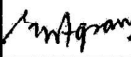


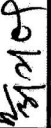
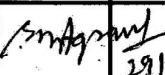
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समग्री सूची संख्या को अधिकृत करता है SUPERSEDES INVENTORY NO.	CONTINUOUS ON LINE PARTIAL DISCHARGE MONITORING SYSTEM FOR TURBOGENERATOR WINDING केवल आंतरिक प्रयोग हेतु प्रदायक को देने से पूर्व इस मुखपृष्ठ को निकाल दें । FOR INTERNAL USE ONLY REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS.				
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.	समतुल्य मानक/सूची आदि COMPARABLE STANDARDS / CATALOGUES ETC. } : सुझाए/सम्भावित प्रदायक एवं श्रेणी SUGGESTED / PROBABLE SUPPLIERS AND GRADES. } : 1. M/s IRIS, 1, WESTSIDE DRIVE, UNIT 2, ETOBICOKE, ONTARIO, CANADA. M9C1B2. 2. M/s CUTLER-HAMMER 5421, FELTL ROAD, SUITE 190, MINNETONKA, MN 55343 U S A 3. M/s PD TECH POWER ENGINEERING AG, SEESTRASSE 14B, 5432 NEUENHOF SWITZERLAND 4. M/s TECHIMP SYSTEMS srl, Via TOSCANA 11 / C 40069 ZOLA PREDOSA, (BO) ITALY				
	कोई अन्य जानकारी ANY OTHER INFORMATIONS } :				
सामग्री सूची संख्या INVENTORY NO. P-6291	हस्ताक्षर एवं दिनांक SIGN & DATE 14/03/03	REV.NO. 05 Dt. 11-03-18	CA. No - TSX-JSG-18-102	स्वीकृति : S P AGRAWAL APPROVED : AGM (ISE & CPL) निर्माण : ISE & CPL PREPARED : HEEP. HARIDWAR	GR.NO 8.10 जारी : ISSUED : TSX दिनांक : DATE : 14.03.03

SIGN दिनांक एवं हस्ताक्षर & DATE		उत्पाद मानक PRODUCT STANDARD		TG 60554																				
				पृष्ठ का Page 1 of 10																				
SUPERSEDES INVENTORY NO.	BASED ON: BHEL EXPERIENCE / IEEE 1434 / IEC 60034-27 CONTINUOUS ON LINE PARTIAL DISCHARGE MONITORING SYSTEM FOR TURBOGENERATOR WINDING																							
सामग्री सूची संख्या को अतिरिक्तित्व करता है	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.																							
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	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.																							
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की संपत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए ।	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.																							
हस्ताक्षर एवं दिनांक SIGN & DATE	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.																							
	<table border="1"> <thead> <tr> <th>नाम NAME</th> <th>दिनांक एवं हस्ताक्षर SIGNATURE & DATE</th> </tr> </thead> <tbody> <tr> <td>TSX</td> <td>P. K. SINGH</td> </tr> <tr> <td>QAX</td> <td>S. K. CHAUDHARY</td> </tr> <tr> <td>CIE</td> <td>S. C. TYAGI</td> </tr> <tr> <td>सहमत विभाग AGREED DEPTT.</td> <td>नाम NAME</td> </tr> <tr> <td>WORKED BY</td> <td>VIPUL SRIVASTAVA</td> </tr> <tr> <td>CHECKED BY</td> <td>MINKESH KUMAR</td> </tr> <tr> <td>REV. NO.</td> <td>0.5</td> </tr> <tr> <td>DI.</td> <td>11.09.18</td> </tr> <tr> <td>CA. NO.</td> <td>TSX - 756 - 18-102</td> </tr> </tbody> </table>					नाम NAME	दिनांक एवं हस्ताक्षर SIGNATURE & DATE	TSX	P. K. SINGH	QAX	S. K. CHAUDHARY	CIE	S. C. TYAGI	सहमत विभाग AGREED DEPTT.	नाम NAME	WORKED BY	VIPUL SRIVASTAVA	CHECKED BY	MINKESH KUMAR	REV. NO.	0.5	DI.	11.09.18	CA. NO.
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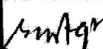
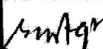
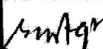
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				पृष्ठ का Page 2 of 10	
SUPERSEDES INVENTORY NO. सामग्री सूची संख्या को अधिकृतित करता है	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	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.			
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत भारती इलेक्ट्रिकल्स की संपत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में प्रतिकारक हो न किया जाए ।	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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सामग्री सूची संख्या को INVENTORY NO.	SUPERSEDES INVENTORY NO.	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. 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.			
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.	4.5 Signal Cables : 4.5.1 The signal cable to be supplied shall be of 50 Ohm or as recommended by the supplier. 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. 4.5.3 The signal cables shall be routed along a conductive grounded metal surface or in metallic conduits. 4.5.4 The placement of the signal cables or conduit shall not interfere with normal operation and maintenance of the generator. 4.5.5 The signal cables shall be securely fastened to the ground plane to prevent movement due to vibration or windage. Alternatively proven type of signal transmission system shall be considered.				
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सामग्री सूची संख्या INVENTORY	P-6291	Rev.No. 05	निर्माणकर्ता WORKED BY	C R SAHA	 29.01.09
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सामग्री सूची संख्या INVENTORY NO.	SUPERSEDES INVENTORY NO.	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 MVar) • 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.				
दिनांक एवं हस्ताक्षर SIGN & DATE	स्वसाधिका एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रलेख एवं अप्रलेख रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए ।	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		
सामग्री सूची संख्या INVENTORY NO.	P-6291	Rev. No. 05	निर्माणकर्ता WORKED BY C R SAHA	29.01.09
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दिनांक एवं हस्ताक्षर SIGN & DATE		उत्पाद मानक PRODUCT STANDARD		TG 60554 पृष्ठ का Page 5 of 10	
सामग्री सूची संख्या INVENTORY NO.	SUPERSEDES INVENTORY NO.	d) Distinguish the PD pulses that are coming from stator slot and or from end winding region. e) Trend analysis over time from present and stored results. f) Overall condition of the winding and identifying likely causes of the problem which will enable predictive maintenance. g) Alarms if threshold values are exceeded in magnitude (Qm). h) Extensive test result presentation			
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	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. Also one potential free contact for alarm shall be provided by the supplier. 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%. 4.13 The system shall have a suitable protection system against over voltage. 4.14 Bidder shall clearly indicate with schematic diagrams, the scheme from the bus coupler (connected to HV Bus) to the measuring system.				
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत भारती इलेक्ट्रिकल्स की संपत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।	5.0 Installation and Commissioning : Installation and commissioning to the satisfaction of BHEL/ end user shall be done by the supplier. 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. 5.1 The bidder shall provide qualified labour and test equipment, necessary to complete the final commissioning of the system. 5.2 Supplier shall install and perform calibration of all PD couplers. 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				
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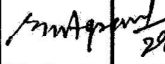
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सामग्री सूची संख्या को SUPERSEDES INVENTORY NO.	5.4 Supplier shall establish in consultation with BHEL/ end user partial discharge sensitivity settings and alarms and set these using the DAU settings and other peripherals. 5.5 The system thus supplied 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.					
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.	स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत भारती इलेक्ट्रिकल्स की संपत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।	हस्ताक्षर एवं दिनांक 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 S P AGRAWAL	29/01/09			

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सामग्री सूची संख्या को अधिकृतित करता है SUPERSEDES INVENTORY NO.		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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दस्तावेज एवं दिनांक SIGN & DATE	सामग्री सूची संख्या INVENTORY NO.	Rev. No. 05												
दस्तावेज एवं दिनांक SIGN & DATE	सामग्री सूची संख्या INVENTORY NO.	<table border="1"> <tr> <td>निर्माणकर्ता WORKED BY</td> <td>C R SAHA</td> <td></td> <td>29-01-09</td> </tr> <tr> <td>जांचकर्ता CHECKED BY</td> <td>S P AGRAWAL</td> <td></td> <td>29/01/09</td> </tr> </table>					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 अधिलेखित करना	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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SUPERSEDES INVENTORY NO. सामग्री सूची संख्या को अधिकारित करता है	ANNEXURE - 1 BRIEF TECHNICAL PARAMETERS OF THE MACHINE : (TENTATIVE VALUES)				
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	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				
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत के बिजली विभाग की सम्पत्ति है इसका प्रलेख एवं अप्रलेख रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।	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				
हस्ताक्षर एवं तिनांक SIGN & DATE 3/2/09					
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सामग्री सूची संख्या को अधिकारित करता है	SUPERSEDES INVENTORY NO.	ANNEXURE - 2			
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	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. 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. 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. 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. 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.				
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।					
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