

BUYERS SPECIFIC ADDITIONAL TERMS & CONDITIONS

ITEM NAME: ONLINE CONTINUOUS PARTIAL DISCHARGE MONITORING SYSTEM ALONG WITH DESK TOP COMPUTER AND COLOUR PRINTER AND INSTALLATION AND COMMISSIONING

PROJECTS: 2X800 MW KODERMA

1. SCOPE OF ENQUIRY:

E-bids on GeM portal are invited from bidders for the supply of : ONLINE CONTINUOUS PARTIAL DISCHARGE MONITORING SYSTEM ALONG WITH DESK TOP COMPUTER AND COLOUR PRINTER AND INSTALLATION AND COMMISSIONING for 2X800 MW KODERMA as per requirement mentioned below:

ITEM-NO	MATERIAL CODE & ITEM DESCRIPTION	QTY.	UNIT	PROJECT	DATE FOR SUPPLY COMPLETION
1	W90415201241 ONLINE CONTINUOUS PARTIAL DISCHARGE MONITORING SYSTEM, SYSTEM CONTROLLERS, DATA ACQUISITION UNIT, SOFTWARE AND ALL TYPES OF SPECIAL CABLES, NETWORK ARRANGEMENT, ASSEMBLIES. SPEC: TG60554 REV: 05	1	SET	KODERMA U-1	15.08.2027
		1	SET	KODERMA U-2	15.12.2027
	Total qty	02	SET		
2	W90415201071 DRG: - REV:00 DESK TOP COMPUTER AND COLOUR PRINTER SPEC: TG60554 REV: 05	1	SET	KODERMA U-1	15.08.2027
		1	SET	KODERMA U-2	15.12.2027
	Total qty	02	SET		
3	W90415201217 INSTALLATION AND COMMISSIONING OF CONTINUOUS ONLINE PD SYSTEM INCLUDING CALIBRATION SERVICES	1	No	KODERMA U-1	15.11.2027 15.03.2028
		1	No	KODERMA U-2	
	Total qty	02	No		

2. Project Detail:

Project Name	2X800MW KODERMA TPS PH-II
Consignee Address	THE CGM & HOP DVC KODERMA TPS PH-II 2X800 BANJHEDIH VILLAGE KODERMA DISTRICT, JHARKHAND

3.BUYERS SPECIFIC ADDITIONAL TERMS & CONDITIONS IN ADDITION TO GTC

Sl. No.	Terms	Description	Supplier confirmation
1.	Documents Checklist:	<p>Please submit signed and stamped copy of your offer on each page along with following documents;</p> <ul style="list-style-type: none"> • Buyer Specific T&C. • Technical PQR & its supportive document. • Technical drawing & purchase specification. • Quality plan. • Certificate/self-certification for minimum local content as per PPP-MII order. 	
2.	Compliance of GTC on GeM	General Terms and Conditions on GeM 4.0 (Version 1.28) dated 22.12.2025 or it's latest revision of GeM portal shall be applicable against this enquiry. Kindly confirm to compliance the same for this tender.	
3.	Pre-Qualification Requirements	The Pre-Qualification Requirements have been compiled. 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.	
4.	Make in India Clause	<p>As per Circular No. 07 of 2024-25 dated 05/12/2024, Following is proposed to be mentioned in the tender documents:</p> <p>"For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT"</p> <p>For this eligibility criteria, bidders are required to submit certificate of Minimum local content as specified in the Make In India Declaration Certificate of the tender (copy attached).</p>	
5.	Compliance of Rule 144 (xi) of GFR 2017	Compliance of Restrictions under Rule 144 (xi) of GFR 2017 shall be as per GeM.	
6.	Bid validity/ Validity of offer	<p>Please note that validity of the offer shall be 180 days from the date opening of Techno-Commercial bid (Part-I bid) on GeM portal.</p> <p>Offer of bidder's having validity less than 180 days shall liable to reject. Please confirm.</p>	
		<p>The required validity is considering that offer is complete & clear w.r.t. PQR and all techno-commercial conditions. Vendors need to extend their offer validity for the time taken by them in responding BHEL's comments/clarification sought during techno-commercial scrutiny of the offer. In case regret by any bidder for such validity extension, their offer shall liable to be reject. Please confirm.</p>	
7.	Prices/Basis of Quotation	<p>Prices: The offered prices of the items shall remain firm and fixed at any point of time and shall be indicated in INR for each accounting unit.</p>	
		<p>Ensure to quote your price inclusive of packing, forwarding, Freight & GST for Total quantity on GeM portal.</p>	
		<p>Transit Insurance would be arranged by BHEL. Please quote your prices accordingly.</p>	

		The prices are to be quoted on Ex-Works with freight Pre-paid up to project destination basis. The goods must be dispatched through any Bank approved transporters having their branch at Haridwar. The names and addresses of transporters approved by IBA as well as BHEL are posted at our website www.bhelhwr.co.in. Please note that, if you dispatch the material by any BHEL un-approved transporter then you will necessarily be required to furnish the MRC (Material Receipt Certificate) from respective Project Site for processing of your invoice. No demurrage charges would be borne by BHEL.									
8.	Loading and unloading	Vendor's scope will not cover Loading & Unloading at Final destination of delivery. Unloading at final destination (i.e. BHEL site) is in BHEL 'scope. Loading and unloading at other intermediate places due to any permitted transshipment will be the responsibility of the vendor. Kindly note									
9.	Evaluation criteria	Evaluation will be done on the basis of total landed cost to BHEL, taking all material codes together with total cost involved for delivery up to BHEL project sites (considering material cost, taxes & duties and Freight charges up to Project site).									
10.	Evaluation Currency	The evaluation currency for this tender shall be INR.									
11.	Payment terms:	<p>For Mcodes W90415201241 & W90415201071 -</p> <p>The payment shall be done after receipt of Material at BHEL respective project site, within no. of days as defined in the below table from the date of receipt of Material at site (i.e. MRC date).</p> <table border="1"> <thead> <tr> <th>Type of Bidder</th> <th>Payment Terms (Number of Days)</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>The Payment terms are subject to receipt of non-discrepant document from supplier.</p> <p>For Mcode W90415201217 - 100% payment against submission of Successful Commissioning or installation Certificate/Time Sheet/MOM signed by Project authorities along with Invoice direct to BHEL.</p>	Type of Bidder	Payment Terms (Number of Days)	Micro & Small Enterprises (MSEs)	45 days	Medium Enterprises	60 days	Non MSME	90 days	
Type of Bidder	Payment Terms (Number of Days)										
Micro & Small Enterprises (MSEs)	45 days										
Medium Enterprises	60 days										
Non MSME	90 days										
12.	GeM charges	GeM charges if any shall be either side only i.e. buyer's GeM charges shall be in buyer's account and seller's GeM charges shall be on seller's account. Please confirm.									
13.	Contract execution	Bidder's are advised to read GeM related query & clarification carefully on GeM portal. Order shall be executed through GeM.									
14.	Delivery Period	<p>Please note that BHEL's Delivery requirements are mentioned in point no 1 of above.</p> <p>Early delivery w.r.t. above lot delivery will be accepted only after written confirmation from BHEL. BHEL reserve right to reject early delivery request of bidders / suppliers.</p> <p>Delivery period indicated in GeM bid is only indicative and final delivery of tender shall be taken as mentioned above.</p> <p>Accordingly bidders to confirm the above deliveries or quote their best possible delivery in no of months / weeks from the date of placement of Purchase order, including all activities like document approval, inspection by TPI time etc.</p>									
15.	Technical	Technical documents/ drawings required with the offer									

	Requirements	THE VENDOR TO ENSURE COMPLETENESS OF THEIR OFFER AS PER BHEL SPEC NO TG60554 REV.05	
16.	Technical Document/ Drawing approval conditions	<p>Drawings/Data sheets/documents/QAP etc. as called for in the specifications shall be submitted by Vendor for BHEL/ Customer approval within 30 days of purchase order. BHEL shall approve these drawings/data sheets/ documents / QAP etc. within 30 days of receipt.</p> <p>Any comments on the documents shall be given by BHEL within 7 days of submission and vendor shall submit revised document / reply to comments, within 7 days of BHEL comments. However, total time for Document approval submission and approval shall not exceed 30 days for respective party.</p> <p>Delivery is from the date of PO, accordingly, delay in submission / revision of the documents by the vendor will automatically account for to vendor. In case of delay on account of BHEL in comments / approval of the documents, the delivery shall be re-scheduled by the no of days taken by BHEL in excess to 30 days. For delay analysis cumulative no of days (including time taken in comments), shall be considered for delivery extension.</p>	
17.	Operation & Maintenance Manual	Kindly confirm that in the event of ordering O&M manuals will be provided in 03 nos. of Hard Copies and 03 CD ROMs/pen drive to BHEL Haridwar for each project covered in the tender .	
18.	Guarantee period	<p>Guarantee shall be 24 months from the date of commissioning of the equipment .</p> <p>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.</p> <p>BHEL reserve the rights to reject the offers having lesser guarantee period as mentioned above.</p>	
19.	Reverse Auction	RA shall be done on GeM portal as per the guidelines & logics enabled on GeM portal.	
20.	Liquidated Damages (LD) for late delivery	<p>Liquidated Damages shall be lot wise as per clause no. 15 (iii) of General terms and conditions on GeM 4.0 (Version 1.28) as under: kindly confirm.</p> <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 per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever”.</p> <p>The date of LR would be treated as the date of delivery for penalty purposes.</p>	
21.	MDCC clause	<p>Please note that, material shall be dispatched only after issue of Material dispatch clearance certificate (MDCC) from end customer. For issue of MDCC, vendors are required to submit all test certificates (TC) and inspection report of third party (IR) to BHEL. After review & acceptance of the quality document, BHEL will forward the same to end customer for issuance of MDCC.</p> <p>MDCC shall be issued within 7 days of receipt of complete quality documents / TCs,. In case of delay in issuance of MDCC, only delivery shall be extended by no of days taken by BHEL in excess to 7 days and all other terms and conditions of PO shall remains same & binding.</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>	

		Kindly confirm.			
22.	Order Acceptance :	Ink signed order acceptance shall be furnished within 15 days of order placement. In case, order acceptance do not received within 15 days of order placement, PO deemed to be accepted by you.			
23.	Beneficiary of PO	Kindly confirm on whom the PO will be placed in the event of ordering.			
24.	Dispatch documents	<p>Following dispatch documents to be provided immediately after directly dispatch to BHEL Project site for billing purpose:</p> <ul style="list-style-type: none"> • Guarantee/Warrantee Certificates • E- Invoice • GeM invoice • Original consignee copies of GR/LR/RR (Material shall be dispatched on door delivery basis without consignee copy) • Packing list • Original GST compliance certificate • Ewaybill part-B • MRC/POD/Receipted LR/RR/GR copy (as per proof of delivery of material at BHEL Project site) <p><i>All clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> Mr. Sachin Gupta Designation: Sr.Engineer (PPX-BOI) 4th Floor, Main Administrative Building, HEEP, BHEL, Hardwar- 249403 Uttarakhand, India Tel: +91 1334 28 1690 </td> <td style="width: 50%; padding: 5px;"> Mr. Pankaj Kumar Designation: Sr.Manager (PPX-BOI) 4th Floor, Main Administrative Building, HEEP, BHEL Hardwar- 249403 Uttarakhand, India Tel: +91 1334 28 1690 </td> </tr> </table>	Mr. Sachin Gupta Designation: Sr.Engineer (PPX-BOI) 4 th Floor, Main Administrative Building, HEEP, BHEL, Hardwar- 249403 Uttarakhand, India Tel: +91 1334 28 1690	Mr. Pankaj Kumar Designation: Sr.Manager (PPX-BOI) 4 th Floor, Main Administrative Building, HEEP, BHEL Hardwar- 249403 Uttarakhand, India Tel: +91 1334 28 1690	
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25.	Submission of bills on BHEL SUVIDHA portal	Kindly ensure to necessarily upload the despatch & invoice details <i>on BHEL SUVIDHA portal at https://suvidha.bhel.in/suvidha/, prior to</i> despatch. All documents as per PO checklist , along with additional documents (if any), must be uploaded on the portal. It is mandatory that tax invoices with a net amount (including taxes) exceeding Rs five lakhs uploaded on the portal are digitally signed using a Class 3 Digital Signature Certificate (DSC) issued by a licensed Certifying Authority. Submission of invoice document in hard copy is allowed for invoices with a net amount (including taxes) equal to and upto Rs five lakhs , in case they were not digitally signed and uploaded on the portal. Pl note that bill will be registered & processed only after uploading dispatch documents on BHEL SuVIDHA portal.			
26.	IP Address	The bids received from same IP address shall be outrightly rejected and shall not be considered for further evaluation.			
27.	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>			

- IV. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause.
- V. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract.
- 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.
- VII. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor.
- 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.
- 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.
- 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.

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.

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.

Remedies in case of Breach of Contract.

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.

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.

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 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>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>	
28.	<p>Suspension of Business Dealings with Suppliers / Contractors:</p>	<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. 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:</p>	

		http://www.bhel.com/vender_registration/vender.php	
29.	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</p>	

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.

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.

The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.

The Arbitration proceedings shall be in English language and the seat and venue of Arbitration shall be at the court(s) of Haridwar.

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.

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.

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.

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.

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.

30. CONFLICT OF INTEREST AMONG BIDDERS/ AGENTS

The bidder notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations:

i) If its personnel have a close personal, financial, or business relationship with any personnel of BHEL who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BHEL directly or indirectly;

ii) The bidder (or his allied firm) provided services for the need assessment/ procurement planning of the Tender process in which it is participating;

iii) Procurement of goods directly from the manufacturers/ suppliers shall be preferred. However, if the OEM/ Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the BHARAT HEAVY ELECTRICALS LIMITED HEEP: HARIDWAR-249403 (UK) INDIA Page 3 of 3 manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorized distributor (with/ or without the OEM) from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate

iv) A bidder participates in more than one bid in this tender process. Participation in any capacity by a Bidder (including the participation of a Bidder as a partner/ JV member or sub contractor in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-contractor in more than one bid if he is not bidding independently in his own name or as a member of a JV

The Bidder declares that they have read and understood the above aspects, and the bidder confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s), in this regard. 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, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by BHEL as per extant policies/ guidelines.

31. 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.

Type under MSE	SC/ST owned	Women owned	Others (excluding SC/ ST & Women Owned)
Micro			
Small			

		<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>	
32.	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.	
33.	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, goslow 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</p>	

		<p>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>	
34.	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.	
35.	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 	
36.	Deviation: (if any)	Kindly confirm that there is no deviation with respect to BHEL Specifications. However, if there is any deviation with respect to the tender documents then the same should be brought out specifically in separate annexure marked Deviations (Technical/Commercial).	
37.	Quality Requirements	<p>Kindly note that Testing & Certification (including manufacturer standard Test certificate) is required as per BHEL ordering drawings, specification & documents & accordingly quality documents for applying MDCC to BHEL.</p> <p>Inspection charges will be borne by BHEL. All coordination with third party inspection agency shall be done by the supplier only.</p> <p>Inspection call to third party inspection agency may be raised directly by the supplier; however 15 days are to be provided for deputation of representative of third party inspection agency for inspection.</p>	

SPECIAL NOTE FOR BIDDERS:

- In the event of our customer order covering this tender being cancelled /placed on hold /otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender at any stage of execution.
- BHEL may negotiate the L1 rate, if not meeting our budget / estimated cost. BHEL may re-float the tender opened, if L1 price is not acceptable to BHEL even after negotiation.
- Any change in applicable rates of Tax or any other statutory levies (Direct / Indirect) or any new introduction of any levy by means of statute and its corresponding liability for the deliveries beyond the agreed delivery date for reasons not attributable to BHEL will be to vendors account. BHEL will not reimburse the same and any subsequent claim in this respect will be summarily rejected.
- BHEL reserves its right to reject an offer due to unsatisfactory past performance by the respective Vendor in the execution of any contract to any BHEL project / Unit.
- The offers of the bidders who are under suspension and 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.

- f. Recovery / deduction as applicable as per Direct and Indirect taxes as notified by Govt. Of India from time to time will be made and information/certificate for such deduction/recoveries shall be provided by BHEL to the vendor.
- g. If the delivery of supply as detailed above gets delayed beyond the delivery period, the Supplier/Vendor shall request for a delivery extension and BHEL at its discretion may extend the Contract. However, if any 'Delivery extension' is granted to the Supplier/Vendor for completion of supply, due to backlog attributable to the Supplier/Vendor, then it shall be without prejudice to the rights of BHEL to impose LD for the delays attributable to the Supplier/Vendor.
- h. In case BHEL increase the quantity during currency of the contract in line with quantity variation clause of GeM bid, delivery extension on pro-rata basis shall be given for supply of these additional quantity.

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 submitted/uploaded along with offer on GeM portal against this bid.

1. Please submit replica of Price schedule (without prices) showing "quoted" in place of price along with techno-commercial bid (Part-I).
2. Please submit signed & Stamped copy (each page) of duly filled of confirmation column of "Buyers Specific Additional Terms & Conditions (ATC)" and its clause wise supporting documents where required.
3. Please submit signed & stamped copy (each page) for qualifying PQR with proper filled information and related supporting documents as mentioned in PQR.
4. Please submit certificate of Minimum local content as specified in the Make In India Certificate of the tender

Pre-Qualification Requirements (PWR) for **On Line Partial Discharge Monitoring System (PDMS)**
Material code no. W90415201241, W90415201071 & W90415201217

Purpose of System: Used in Power plant applications for measuring partial discharge in Gen stator winding.

1) Bidder shall be manufacturer or authorized supplier of On Line Partial Discharge Monitoring System (PDMS). Letter of authorization or suitable documents shall be submitted for the same.

2) The Vendor shall have supplied above system for at least two Turbo-Generators with output terminal Voltage of at least 21KV. The system must be working for one year to the satisfaction of end customer.

In support of above, Customer satisfaction letter from at least one end customer or 'Installation and commissioning' report of at least two installations should be provided by Vendor. The report shall not be older than last 7 years from date of enquiry.

OR

Successful execution of at least one order for BHEL Haridwar for On Line Partial Discharge Monitoring System (PDMS) within last 7 years from date of enquiry.

- 3) System should be suitable to work under high magnetic fields and high voltage area.
- 4) Data sheet / Specification sheet for field sensor (capacitive coupler) and main monitoring system to be submitted for BHEL review.
- 5) The maximum PD level shall not be more than 5pC at 25KV rms. Coupling capacitor should be tested at minimum 60KV AC rms for 1 min. Vendor to confirm.
- 6) Coupling capacitor values should be either 80pF or 1.0 nF.
- 7) Bandwidth of PDMS range shall be several MHz
- 8) PDMS monitoring system resolution should be 0.5 deg or better.

Notes: -

- 1) Vendor to furnish their complete reference / experience list for our review.
- 2) BHEL reserves the right to verify information submitted by vendor. In case the information is found false/ incorrect, the offer shall be rejected.

Prepared by
Kavita S
Kavita Seth *8/7/25*
Sr.Engr/CIE

Checked by
Pallu Singh
Pallu Singh *08/07/25*
Sr.MGR / CIE

Approved by
Satish *08/07/25*
Shri Satish Kumar
Sr.DGM / CIE

SIGN दिनांक एवं हस्ताक्षर & DATE		उत्पाद मानक PRODUCT STANDARD	TG 60554 पृष्ठ का Page 1 of 10
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सामग्री सूची संख्या को
 अधिकतम कराया है
 SUPERSEDES
 INVENTORY NO.

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 इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रलेख एवं अपरलेख का ये किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।

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 P-6291

BASED ON: BHEL EXPERIENCE /IEEE1434 /IEC 60034-27

CONTINUOUS ON LINE PARTIAL DISCHARGE MONITORING SYSTEM FOR TURBOGENERATOR WINDING

1.0 APPLICATION :

The life of stator winding being a major factor in the life of the machine itself, condition monitoring of HV electrical insulation becomes a critical measure of life expectancy. Insulation deterioration due to delamination, abrasion or swelling results in presence of voids in insulation system and result in partial discharge within the HV insulation, tracking on end windings and sparking between stator core and loose stator coils. In order to provide an effective tool for predictive maintenance and condition monitoring of the stator winding in HV rotating machines, continuous on-line PD monitoring system for stator insulation is proposed to be connected to the Generator system.

2.0 COMPLIANCE WITH STANDARD : This document has been prepared based on BHEL experience. Assistance has been taken from IEEE 1434 / IEC 60034 Part-27.

3.0 SCOPE :

3.1 This specification defines the requirement of design, manufacture, supply and installation of the Continuous On-line partial discharge monitoring system, including permanently installed PD sensors like Capacitive couplers, signal cables, Data Acquisition Units, miscellaneous installation / sensing materials as well as system controller and software. :

3.2 The system shall enable automatic and continuous on-line monitoring and testing of PD activity in the stator insulation without any interruption of the operation of the generator.

The system shall contain alarm and self test interfaces. The system may be independent of a computer functionality with respect to data capturing and storing. There should be provision for storing matrices alongwith trending parameters.

3.3 The system as furnished and installed shall not in any way compromise the integrity and safety of the generator.

3.4 The system shall also automatically monitor the operating conditions of each generator, to ensure the validity of the partial discharge tests. To enable such monitoring, the system shall include all necessary analog input modules, customised to accept signals provided by purchaser / end user.

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TSX	P. K. SINGH	अनुवादक	TRANSLATED BY		
QAX	S. K. CHAUDHARY	निर्माणकर्ता	WORKED BY	C R SAHA	29/01/09
CIE	S. C. TYAGI	जांचकर्ता	CHECKED BY	S P AGRAWAL	29/01/09
सहमत विभाग AGREED DEPTT.	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	पर्यवेक्षणकर्ता SUPERVISED BY		
WORKED BY	VIPUL SRIVASTAVA	स्वीकृति	APPROVED :	S P AGRAWAL, AGM (ISE & CPL)	GR.NO. 870
CHECKED BY	HINIKASH KUMAR	निर्माण	PREPARED :	ISE & CPL	ISSUED : TSX
REV.NO. 0.5					DATE : 14.03.03
Dt. 11/09-18	CA.No. TSX-756-18-102				

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		PRODUCT STANDARD	पृष्ठ का Page 2 of 10

SUPERSEDES INVENTORY NO.
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3.5 The system shall be capable of performing complete PD tests and producing all necessary graphs either in pre-defined time intervals or on coincidence of a pre-defined combination of operating parameters.

The system shall be capable of automatically suspending measurements if the generator is not in service.

3.6 The system shall be capable of being installed during the factory or field erection of the generator, with the rotor in place

3.7 Any material and component not specifically stated in this specification but which are necessary for trouble free operation of the system and its accessories shall be deemed to be included unless specifically excluded.

3.8 The complete system design, supply, erection, testing and commissioning shall be carried out by the supplier in close coordination with the purchaser / end user of the system.

3.9 Supply and installation of all equipment and accessories including cables shall be carried out by the supplier.

3.10 Any special instrument / equipment required for erection, testing and commissioning shall be provided by the supplier and may be taken back after successful commissioning.

3.11 10% of the installed quantity of sensors, subject to minimum of 2 numbers shall be supplied as mandatory spares.

4.0 TECHNICAL REQUIREMENTS :

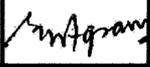
4.1 The system for continuous on-line partial discharge monitoring of Generator shall monitor partial discharges during normal operation of the gas / steam / nuclear / turbine generator while eliminating all types of external electrical interference unique to each machine. Brief technical parameters of the machine shall be furnished as per the format indicated in the Annexure -1 by the purchaser. **Measurement system Bandwidth $\geq 20\text{MHz}$.**

4.2 **Noise Cancellation :** Effective fully DIGITAL noise cancellation technique based on pulse arrival time or other proven method to ensure that false test results do not occur and suitable for turbo generators as mentioned in Annexure - 1.

4.3 **Power source :** Dual Power supply feeder at 240 Volts $\pm 10\%$, single phase, 50 Hz (+ 3%, -5%) can be provided by the purchaser. Power supply required at any other voltage level shall be arranged by the bidder suitably by deriving the same from above supply.

4.4 **Capacitive Couplers :**
The couplers being installed on the HV terminal side shall be of suitable type with good frequency response for the machine. These couplers shall be of Epoxy Mica type and PD free corresponding to rated line voltage and shall be suitable for temperature at least upto 105°C. The type of capacitive coupler offered should have been used as part of a continuous on-line PD monitoring system on generators for at least 2 years. The details of supplementary PD sensors if any shall be furnished.

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	जांचकर्ता CHECKED BY S P AGRAWAL	21/01/09

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सामग्री सूची संख्या को अधिकृतित करता है SUPERSEDES INVENTORY NO.	<p>The PD sensors like epoxy mica capacitors shall be grounded at the installation point. Adequate safety protection should be provided at the coupler location taking into account personal safety even in case if signal cable is cut off at any location.</p> <p>Couplers, unique to each type of machine and other PD sensors shall be of such design so as to be installed outside the generator assembly without involving any modification in the generator.</p> <p>4.5 Signal Cables :</p> <p>4.5.1 The signal cable to be supplied shall be of 50 Ohm or as recommended by the supplier.</p> <p>4.5.2 Each signal cable shall be terminated in a Shield Grounding Assembly, if applicable, at the capacitive coupler end and to a DAU (or an intermediate termination box) at the other end.</p> <p>4.5.3 The signal cables shall be routed along a conductive grounded metal surface or in metallic conduits.</p> <p>4.5.4 The placement of the signal cables or conduit shall not interfere with normal operation and maintenance of the generator.</p> <p>4.5.5 The signal cables shall be securely fastened to the ground plane to prevent movement due to vibration or windage.</p> <p>Alternatively proven type of signal transmission system shall be considered.</p> <p>4.6 Data Acquisition Units (DAU) :</p> <p>4.6.1 A DAU (and, if necessary, an intermediate termination box) shall be installed external to the generator housing. Both the DAU and the termination box shall be weatherproof.</p> <p>4.6.2 The DAU shall incorporate number of inputs sufficient to accommodate all PD sensors.</p> <p>4.7 The intermediate termination box, if needed, shall be sized to accommodate all signal cables and shall incorporate :</p> <p>Proper grounding with copper wire shall be done to connect the termination box to the station ground grid.</p> <p>If an intermediate termination box is not installed, all necessary connection and protection component shall be integrated into the DAUs.</p>				
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सामग्री सूची संख्या INVENTORY	P-6291 Rev.No. 05		निर्माणकर्ता WORKED BY	C R SAHA	 29.01.09
			जांचकर्ता CHECKED BY	S P AGRAWAL	 29/01/09

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4.8 SYSTEM CONTROLLER AND SOFTWARE :

The Bidder shall supply :

- 4.8.1 The system controller, capable of monitoring one DAU or more at site shall consist of a personal computer equipped with all necessary peripherals.
- 4.8.2 All necessary software to control the operation of each DAU to collect PD data based on generator operating conditions or continuously, store test results on a hard drive and enable communication with other computers located elsewhere.
- 4.8.3 All necessary hardware and software to enable the DAUs and the System Controller to communicate back and forth over a local area network (LAN). The LAN backbone (twisted pair / fibre-optic cable) will be provided by supplier.
- 4.8.4 The software components shall be divided into two groups, those that perform monitoring and display functions and those which are used for configuration (i.e., system set-up and selecting conditions for data storage and alarms) only.

System shall be fully configurable from personal computer.

DAU shall provide for communication with PC via local network, land-line or cellular modem or wireless radio modem.

4.9 Computer :

Details of on-site / off-site Computer hardware for running of PD software shall be suitable to system requirement for storage and analysis.

4.10 Software Features :

Software for analysis and interpretation of test results (expert system) to assess the condition of winding insulation.

It shall be capable of following :-

- a) Collect data from all DAUs with all sensors connected.
- b) It shall form the database that is used as the basis for interpreting on-line partial discharge measurements.
- c) Providing Triggers for taking PD measurements and saving data based on :

- Time
- Generator load (MW and / or MVA)
- Stator temperature

Input for the above parameters will be provided as 4-20 mA signals from the purchaser. The system shall provide monitoring of dynamics such as winding temperature, load, voltage and shall have access for feeding directly into the monitoring for correlation with PD activity.

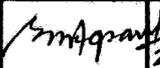
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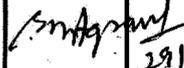
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सामग्री सूची संख्या इंजीनियरिंग क्रमांक INVENTORY NO.	<p>d) Distinguish the PD pulses that are coming from stator slot and or from end winding region.</p> <p>e) Trend analysis over time from present and stored results.</p> <p>f) Overall condition of the winding and identifying likely causes of the problem which will enable predictive maintenance.</p> <p>g) Alarms if threshold values are exceeded in magnitude (Qm).</p> <p>h) Extensive test result presentation</p> <p>4.11 LAN connectivity via an IEEE 802.3 Ethernet card or twisted pair RS 485 or modbus for remote operation/ monitoring and necessary interface provision with owner's DDCMIS. (Distributed Digital controlled Monitoring Information System). This interface shall enable monitoring of PD values in DDCMIS. The vendor will include required application software to meet this requirement.</p> <p>Also one potential free contact for alarm shall be provided by the supplier.</p> <p>4.12 Ambient Conditions : The system shall be suitable for operation in ambient temperature from 0 to 50°C and relative humidity of 0 to 95%.</p> <p>4.13 The system shall have a suitable protection system against over voltage.</p> <p>4.14 Bidder shall clearly indicate with schematic diagrams, the scheme from the bus coupler (connected to HV Bus) to the measuring system.</p> <p>5.0 Installation and Commissioning : Installation and commissioning to the satisfaction of BHEL/ end user shall be done by the supplier.</p> <p>In this connection, based on the site layout, the installation drawing of various bus couplers and associated assemblies shall be got approved prior to actual installation. Supplier shall bring all commissioning spares at the time of commissioning. The system shall be capable of being installed during the field erection of the generator with rotor in place.</p> <p>5.1 The bidder shall provide qualified labour and test equipment, necessary to complete the final commissioning of the system.</p> <p>5.2 Supplier shall install and perform calibration of all PD couplers.</p> <p>5.3 Supplier shall ensure during commissioning operation of system controller and network between system controller and DAU, operation and accuracy of machine parameter inputs, alarm outputs, operation of LAN and the complete system</p>				
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सामग्री सूची संख्या INVENTORY NO. P-6291	Rev.No.05		निर्माणकर्ता WORKED BY C R SAHA		29.01.09
			जांचकर्ता CHECKED BY S P AGRAWAL		29/01/09

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5.4 Supplier shall establish in consultation with BHEL/ end user partial discharge sensitivity settings and alarms and set these using the DAU settings and other peripherals.

5.5 The system thus supplied and installed shall not in any way compromise the integrity and safety of the generator.

6.0 Training : Complete guidance regarding installation shall be provided by the supplier. The training shall be provided by the supplier to BHEL/ end user engineers during commissioning. During the training, supplier will demonstrate the use of various system operational software packages as well as interpretation of PD data, stator winding failure mechanisms.

7.0 The system offered shall be of proven design and shall be manufactured as per the latest requirements of relevant international standards.

8.0 INSPECTION & TESTING :

8.1 Bidder shall furnish the following type, Routine and Functional tests:

Type Test:

a) Surge protection test (type test) for solid state equipment as per ANSI C 37.90a – latest edition/ IEEE – 472 / IEC – 60255 – 4.

Acceptance Norms : As per acceptance clause of specification.

b) Dry Heat Test : as per IEC 60068 -2-2

c) Damp Heat Test : as per IEC 60068 -2-3

Acceptance Norms : for (b) & (c) : Should pass in relevant functional checks.

Routine Tests:

d) Burn – in test (Routine) as per test procedure indicated in Annexure-2. Alternatively supplier may indicate the test method by which infant mortality of the system is eliminated, for the approval of BHEL/ end user. Certificate shall be furnished accordingly.

e) Coupling Capacitor shall be type and routine tested as per relevant IEC / IEEE / ASTM for a minimum of 40 kV AC RMS for 1 minute and partial discharge test as per IEC 60270. The maximum PD level should not be more than 5 pC at 25 KV r.m.s.

Functional Tests:

f) Test to demonstrate the proper functioning of all the hardware and software.

g) Test to demonstrate the control system functions.

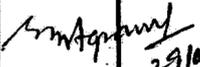
h) Test to demonstrate all diagnostic features.

Acceptance Norms : Based on Operation Manual.

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हस्ताक्षर एवं
दिनांक
P-6291 29/01/09

सामग्री सूची संख्या INVENTORY NO. P-6291	REV. NO. 05	निर्माणकर्ता WORKED BY	C R SAHA		29.01.09
		जांचकर्ता CHECKED BY	SP AGRAWAL		29/01/09

चक्र संख्या एवं दिनांक SIGN & DATE		उत्पाद मानक PRODUCT STANDARD	TG 60554 पृष्ठ का Page 7 of 10

सामग्री सूची संख्या को अतिरिक्त करता है
 SUPERSEDES INVENTORY NO.

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हराकार एवं दिनांक
 SIGN & DATE
 31/10/09

8.2 In case certificate for any test is not available, or in case the test reports are not found to be meeting the specification/ relevant standards requirements, then all such tests shall be carried out on the equipment being supplied. Also, calibration certificates for the instruments in the system shall be traceable to National/ International standards.

9.0 **Guarantee :** The system shall bear a guarantee for a period of 24 months from the date of commissioning.

10.0 **Predeparture Inspection :** BHEL reserves the rights to carry out predeparture inspection at supplier's works. However this predeparture inspection shall not absolve the supplier from his responsibility to ensure free and proper functioning of the system.

11.0 DOCUMENTS :

11.1 Three copies of descriptive catalogues in English language giving complete technical information including dimensional details of all hardware and external terminal details for customers' interconnection shall be furnished alongwith the offer.

11.2 Three copies of the block schematic diagram illustrating the principle of operation of the system shall be furnished alongwith the offer.

11.3 Twenty five copies including schematics, wiring diagram, layout drawings etc. plus 3 number CD ROMs of the O & M manual (which shall include detailed construction / operation, servicing manuals incorporating various electrical schemes indicating the values of various electrical and electronic components) to facilitate proper operation and servicing of the system instruments shall be supplied for each power station. It shall contain original copies of O & M manual of bought out items and not Xerox copies.

Also the manual shall clearly indicate the action to be taken on the generator in the event of abnormal level of Partial discharge observed during the course of on-line monitoring.

12.0 PACKING / DESPATCH :

12.1 The equipment / accessories shall be packed in a suitable water proof / vibration proof packing boxes capable of bearing transit hazards. Various packing boxes shall be properly identified and marked giving details of dimensions, net / gross weight.

12.2 The system shall have proper casing / covers for its instruments / assemblies for safe handling / storage.

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		जांचकर्ता CHECKED BY S P AGRAWAL		29/01/09

दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD		TG 60554
				पृष्ठ का Page 8 of 10

समय की पूर्ती संख्या को अधिकतम करता
SUPERSEDES INVENTORY NO.

13.0 SPARE PARTS :

13.1 Recommended spare parts for 3 year trouble free operation of the system shall be offered (minimum 2 nos.) as mandatory spares along with the main equipment. BHEL reserves the right to order the spare parts either along with the main equipment or separately, in which case validity of the offer for spare parts shall be extended by 6 months from the date of placement of order for main equipment. The offer for spares shall indicate breakup of prices for each component separately.

13.2 Also supplier shall guarantee for support and long term availability of spares to the owner for the full life of equipment covered under the contract.

14.0 CROSS REFERRED DOCUMENTS :

- i) ANSI - C 37.90a ; IEEE - 472 / IEC - 60255 - 4.
- ii) Dry Heat Test : as per IEC 60068 -2-2
- iii) Damp Heat Test : as per IEC 60068 -2-3
- iv) IEC 60270
- v) IEC 60034 Part 27
- vi) IEEE 1434

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दिनांक
DATE
10/1

Released

निर्माणाकर्ता WORKED BY	CR SAHA	<i>CR SAHA</i>	29.01.09
जांचकर्ता CHECKED BY	SP AGRAWAL	<i>SP AGRAWAL</i>	29/01/09

हस्ताक्षर SIGN	<i>[Signature]</i>
समय की पूर्ती संख्या INVENTORY NO.	P-6291
संख्या	310
संख्या	Rev. No. 05

दिनांक एवं हस्ताक्षर SIGN & DATE 	उत्पाद मानक PRODUCT STANDARD	TG 60554 पृष्ठ का Page 9 of 10
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सामग्री सूची संख्या को अधिकृत करता है SUPERSEDES INVENTORY NO.	ANNEXURE - 1
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BRIEF TECHNICAL PARAMETERS OF THE MACHINE :

(TENTATIVE VALUES)

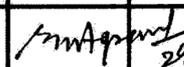
1. GENERATOR TYPE : STEAM / GAS / NUCLEAR / TURBINE GENERATOR
2. COOLING SYSTEM : WATER AND HYDROGEN / HYDROGEN / AIR COOLED
3. POWER OUTPUT : ----- MW
4. GENERATION VOLTAGE : ----- kV
5. STATOR CURRENT : ----- Amps.
6. CAPACITANCE OF STATOR WINDING : ----- Micro Farads / Phase
7. FREQUENCY : 50 Hz
8. STATOR PHASE CONNECTION : YY
8. TERMINAL MARKING VIEWED FROM

TURBINE END (TE)	:	U2	V2	W2
EXCITER END (EE)	:	U1	V1	W1

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दिनांक
SIGN & DATE


सामग्री सूची संख्या INVENTORY P-6291	Rev.No. 05	निर्माणकर्ता WORKED BY C R SAHA		29.01.09
		जांचकर्ता CHECKED BY S P AGRAWAL		29/01/09

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सामग्री सूची संख्या को अधिष्ठापित करता है
 SUPERSEDES INVENTORY NO.

ANNEXURE - 2

BURN IN AND ELEVATED TEMPERATURE TEST (ROUTINE TEST)

All solid state electronic systems equipment shall be tested as a complete system / equipment with all devices connected for a minimum of 168 hours continuously under energized conditions prior to shipment from manufacturing works, as per the following cycle.

1. Elevated Temperature Test Cycle

During the elevated temperature test which shall be for 48 hours of the total 168 hours of testing, the ambient temperature shall be maintained at 50°C. The equipment shall be interconnected with devices which will cause it to repeatedly perform all operations it is expected to perform in actual service with load on various components being equal to those which will be experienced in actual service.

During the elevated temperature test the cubicle doors shall be closed (or shall be in the position same as they are supposed to be in the field) and inside temperature in the zone of highest heat dissipating components / modules shall be monitored. The temperature rise inside the cubicle should not exceed 10°C above the ambient temperature at 50°C.

2. Burn in Test Cycle

The 48 hours elevated temperature test shall be followed by 120 hours of burn in test as above except that the temperature shall be reduced to be ambient temperature prevalent at that time.

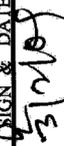
3. During the above tests, the process I/O and other load on the system shall be simulated by simulated inputs and in case of control systems, the process which is to be controlled shall be simulated. Testing of individual components or modules shall not be acceptable.

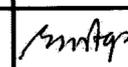
4. In case, the supplier is having any alternate established procedure of eliminating infant mortality procedure that may also be followed with BHEL approval by furnishing data to validate the alternate procedure.

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दस्तावेज एवं दिनांक
 SIGN & DATE


सामग्री सूची संख्या INVENTORY P-6291	Rev. No. 05	निर्माणकर्ता WORKED BY	C R SAHA		29.01.09
		जांचकर्ता CHECKED BY	SP AGRAWAL		29/01/09

ANNEXURE- 3

CERTIFICATE OF NO DEVIATION

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Subject: **No Deviation Certificate**

Ref: 1) GeM Bid No:
2) All other pertinent issues till date

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred GeM Bid.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized representative of the bidder)

Date:
Place:

ANNEXURE – 12

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH
JUNE, 2020 AND SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref: 1) GeM Bid Specification No:
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... *(specify the name of the organization here)* has a local content of _____ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| ... | |

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

** - *Strike out whichever is not applicable.*

Note: