

NTPC LTD
EOC, NOIDA

**Sub: Qualifying Requirement for Vendor Enlistment for supply of Pressure Transmitter
(Electronic Transmitter for Pressure, Diff Press and DP based Flow / Level Measurements)**

A)	MEG DETAILS		
	1.0	MEG NO.	94 MEG-01
	2.0	MEG DESCRIPTION	Pressure Transmitter (Electronic Transmitter for Pressure, Diff Press and dp based FLOW / Level measurements)
	3.0	RESPONSIBILITY CENTRE	CPC
B)	<p>Technical Criteria of QR:</p> <ol style="list-style-type: none"> The Applicant should be a manufacturer of Pressure Transmitter (Electronic Transmitter for Pressure, Diff Pressure and DP based Flow / Level measurements) meeting the Technical Specification requirement. The Applicant should have successfully executed the supply of pressure transmitter during the last seven (07) years, as on the date of bid opening. <p>Documents to be submitted in support of meeting Technical QR:</p> <ol style="list-style-type: none"> Latest annual report OR NSIC / SSI / MSME registration certificate / BIS license / ISO certificate / Certificate of registration from the concerned excise department / any other statutory document as a proof of being manufacturer of Pressure Transmitter. The PO (issued within last seven years from the date of application for enlistment) in support of award and completion certificate/copies of invoice to establish successful execution of the supply of Pressure transmitter as per QR. Standard Published catalogue. 		
C)	<p>Documents to be submitted to find executed value of orders:</p> <ol style="list-style-type: none"> Three POs of the highest executed values of similar work during previous seven years from the date of application. Copy of Invoice / Completion certificate from the concerned buyer/s in support of successful execution of supply against the POs to be submitted Audited balance sheet including Profit & Loss statement for the previous three completed financial years reckoned from the date of application. In case the audited documents are not ready / available, then certified copy by a registered practicing Chartered accountant may be submitted. GSTIN certificate, PAN, Power of Attorney, Letter of Undertaking, works information etc as mentioned in enlistment application pages of website www.vendor.ntpc.co.in <p>Similar works means: Supply of Pressure Transmitter (Electronic Transmitter for Pressure, Diff Press and DP based FLOW / Level measurements) to power plant.</p>		

TECHNICAL SPECIFICATION FOR ELECTRONIC TRANSMITTER FOR PRESSURE, DIFF PRESS AND DP BASED FLOW / LEVEL MEASUREMENTS

Sl.No.	Features	Essential/Minimum Requirements
1.	Type of Transmitter	Microprocessor based 2 wire type (loop powered), Hart protocol compatible.
2	Output signal	4-20 mA DC (Analog) along with superimposed digital signal based on HART protocol.
3	Accuracy	± 0.060 % of calibrated range (minimum) for calibrated range greater than 400 mmwc. ±0.065% of calibrated range (minimum) for calibrated range greater than 250 kg/cm2. ± 0.10 % of calibrated range (minimum) for calibrated range less than 400 mmwc.
4.	Turn down (minimum)	50:1 for greater than or equal to span of 400mmwcl. 20:1 for span below 400mmwcl. 10:1 for span greater than 250 kg/cm2
5.	Stability	0.25 % of calibrated range for 10 years for calibrated range greater than equal to 400 mmwc on standard conditions of manufacturer. 0.2 % of calibrated range for 1 years for calibrated range less than 400 mmwc on standard conditions of manufacturer. 0.15% of calibrated range for 5 years for static pressure greater than 250 kg/cm2.
6.a.	Zero and span drift	+/- 0.015% per degC at max span
		+/-0.11% per degC at min. Span
6.b.	Power Supply	24V DC ± 10%.
7.	Load impedance	500 ohm (minimum)
8.	Housing	Weather proof as per IP-67, metallic housing with durable corrosion resistant coating

9.	Over Pressure	150% of max. Operating pressure
10.	Electrical Connection	Plug and socket type except in hazardous area

11.	Process connection	1/2 inch NPT (F)
12.	Span and Zero	Continuous, tamper proof, Remote as well as manual adjustability from instrument with zero suppression and elevation facility.
13.	Accessories	Diaphragm seal, pulsation dampeners, syphon etc. as required by service and operating condition.
14.	Diagnostics and Display	Self-Indicating feature and digital display
15.	Accessories	2 valve manifold for absolute & Gauge pressure transmitters, 3-valve manifold for Differential Pressure and 5 valve manifold for Level /Flow applications. The valve manifold shall be non-integral type (except Fuel Oil area). -For hazardous area, enclosure as described in NEC article 500 -2 inch pipe mounting clamp
16.	Certification	SIL 2 or Better
17.	Adjustment/calibration/maintenance	From hand held HART calibrator

Notes

1. LVDT type is not acceptable.

2. Where the process fluids are corrosive, viscous, solid bearing or slurry type, diaphragm seals shall be provided. Parts below the diaphragm shall be removable for cleaning. The entire volume above the diaphragm shall be completely filled with an inert liquid suitable for the application.

3. All the supplied transmitter should have valid calibration certificates from manufacturer and offered model should have type test certificate as per standard IEC-60770 / BS6447.

4. Above mentioned (3,4,5) parameters/features of offered models shall be strictly as defined in standard published catalogue of the manufacturer only

5. All instruments envisaged for sea water applications, shall be provided with wetted parts made of Monel/ Hastelloy C or any other material (if provenance experience of the proposed material for such applications is established by contractor). For Chlorine application: Instruments shall be provided with wetted parts (e.g. diaphragm seal, etc.) made of Hastelloy C. Also, filled liquid shall be Fluorolube oil/ Inert Hydrocarbon / CTFE etc., for these applications.

For applications of FECL3 solution: Instruments shall be provided with wetted parts (e.g. diaphragm seal, etc.) made of Tantalum.

6. For coastal areas, all instruments shall be provided with durable epoxy/ polyurethane coating for housings and all exposed surfaces of the instruments.

7. Vendor shall furnish their Environmental stress screening test process/procedure, including but not limited to Burn-In Test and Elevated Temp test processes for eliminating infant mortality electronics components used in manufacturing of items under consideration as a part of vendor enlistment process.