

TECHNICAL PRE QUALIFICATION REQUIREMENT

Name of Project : - 400/220kV Switchyard: 3x660MW North Karanpura TPS
Name of Customer : - NTPC
Name of Item : - Offline SF6 Dew Point Meter for 400kV, 220kV Circuit Breakers

TECHNICAL PRE QUALIFICATION REQUIREMENT

- a) The bidder should have supplied the offered make/ model in past to Power Utility, Industry, any NABL accredited testing laboratory, etc.
- b) The bidder should be manufacturer/ authorized distributor of the item/ items quoted

SUPPORTING DOCUMENTS TO BE ATTACHED

Sr	Required Criteria	Supporting Documents to be submitted by bidder along with technical bid
1	Manufacturer/ Authorized Distributor	Proof of Manufacturing facilities/ Valid authorization letter from OEM etc.
2	Supply	PO / Dispatch clearance / LR / Material Receipt certificate at site / installation or commissioning certificate etc.

Abh. Singh
10/10/22

PREPARED BY

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BHARAT HEAVY ELECTRICALS LIMITED

TRANSMISSION BUSINESS ENGINEERING MANAGEMENT

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BHEL Document No. TB-316-369-004A	Rev.		Prepared by	Checked by	Approved by
	00	Name	AK		
Type of Document	Technical Specification		Sign	<i>[Signature]</i>	<i>[Signature]</i>
Title	SF6 DEW POINT METER		Date	07.09.18	<i>[Signature]</i>
			Group	TBEM	
			W.O. No	83011	

CUSTOMER **NTPC LTD.**

CONSULTANT **-**

PROJECT **North Karanpura Super TPP (3x660MW)**
 1. 400/220kV Switchyard at NKSTPP
 2. 220kV Sub-station at Chatti Bariatu & Kerandari-A Mine

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Rev No.	Date	Altered	Checked	Approved	REVISION DETAILS
Distribution				To	
				Copies	

SECTION 1

SCOPE, SPECIFIC TECHNICAL REQUIREMENTS AND QUANTITIES

1.0 SCOPE

This specification covers design, manufacture, testing, supply, delivery to site of Electrical Test Laboratory equipment.

1.1 The equipment are required for the following project:

Name of Owner : NTPC LTD.

Name of Project : 400/220kV Switchyard for North Karanpura Super Thermal Power Project (3x660MW)

Refer Section - 3 for Project Details and General Specifications.

1.2 TECHNICAL PARTICULARS

Refer Section-2 for specific technical requirement.

1.3 QUANTITIES

Sl.No.	DESCRIPTION	QUANTITY (Nos.)
1.	Off line SF6 dew point meter for 400kV, 220kV circuit breakers.	1

Note:-

- Supplier should specify the Make & Model & accessories/complete scope of supply offered along with Technical Bid.
- Supplier is required to provide all the Technical details/ Catalogue/Datasheet of the offered make/model.
- Make/Model offered is subject to NTPC approval. NTPC approval shall be considered as final.
- The above listed equipment shall be supplied with standard accessories & any other accessory required to meet the technical specification.
- The Test equipment shall be delivered to site in new/ fresh condition.
- Supplier shall provide valid calibration certificate, test certificate & warranty certificate for the quoted test equipment (as applicable), in the event of order.
- Supplier is required to give an undertaking "to address issue of warranty / after sales services either itself or from the respective manufacturer/OEM of the equipment".

1.4 BIDDER SHALL SUBMIT THE FOLLOWING DOCUMENTS ALONGWITH OFFER

- Leaflet/ catalogue of offered items.
- Instruction Manual
- List of accessories offered
- Test Certificates/ reports
- Calibration certificate

1.5 CERTIFICATES/ REPORTS

Bidder shall submit valid test reports/ certificates as per relevant standard for review and approval by NTPC/ BHEL.

PROJECT: 400/220kV Switchyard for North Karanpura Super TPP (3x660MW)

CUSTOMER: NTPC LTD.

Technical Specification of SF6 Dew Point Meter

Section-2: Equipment Specification

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SECTION 2

EQUIPMENT SPECIFICATION

Technical Specification For SF6 Dew Point Meter		
Sl. No.	Parameter/Specifications	
1	Functional Requirement	The meter should be capable of measuring the dew point of SF6 Gas of the Circuit Breaker/ GIS equipment.
		It is portable and adequately protected for outdoor use.
		The meter is provided with dew point hygrometer with digital indication to display the dew point temperature in degree C
2	Measuring principle	Polymer based capacitive moisture sensor
3	Display	LCD/ Keypads
4	Measuring Range	+20 ... - 60 °C
5	Accuracy	±4 °C
6	Input Pressure	Up to 10 Bar
7	Power Supply	Rechargeable battery or AC power
8	Design/Engg.	The complete equipment along with complete accessories must be designed/engineered by Original Equipment Manufacturer.
9	Environment	The test kit shall be compatible for EMI/EMC/safety environment requirement as per IEC.
10	Warranty / Guarantee	18 months form the date of delivery or 12 months form the date of successful & complete commissioning at end user sub-station, whichever is earlier. All the materials, including accessories, cables etc. are to be covered under warranty/guaranty period. If the kit needs to be shifted to supplier's works for repairs within warranty/guaranty period, suppliers will have to bear the cost of spares, software, and transportation of kit for repair at test lab / works.
11	Calibration certificate	Unit shall be duly calibrated before supply and the date of calibration shall not be older than two months from the date of inspection/supply of the kit.
12	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to end user engineers.
13	Commissioning, Handing over the Instrument	Successful bidder will have to commission the instrument to the satisfaction of end user. The instrument failed during the demonstration shall be rejected and no repairs are allowed.
14	After Sales Service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt after sales services.

PROJECT: 400/220kV Switchyard for North Karanpura Super TPP (3x660MW)	
CUSTOMER: NTPC LTD.	
Technical Specification	TB-316-369-004A
Section-3: Project Details and General Specification	

SECTION- 3

PROJECT DETAILS AND GENERAL SPECIFICATIONS

3.0 GENERAL

This section stipulates the General Technical Requirements under the Contract and will form an integral part of the Technical Specification.

The provisions under this section are intended to supplement general requirements for the materials, equipment and services covered under other sections of tender documents and are not exclusive. However in case of conflict between the requirements specified in this section and requirements specified under other sections, the requirements specified under respective sections shall prevail.

3.1 PROJECT DETAILS

	Particular	Details
a)	Customer	NTPC Ltd.
b)	Engineer/Consultant/ Inspector	NTPC Ltd.
c)	Project Title	North Karanpura Super Thermal Power Project (3x660 MW) : 400/220kV Switchyard at NKSTPP end & 220kV Sub-station at Mine end
d)	Project Location	Place: Near Tandwa town District: Hazaribagh & Chatra State: Jharkhand
e)	Latitude & Longitude	400/220kV S/s at NKSTPP: North: 23°50' to 23°52' and East: 84°59' to 85°2' 220kV S/s at Chatti Bariatu & Kerandari-A mine: North: 23°52'35" and East: 85°05'25"
f)	Nearest Railway Station	Khalari Railway Station Ranchi-Garhwa section of Eastern Railways
g)	Distance of project location from the Railway station	40 Km (approx.)
h)	Nearest Major Town	Hazaribagh city
i)	Distance of the town from the project site	50 Km.
j)	Nearest commercial airport	Ranchi
k)	Distance of airport from the project site	150 Km
<u>SITE CONDITIONS</u> (for design purposes)		
a)	Design ambient temperature	50°C
b)	Maximum Relative humidity	95 %
c)	Height above mean sea level	Less than 1000 meters
d)	Pollution Severity	Heavily polluted (With Coal dust & Fly ash) and Highly Corrosive environment.