

**BHARAT HEAVY ELECTRICALS LIMITED, HARIDWAR**

Control & Instrumentation Engineering (CIE)

PRE-QUALIFICATION REQUIREMENT

Dt: 16-09-2023

- 1) Conductivity transmitter W96415206940
- 2) Conductivity probe W96415203339
- 3) Flow Thru chamber W96415203347

A- Common qualification requirements for Conductivity transmitter W96415206940 & Conductivity probe W96415203339

1. Bidder shall be manufacturer or authorized supplier of Conductivity Transmitter and Probe. Letter of authorization or suitable document shall be submitted in support for the same.
2. Bidder must have supplied 15 or more Conductivity transmitters+ probe in last 5 years from date of enquiry. Out of these at least 2 orders must be of 4 or more Units each. PO copies to be provided in support of the same.

B- Technical requirement for Conductivity transmitter code W96415206940:-

(Refer Note 1 below also)

- Suitable for measuring conductivity of DM water.
- HART Smart Two wire 24V, μ P based programmable.
- Covers measuring range 0-5 μ Siemens/cm, Output signal 4-20mA.
- Protection class IP65 or better.

Permissible load burden shall be 400 Ω or better.

Bidder to submit data sheet/ document in support of above features. It should indicate important parameters linking with national/international standard.

C- Technical requirement for Conductivity Probe code W96415203339:-

(Refer Note 1 below also)

- Sensor shall be continuous flow through type with Cell constant of probe 0.05 or better.
- Material of electrodes shall be stainless steel.
- Temperature compensation thermometer Pt100 or Pt1000 shall also be fitted inside the sensor.

Bidder to submit data sheet/ document in support of above features. It should indicate important parameters linking with national/international standard.

D- PQR applicable for Flow- Thru-chamber Chamber code W96415203347:-

- Item shall be suitable for mounting the offered Probe. Item automatically qualifies, on PQR qualification of Conductivity Probe & Transmitter.

Notes: -

- (1) Conductivity transmitter and Probe work in pair. Hence both Conductivity transmitter and Probe shall qualify their respective PQR independently, for purchase of either item. Failure to qualify PQR by either transmitter or Probe shall automatically disqualify the other.
- (2) All 3 items to be procured from the same vendor.
- (3) The conductivity transmitter shall be used in Power Plant for DM water (used as cooling medium in Generator) conductivity measurement.
- (4) Bidder to provide reference list of customers of Conductivity Transmitter for our information.
- (5) Bidder to confirm specific compliance wherever asked. BHEL reserves the right to verify information submitted by Bidder. In case the information is found false/ incorrect/ incomplete, the offer shall be rejected.

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

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