKAI SWITCHGEAR	CHINA				
31	LT PANEL (ACDB/DCDB/M LDB/ELDB /LOCAL STARTER PANEL)		RYB SWITCHGEAR	DELHI	BOI
			MANISH ENGINEERING	MUMBAI	
			UNILEC ENGINEERS	BHIWADI	
			CHANDRA ELECTRICAL & ELECTRONICS	AURANGABAD	
			JASPER ELECTRICALS	NOIDA	
			AKSHAR ELECTRIC	BARODA	
			ZENTIH	THANE	
			MAKTEL	VADODARA	
			INDUSTRIAL CONTROL	AHMEDABAD	
		POSITRONICS	-		
		ELCHEMECH	AHMEDABAD		
		OM ELECTRICALS	AHMEDABAD		
		ELECTO CONTROL SYSTEM	NOIDA		
		RISHA CONTROL	NEW DELHI		
		STERLING GENERATORS	SILVASA		
		PRISTINE SWITCHGEARS (SCHNEIDER)			
		NARKHEDE UDYOG (ABB)			
		BHARAT ENGINEERS	VADODARA		
		ATOZ	NOIDA		
		BCH	FARIDABAD		
		SIEMENS	MUMBAI		
		LUNAR ENGINEERING PVT LTD	SACHIN,SURAT		
		VIDYUT CONTROL (I) PVT LTD	GHAZIABAD		
		PYROTECH ELECTRONICS PVT LTD	UDAIPUR		
		PYROTECH ELECTRONICS PVT LTD	UDAIPUR		
		C & S	HARIDWAR		
SHANGHAI WIN-POWER CORPORATION	CHINA				
32	VARIABLE FREQUENCY DRIVE (VFD)		SIEMENS	NASHIK	BOI
			ROCKWELL	SHAHIBABAD, UP	
			GE	BANGALORE	
			ABB	BANGALORE	
			YOKOGAWA	JAPAN	
			L&T	MUMBAI	
			ALLEN BRADLEY	--	
			AMTECH ELECTRONICS INDIA LTD	GANDHINAGAR	
			HITACHI HI-REL POWER ELECTRONICS PVT LTD.	SANAND,AHMEDABA D	
		ABB	WORLD WIDE		
		GE	WORLD WIDE		
		33	PLC PANELS	ABB	
GE	BANGALORE				
SIEMENS	MUMBAI				
L&T	MUMBAI				
SCHNEIDER	DELHI				
ROCKWELL AUTOMATION	SAHIBABAD				
AMTECH ELECTRONICS INDIA LTD	GANDHINAGAR				
Shanghai Institute of Process Automation Instrumentation	CHINA				
Beijing Far East Instrument Co., Ltd.	CHINA				
Xi'an Xingyi Control System Co.,Ltd.	CHINA				
JAYASHREE ELECTRON PVT LTD	PUNE			BOI	
AMTECH ELECTRONICS INDIA LTD	GANDHINAGAR				
GUODIAN NANZI	CHINA				
SHANGHAI WIN-POWER CORPORATION	CHINA				

35	THYRISTOR PANEL	SIEMENS	MUMBAI	BOI
		GE	BANGALORE	
		HONEY WELL	PUNE	
		L&T	MUMBAI	
		EUROTHERM	USA	
		DEC	CHINA	
		FEIDA	CHINA	
36	HT CABLES	POYCAB WIRES	DAMAN	Not in Scope
		KEI	BHIWADI	
		RAVIN CABLE	PUNE	
		UNIVERSAL CABLE	SATNA	
		STERLITE TECHNOLOGIES LTD.	HARIDWAR	
		GUPTA POWER		Not in Scope
		CCI	NASHIK	
		TORRENT CABLE	NADIAD	
		UNIFLEX CABLE	VALSAD	
		HAVELLS CABLE	ALWAR	
		NICCO CABLE	KOLKATA	
		FINOLEX	MUMBAI	
		CMI ENERGY INDIA LTD	BADDI	
		KEC INTERNATIONAL (RPG)	VADODARA	
		PARAMOUNT COMMUNICATION LTD	ALWAR	
		GEMSCAB INDUSTRIES LTD	BHIWADI, RAJASTHAN	
		PHELPS DODGE YANTAI CABLE COMPANY LTD	CHINA	
		ANHUI HUANENG CABLE GROUP CO. LTD	CHINA	
		JIANGSU HENG TONG POWER CABLE CO. LTD	CHINA	
		QINGDAO HANHE CABLE CO. LTD	CHINA	
37	LT POWER CABLE	DELTON	HYDERABAD	BOI
		SUYOG ELECTRICALS	VADODARA	
		BANSALI CABLES	ALWAR	
		CMI ENERGY INDIA LTD	BADDI	
		KEC INTERNATIONAL (RPG)	VADODARA / SILVASSA	
		TC COMMUNICATION	GHAZIABAD	
		SPECIAL CABLES PVT LTD	RUDRAPUR	
		NAGANWALA IMPEX PVT LTD	ALWAR, RAJASTHAN	
		PARAMOUNT COMMUNICATION LTD	ALWAR, RAJASTHAN	
		ATLAS CABLE AND ACCESSORIES	GANDHIDHAM	
		GEMSCAB INDUSTRIES LTD	BHIWADI, RAJASTHAN	
		Far East Cable Co., Ltd.	CHINA	
		JIANGSU JIANGYANG CABLES	CHINA	
38	CONTROL & INSTRUMENTATION CABLE	POYCAB WIRES	DAMAN	BOUGHT OUT ITEM
		SUYOG ELECTRICALS	VADODARA	
		CORDS CABLE	BHIWADI	
		THERMO CABLE	HYDERABAD	
		UNIVERSAL CABLE	SATNA	
		KEI	BHIWADI	
		BANSALI CABLE	BHIWADI	
		CABLE COORPORATION OF INDIA	NASHIK	
		DELTON	FARIDABAD	
		HAVELLS CABLE	BHIWADI	
		CMI ENERGY INDIA LTD	BADDI	
		LAPP INDIA	BANGALORE	
		KEC INTERNATIONAL (RPG)	VADODARA / SILVASSA	
		TC COMMUNICATION	GHAZIABAD	
		SPECIAL CABLES PVT LTD	RUDRAPUR	
		PARAMOUNT COMMUNICATION LTD	ALWAR	
		ATLAS CABLE AND ACCESSORIES	GANDHIDHAM	
		GEMSCAB INDUSTRIES LTD	BHIWADI, RAJASTHAN	BOUGHT OUT ITEM
		JIANGSU JIANGYANG CABLES	CHINA	
		OPTICS & ALLIED	BANGALORE	BOUGHT OUT ITEM
		BELDEN	--	

39	FIBER OPTIC CABLE	UNI-FLEX	--	
		BIRLA ERICSSON	REWA	
		TERACOM GOA	USHA	
		MARTIN (UM CABLES LTD.)	SILVASSA	
		PARAMOUNT COMMUNICATIONS LTD	ALWAR, RAJASTHAN	
		FINOLEX CABLE	GOA / PUNE	
		Qingdao Hanhe Cable Co.,Ltd.		
	Jiangsu Jiangyang Cable Co.,Ltd.			
40	LT PVC Cable	POYCAB WIRES	--	BOI
		KEI	--	
		THERMO CABLE	HYDERABAD	
		SIECHEM	PONDICHERRY	
		UNIVERSAL CABLE	--	
		LAPP	--	
		PARAMOUNT COMMUNICATION LTD	ALWAR, RAJASTHAN	
		UNIFLEX CABLES (APAR)	--	
		SICHUAN CABLES	CHINA	
		WUXI CABLES	CHINA	
		Far East Cable Co., Ltd.	CHINA	
		JIANGSU JIANGYANG CABLES	CHINA	
		Tianjin Daily Prosperity Science & Technology	CHINA	
41	WIRES	POYCAB WIRES	DAMAN	BOI
		KEI	SILVASSA/BHIWADI	
		RPG	SILVASSA	
		TORRENT CABLE	NADIAD	
		HAVELLS CABLE	BHIWADI	
		UNIVERSAL CABLE	SATNA	
		SUYOG	KALOL	
		FINOLEX	PUNE	
		LAPP	BANGLORE	
		GENEREAL CABLE	BADDI	
		ROLLIFLEX CABLES PVT. LTD.	DAMAN	
		SICHUAN CABLES	CHINA	
		WUXI CABLES	CHINA	
		Far East Cable Co., Ltd.	CHINA	
		JIANGSU JIANGYANG CABLES	CHINA	
		Tianjin Daily Prosperity Science & Technology	CHINA	
		42	BUS BAR TRUNKING SYSTEM (BBT) / SANDWICHED TYPE BUS DUCT	
CGL	--			
L&T	--			
SIEMENS	--			
GODREJ	--			
C&S	--			
LEGRAND	--			
43	GI LATTICE STEEL & PIPE STRUCTURE	MJ ENGINEERS	BHIWADI	NOT IN SCOPE
		GLOBAL SMELTERS LTD.STR DIVISION	UNNAO, UP	
		ARCHON ENGINEERING	KALOL,GANDHINAGA R	
		GOODLUCK STEEL & TUBE LTD.	BULANDSHAHR, UP	
		AGARWAL FOUNDARIES	MEDAK, AP	
		R.S. INFRA PROJECTS LTD	GHAZIABAD	
		ANAND UDHYOG THANE	INDIA	
	KANADE ANAND UDHYOG	THANE		
44	GENERATOR'S AIR COOLER FOR BRUSH GEAR (IF APPLICABLE)	GEA	GERMANY, INDIA,	NOT APPLICABLE
			POLAND	
		COLD & HOT	SWITZERLAND	
		KELVION (GEA ECOFLEX)	INDIA	
45	GENERATOR'S BEARING	GTE GLEITLAGERTECHNIK-ESSEN	GERMANY	BHEL
		GERMANY RENK	GERMANY	
46	GENERATOR'S BUSHING CURRENT TRANSFORMER	TOSHIBA CORPORATION	JAPAN	NOT IN SCOPE
		ABB	JAPAN	
		TRENCH	FRANCE	
		SIEMENS LTD -- HSP		
		PRAYOG	INDIA	
		PRAGATI	INDIA	
		KAPPA	INDIA	
		MAHENDRA ELECTRICALS	INDIA	
		DALIAN INSTRUMENT TRANSFORMER	INDIA	
		JSL INDUSTRIES	INDIA	
		DALIAN NORTH TRANSFORMER	CHINA	
		DALIAN FIRST TRANSFORMER	CHINA	
		SHENYANG TRANSFORMER	CHINA	
		SCHNEIDER	ERMANY, INDIA	
		C&S	INDIA	

47	GENERATOR'S CONTROL CUBICLE FOR H ₂ O & H ₂ MACHINE	POSITRONICS	INDIA	
		PYROTECH	INDIA	
		MASSIBUS	INDIA	
		ABB	INDIA	
		GE	INDIA	
48	GENERATOR'S HYDROGEN COOLER	GEA	GERMANY	BHEL
		LAXMI	INDIA	
		DENGENG UNIFIN	CHINA	
		FITWELL	INDIA	
49	GENERATOR'S HYDROGEN GAS COOLING SYSTEM	ROCKFIN	PUNE/POLAND	
		ROTAN	GERMANY	
50	GENERATOR'S HYDROGEN GAS DRYER	JINDAL ELECTRONICS	INDIA	BOI / # Refer Note
		MELLCON ENGG	INDIA	
		YANGZHOU ELECTRIC POWER	CHINA	
		HAILIN NORTH ELECTRICAL POWER	CHINA	
		SUZHOU TAILIDENG PURIFICATION	CHINA	
		YANGZHOU YIHUA SCIENCE TECHNIC CO., LTD	CHINA	
51	GENERATOR'S HYDROGEN GAS GENERATION PLANT	CHINA SHIPBUILDING INDUSTRY CORPORATION,NO.717 INSTITUTE	CHINA	BOI / # Refer Note
		SUZHOU JINGLI HYDROGEN MAKING EQUIPMENT CO. LTD	CHINA	
		TIANJIN MAINLAND HYDROGEN MAKING EQUIPMENT CO. LTD	CHINA	
52	GENERATOR'S HYDROGEN GAS PURITY INDICATOR PANEL	KOKUSAI KEISO CO.	JAPAN	BOI / # Refer Note
		SANYO CONTROLS CO.	JAPAN	
		IYO DENKI	JAPAN	
53	GENERATOR'S MAIN/ EMERGENCY SEAL OIL PUMP COOLER	GEA ECOFLEX (KELVION)	GERMANY, INDIA	BOI / # Refer Note
		ALPHA LEVEL	EUROPE, SWEDEN	
		TRANTER	INDIA	
54	GENERATOR'S MAIN/ EMERGENCY SEAL OIL PUMP	KOSAKA LABORATORY LTD IMO PUMP	JAPAN	BOI / # Refer Note
		ALL WEILER	GERMANY	
		TUSHACO	INDIA	
		UT PUMP	INDIA	
		IMO	Sweden	
55	GENERATOR'S MAIN/EMERGENCY SEAL	ROCKFIN	POLAND	BOI / # Refer Note
		DEA	CHINA	
56	GENERATOR'S REFRIGERATION HYDROGEN TYPE DRIER	AKER PROCESS SYSTEMS PTY. LTD.	AUSTRALIA/CHINA	BOI / # Refer Note
		HEBELER	USA	
		HOWARD MRTEN	CANADA	
		MITTEN	USA	
		ROCKFIN	PUNE/POLAND	
		ROTAN	GERMANY	
57	GENERATOR'S ROTOR RETAINING RING	ENERGIETECHNIK ESSEN (VSG)	GERMANY	BHEL
		SAARSCHMIEDE	GERMANY	
		AUBERT & DUVALL	FRANCE	
		SIEMENS AG ERFURT	GERMANY	
		JAPAN STEEL WORKS LTD	JAPAN	
58	GENERATOR'S ROTOR SHAFT FORGINGS	JSW (JAPAN STEEL WORKS)	JAPAN	# Refer Note
		JCFC	JAPAN	
		SAARSCHMIEDE	GERMANY	
		S.D.F.TERNI	ITALY	
		SCHMIEDE WEKE GRODITZ	GERMANY	
		BUDERUS EDELSTAHI	GERMANY/AUSTRIA	
		CRUESOT FORGE	FRANCE	
		KOBE STEEL	JAPAN	
		CHINA NATIONAL ERZHONG GROUP CO.	CHINA	
		CHINA FIRST HEAVY INDUSTRIES	CHINA	
59	GENERATOR'S STATOR COOLING WATER SYSTEM	ROCKFIN	INDIA/POLAND	BHEL
		ROTAN	GERMANY	
		LINCOLIN	BANGALORE	
		ENPRO	PUNE	
		CENLUB FARIDABAD HYDAK	INDIA	
		COIMBATORE TOSHIBA CORPORATION	JAPAN	
		TJPS	INDIA (CHENNAI)	
		JIMC	KOREA	
		CHORYO HIGH TECH	JAPAN	
60	GENERATOR'S STATOR FRAME	ANDRITZ KFT	HUNGARY	BHEL
		TURBOCARE	POLAND	
		TIGEP	HUNGARY	
		ALSTOM	INDIA	
		ALSTOM POWER SP Z O O	POLAND	
		ALSTOM BEIZONG POWER (BEIJING)	CHINA	

