



# **Bharat Heavy Electricals Limited**

(A Government of India undertaking)

**ELECTRONICS DIVISION**

P. B. No 2606, Mysore Road,

Bengaluru - 560 026

**NOTICE INVITING EXPRESSION OF  
INTEREST FOR TRANSFER OF  
TECHNOLOGY / BUSINESS SHARING  
AGREEMENT FOR  
MANUFACTURING SMART  
ELECTRONIC TRANSMITTERS  
(PRESSURE & DIFFERENTIAL  
PRESSURE) AT BHEL,  
ELECTRONICS DIVISION**

**EOI REFERENCE NUMBER :  
CE/Engg./ETxr/EOI/05**

**This document contains 20 pages**

## DISCLAIMER

The information contained in this Expression of Interest document (the “EOI”) or subsequently provided to Applicant(s), whether verbally or in documentary or any other form, by or on behalf of BHEL or any of its employees or advisors, is provided to Applicant(s) on the terms and conditions set out in this EOI and such other terms and conditions subject to which such information is provided.

The purpose of this EOI is to provide interested parties with information that may be useful in formulation of their application for qualification pursuant to this EOI.

BHEL also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused or arising from reliance of any Applicant upon the statements contained in this EOI.

The issue of this EOI does not imply that BHEL is bound to select and shortlist Applicants for next stage or to enter into any technology tie-up agreements with shortlisted Applicants for the Project.

The respondent shall bear all costs associated with the preparation, technical discussion/presentation and submission of EOI, the Purchaser/Consultant shall in no case be responsible or liable for these costs regardless of the conduct or outcome of the EOI process.

Canvassing in any form by the respondent or by any other agency on their behalf may lead to disqualification of their EOI.

# BHARAT HEAVY ELECTRICALS LIMITED

## ELECTRONICS DIVISION

INVITES EXPRESSION OF INTEREST FROM OEMs FOR TRANSFER OF TECHNOLOGY / BUSINESS SHARING AGREEMENT FOR MANUFACTURING SMART ELECTRONIC TRANSMITTERS (PRESSURE & DIFFERENTIAL PRESSURE) AT BHEL, ELECTRONICS DIVISION

### CONTACT PERSON AND SCHEDULE OF EVENTS

#### Contact Person

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#### Schedule of Events

Last date for receipt of responses from prospective technology partners:	<b>31.08.2015 1400 Hrs IST</b>
All corrigenda, addenda, amendments, clarifications, time extensions etc. related to this EoI will be hosted on	<a href="http://www.bhel.com">www.bhel.com</a> and <a href="http://www.bheledn.com">www.bheledn.com</a>
<b>Mode of Submission of Documents</b>	In sealed cover to the contact person so as to reach on or before the date mentioned above. The cover shall be super scribed with EOI Reference number and the words "Expression of Interest- Manufacturing Technology of Smart Electronic Transmitters ( PT & DPT )".

**EXPRESSION OF INTEREST FOR TRANSFER OF TECHNOLOGY / BUSINESS SHARING AGREEMENT FOR MANUFACTURING, TESTING AND TRAINING FOR SMART ELECTRONIC TRANSMITTERS (PRESSURE & DIFFERENTIAL PRESSURE)**

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## SECTION - 1

### EXPRESSION OF INTEREST

#### 1.1 ABOUT BHEL

Bharat Heavy Electricals Limited (BHEL) ([www.bhel.com](http://www.bhel.com)), a Government of India Undertaking and a Maharatna Company, is an integrated power plant equipment manufacturer for both Indian and export markets. It is one of the largest engineering and manufacturing enterprises in India with annual revenue of over INR 400 Billion (US\$ 6.6 Billion). About 63% of the equity in BHEL is owned by the Government of India.

Established in 1964, BHEL is India's largest engineering and manufacturing company of its kind engaged in the design, engineering, manufacture, construction, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable Energy, Oil & Gas and Defence. With a widespread network of 17 manufacturing units, two repair units, four regional setups, eight service centres, eight overseas offices, 15 regional centres, seven joint ventures and infrastructure to execute more than 150 project sites across India & abroad, BHEL provides products, systems and services to customers efficiently and at competitive prices. The Power sector covers generation, transmission and distribution equipment for hydro, fossil, and gas fuels. BHEL has been in this business for nearly 50 years and has supplied equipment that accounts for 64 % of the total thermal generating capacity in India. The high level of quality & reliability of our products is due to adherence to international standards by acquiring and adapting to some of the best technologies from leading companies in the world including General Electric Company, Alstom SA, Siemens AG and Mitsubishi Heavy Industries Ltd., together with technologies developed in our own R&D centres.

The annual turnover of BHEL for the year 2013-14 was US \$ 6.6 Billion with a profit before tax of US \$ 822 Million. BHEL's highly skilled and committed manpower of about 47500 employees, the best of manufacturing facilities and practices together with the latest technologies, has helped BHEL to deliver a consistent track record of performance. With the current order book exceeding US \$ 16 Billion, BHEL is poised for excellent future growth. More details about the entire range of BHEL's products and operations can be obtained by visiting our web site [www.bhel.com](http://www.bhel.com).

#### 1.2 ABOUT ELECTRONICS DIVISION & ELECTRONICS SYSTEMS DIVISION

Electronics Division (EDN) ([www.bheledn.com](http://www.bheledn.com)) along with its Electronics Systems Division (ESD) situated in Bengaluru is a leading supplier of new generation power plant automation and control systems. EDN has also emerged as a leading player

in the field of power transmission and distribution, industry, transportation and renewable energy sources. The state of the art equipment and systems manufactured meet the demanding requirement of both the national and international markets in terms of technical specifications and quality.

This Division has established references both in India and overseas by successful installation of power plant automation and photo voltaic systems. Besides providing unified solutions for various control systems application, EDN proudly holds the largest market share for power plant automation systems in India. Further, it has been accredited with Quality Management Systems (ISO 9001), Environmental Management Systems (ISO 14001), Occupational Health & Safety Management Systems (OHSAS 18001) and ISMS (ISO 27001) certifications.

Electronics System Division (ESD) is located at Electronic City, Bengaluru. Presently the unit manufactures Defence Electronics Products, Control Equipment for power plants, naval automation systems, Space batteries and Solar Space panels.

### **1.3 BHEL's EXPERIENCE IN SMART ELECTRONICS TRANSMITTERS (PT & DPT):**

BHEL procures more than five thousand transmitters per annum for various power projects. Now, BHEL is looking forward to establish manufacturing facility for Smart Electronic Transmitters at Electronics Division, Bengaluru , India to meet in-house and other market requirements.

## 1.4 EXPRESSION OF INTEREST (EOI)

BHEL proposes to address the present and future requirements of Smart Electronic transmitters (PT & DPT) including wireless, Profibus and Field bus transmitters. This EOI is published for seeking responses from Original Equipment Manufacturers (OEMs) who are willing to be associated with BHEL-EDN to enable it to meet the above objective on establishing manufacturing setup of Electronic transmitters and provide training to BHEL engineers for long term service support. The business association shall be for minimum of 10 years and further amendments can be issued after prescribed time.

## 1.5 A COLLABORATIVE APPROACH

BHEL intends to have a long term association with the prospective technology partner to enable it to manufacture and marketing Electronic Transmitters.

## 1.6 BUSINESS MODEL

BHEL proposes to have an association with the Respondent (i.e. prospective Business partner) who shall be responsible to the customer jointly with BHEL for the design, procurement of components and sub-systems, overall system integration, testing (Functional & Type Tests) and also shall be responsible for the successful Acceptance (including field trials), guarantee and warranty obligations & long term support.

### 1.6.1 Business Sharing Agreement (BSA)/ Transfer of Technology (ToT)

In the BSA/ToT model, the Respondent shall help to setup manufacturing facility for electronic transmitters in association with BHEL to meet market requirements. All the information related to design, manufacture, testing, trouble shooting, servicing/maintenance, quality assurance methods, training, etc., for the complete Smart electronic transmitters including hardware and software will be shared with BHEL.

BHEL prefers ToT option. However, OEMs can offer both the options of BSA and ToT model. BHEL shall decide which model to accept after making detailed analysis.

## 1.7 TYPICAL REQUIREMENTS

Indicative Typical requirements of Smart Electronic Transmitters, are covered in Section - 2. However, the Respondent is requested to provide detailed specifications to achieve the objective of ToT/ BSA. Also, the Respondent shall provide technology for in-built items of Transmitters like sensors, electronic cards and the communication system.

## **1.8 METHODOLOGY OF ToT/BSA BETWEEN BHEL AND PROSPECTIVE BUSINESS PARTNER WHO IS AN OEM**

Manufacturing of Smart Electronics Transmitters comprise of 2 types of items:

- A. Items in the manufacturing range of the prospective business partner (OEM) and manufactured at their works or at their sub-contractors' works, either at a single location or at multiple locations for which technology has to be provided for the entire product life cycle to BHEL to enable BHEL to manufacture the Electronic Transmitter at its Electronics Division.
- B. Items other than (A) above to be procured by BHEL-EDN. The specifications for these items are to be given by the prospective technology partner.
- C. Any improvement in the technology by the OEM during the agreement period shall be shared and implemented with BHEL.

### **1.8.1 Typical Arrangement**

The prospective business partner shall be the Technology leader and shall indicate in their response to this EOI the proposed arrangement for information sharing to BHEL-EDN along with the milestones and time frame.

This shall however be mutually discussed at the time of entering into a final agreement.

### **1.8.2 Information Sharing**

In response to the EOI, the prospective technology partner shall clearly state his willingness to share the following with BHEL-EDN.

- a. Complete Technical documentation for manufacture of sensors, various PCBs and sub-assemblies including processes employed, testing methods flow chart & source code of all software & firmware shall be provided to BHEL.
- b. Engineering information and selection criteria of all bought-out components (Recommended third party vendors database).
- c. Details of special purpose equipment for design platform, engineering platform, Manufacturing, testing and servicing at both sub-assemblies and system level.
- d. Training, deputation of OEM's experts and assistance in design, manufacturing and testing & quality check of the equipment, know-how and know-why to enable BHEL to provide long term product support.

- e. Support for training of BHEL-EDN engineers for operating, maintaining and troubleshooting of manufacturing equipment.
- f. Technology upgrades including addressing of obsolescence issues covering all the above for a mutually agreed period.
- g. A commitment has to be given by the prospective BSA/ToT partner for long-term association with BHEL-EDN. The prospective partner shall forward details regarding methodology and duration for which they can provide support.
- h. Exclusive rights to be given to BHEL to modify hardware/ software beyond partnership period, on no charge basis.
- i. If any equipment needs Type tests (Environmental, EMI/EMC and any end equipment specific tests), a copy of Type test certificates or type test procedures to be provided by the prospective business partner.
- j. The prospective technology partner shall provide details of all the standards followed for the hardware & software used in their products.
- k. Repair, trouble-shooting procedures, database of failures, MTBF, User/Operator manual, maintenance and engineering Manuals to be provided so as to enable BHEL to provide product support to Customer.

## **1.9 RESPONSE TO THE “EXPRESSION OF INTEREST” - (EOI)**

BHEL-EDN will analyse the responses received towards this EOI to shortlist prospective Business partners.

A separate Request for Quotation (RFQ) along with detailed Technical and Commercial Specifications will be issued to these shortlisted business partners for submitting Techno-Commercial and Price offers.

### **1.9.1 Qualifying Requirements**

Only OEMs meeting the Qualifying Requirements (QR) as described in Section-3 may respond to this Expression of Interest and will be considered for further evaluation.

### **1.9.2 Checklist of Documents**

The information required to be submitted along with the EOI by the interested OEMs are given in Section-5.



## SECTION- 2:

### TECHNICAL REQUIREMENTS FOR SMART ELECTRONIC TRANSMITTERS

1.0 BHEL intends to leverage the infrastructure, competence and capabilities of Electronics Division to augment its manufacturing capacity by manufacturing Smart Electronic Transmitters. Towards this, BHEL intends to select suitable partner(s) from reputed “Electronics Transmitters Manufacturer” having the requisite infrastructure and competence to form a memorandum of understanding to undertake the work of manufacturing at BHEL premises to meet in house requirement (**5000 units/annually**) as well as to meet the regional demand or Export to meet the global demand also. Manufacturing Capacity for Electronic Transmitters to be built up for **10,000 units per annum**..

2.0 With this objective in view, EOI is invited from interested, competent and experienced “Electronics Transmitters Manufacturer” (OEM) engaged in manufacturing for entering into understanding with BHEL to facilitate manufacturing and supply on time with highest quality product to the customer.

Salient features of EOI for manufacturing as given below:-

Manufacturing of Electronic transmitters consists of manufacturing of basic **prime components** & assembly line for **final product** using basic components manufacturing & testing.

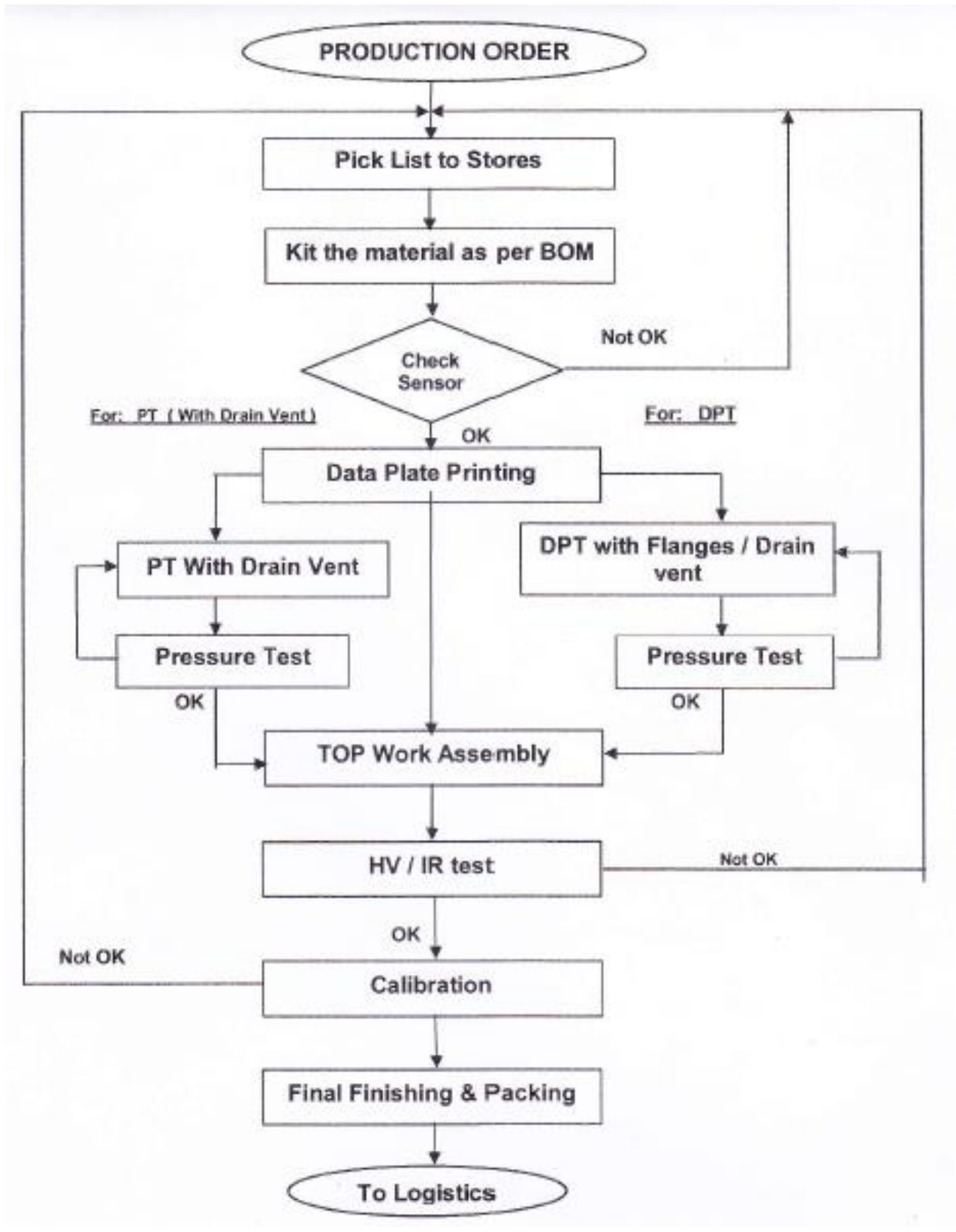
BHEL will provide the space for manufacturing of components & assembly line in BHEL premises.

Bidder has to provide total information for manufacturing facility machinery/setup , testing & calibration facility of Transmitters, Training for design, engineering of each major components & its manufacturing process/functions as given below:-

1) Providing state of art technology to set up manufacturing of basic major components like **sensor**, Electronics for display & CPU processor, Electronics for communication protocol like **HART, Field Bus/Profibus & wireless HART** and manufacturing of Transmitters enclosure & accessories.

2) Manufacturing of Smart Electronics Transmitters should cover assembly line for testing of basic components at different steps & assembling the components phase by phase to complete the assembly of transmitters and final calibration of the Electronics Transmitters traceable to the national accredited Lab. Typical flow chart for assembly line is enclosed for reference.

Typical flow chart for assembly line



## 2.1. Technical requirements

1. **Sensor Technology:** Capacitive /Silicon resonant / Piezo resistive or any proven sensor in Thermal power plant and similar industrial application in last 10 years(LVDT Principle is not acceptable)
2. **Medium:** Air , Flue gas , Steam , Water , Oil etc
3. **Txr Categorizations :**

### Differential Pressure Transmitters (DPT)

Sl no	Range	Static pressure	
1	0-200mmWC	Upto 160 Kg/cm <sup>2</sup>	
2	Above 200mmWC and upto 50000mmWC	Upto 160Kg/cm <sup>2</sup>	
3	Above 5Kg/cm <sup>2</sup> and upto 50Kg/cm <sup>2</sup>	Upto 320Kg/cm <sup>2</sup>	

### Pressure Transmitter (PT)

Range:-1kg/cm<sup>2</sup> to 450 kg/cm<sup>2</sup>

### Remote seal PT

Range: -1 kg/cm<sup>2</sup> to 50kg/cm<sup>2</sup>

### Remote seal DPT

Range:-1kg/cm<sup>2</sup> to 5 kg/cm<sup>2</sup> , Static Pressure : Upto 160kg/cm<sup>2</sup>

4. **Type of transmitter :** Microprocessor based 2-wire smart type transmitters for pressure , differential pressure measurement , flow (DP type) measurement, Remote seal capillary type (both PT&DPT).
5. **Supply voltage :** 24V DC
6. **Output:** 4-20mA,user selectable for linear or square root output
7. **Communication protocol Compatibility:** HART , FOUNDATION FIELD BUS , PROFIBUS
8. **Basic Accuracy:** +/- 0.075% or better including repeatability, hysteresis ; +/- 0.1 % or better for calibrated span
9. **Rangability :** 10 : 1 or better (for draft ranges, upto 500 mmWc) , 5:1 or better ( for high pressure ranges above 100 Kg/cm<sup>2</sup>) ; 30 : 1 or better ( for other ranges).
10. **Response time:** 0-200ms or better;(for normal applications);5s or better (for remote seal capillary type)
11. **Electromagnetic compatibility:** Transmitters shall meet requirements of EN61326 and NAMUR NE-21
12. Zero & span shall be available
13. **Housing:** Weather proof body with epoxy coating or equivalent, Dual compartment with IP65 protection class
14. **Wetted parts :** SS( diaphragm, sensor) or equivalent

15. **Electrical connection** : ½' NPT
16. **Process connection** : ½' NPT(Front entry for DPT; Bottom/front type for PT)
17. **Mounting brackets** : 2" suitable for or horiz pipe(CS),Universal type
18. **Bolts & nuts** : Carbon steel (CS) / Stainless steel (SS)
19. **Tag plate** : Required
20. **Drain & vent** : Stainless Steel (SS) Shall be provides.
21. **Display**: 4 line LCD/LED with backlit with Local keyboard for configuration /Touch screen
22. **Stability**: +/- 0.1 of span for 1 year (min)
23. **Diagnostic features**: Self diagnostic type to be displayed in the display unit.

**Special Requirement:**

- (a) Also should be able to meet the Hydrogen services. Sensor diaphragm shall be coated with gold plated or equivalent proven design.
- (b) Hazardous areas transmitters shall be intrinsically safe explosion proof

Over Pressure limits:

- 1) 1.5 times of line Operating pressure (Static pressure)

## 2.2 Type test Requirements

### TYPE TEST REQUIREMENT OF ELECTRONICS TRANSMITTER AS PER IEC 60770

Sr. No.	Test name	Reference standards	Test Type
1	Inaccuracy and measured error ( with graphs in 03 cal. Ranges )	IEC 61298 -2	Performance test
2	Non-Linearity	IEC 61298 -2	Performance test
3	Hysterisis	IEC 61298 -2	Performance test
4	Non-repeatability	IEC 61298 -2	Performance test
5	Dead Band	IEC 61298 -2	Performance test
6	Start up drift	IEC 61298 -2	Functional test
7	Long term drift	IEC 61298 -2	Functional test
8	Ambient temperature	IEC 61298 -3	Temp. related Test
9	Vibration (sinusodial)	IEC 61298 -3	Enviromental Tests
10	Shock	IEC 61298 -3	Functional test
11	Mounting Position Effect	IEC 61298 -3	Functional test
12	Overrange	IEC 61298 -3	Functional test
13	Short term Supply Voltage interruptions	IEC 61298 -3	Functional test
14	Reverse supply voltage protection	IEC 61298 -3	Functional test

Sr. No.	Test name	Reference standards	Test Type
15	Common mode interference	IEC 61298 -3	Functional test
16	Normal mode interference ( series Mode)	IEC 61298 -3	Functional test
17	Earthing	IEC 61298 -3	Functional test
18	Electrical fast transients ( Bursts)	IEC 61298 -3/ IEC 61000-4-4	EMI Test
19	Surge Voltage immunity	IEC 61298 -3	EMI Test
20	Conducted sine wave RF disturbances	IEC 61298 -3	EMI Test
21	Power frequency magnetic filed	IEC 61298 -3	EMI Test
22	Damped Oscillatory Magnetic Field	IEC 61298 -3	EMI Test
23	Radiated radio frequency electromagnetic field	IEC 61298 -3	EMI Test
24	Open and short circuit of Output	IEC 61298 -3	EMI Test
25	Input resistance of a transmitter with electrical inputs	IEC 61298 -2	Functional test
26	Insulation Resistance	IEC 61298 -2	Functional test
27	Dielectrics strength	IEC 61298 -2	Functional test
28	Power consumption	IEC 61298 -2	Functional test
29	Output ripple	IEC 61298 -2	Functional test
30	Outout load	IEC 61298 -3	Functional test
31	Source Impedance	IEC 61298 -3	Functional test
32	Supply voltage depressions	IEC 61298 -3	Functional test
Sr. No.	Test name	Reference standards	Test Type
33	Dry Heat Test		Enviromental Tests
34	Damp Heat Test	IEC 61298 -3, IEC 60068 -2-1, IEC 60068 -2-2,	Enviromental Tests
35	ESD Immunity test		EMI Test
36	Frequency response		n/a
37	Air consumption		n/a
38	Ingrass Protection ( IP )		IP Test
39	Electrical output Load at Full span		Functional test
40	Supply voltage variation		Functional test
41	Life cycle test		Functional test
43	static pressure test		

## 2.3 Technical documents requirement

- (a) Past experience (10 years) in designing and manufacturing of Smart Electronic Transmitters.
- (b) Type test certificate from Third party independent accredited Lab(National/International standard) for each range of models(PTs 2 varieties & DPTs 2 varieties minimum.).
- (c) Detailed technical data of complete product range confirming to the technical performance parameters. Performance parameters are to be supported by Test reports like accuracy, response time etc.
- (d) List of customer with contact & address details to whom Smart Electronic Transmitters have been supplied recently and successfully working in specifically in power and process industries.
- (e) **Space requirement** to be recommended for setting up manufacturing of **sensors**, PCB's, Electronics, communication protocol & enclosures of complete range of Smart Electronic Transmitters and its testing. Flow chart for manufacturing process with quality checks to be furnished for each major components. Detailed list of machineries required to be furnished with capacity, rating & power supply requirement.
- (f) **Space requirement** to be recommended for setting up assembly line of **complete Electronic** Transmitters including assembly, calibration & testing facility considering all safety measures. Flow chart for assembly process with quality checks starting from component levels to finished final product to be provided. Detailed list of machineries required to be furnished with capacity, rating & power supply requirement.
- (g) **Space requirement** to be recommended for setting up incoming & outgoing material handling including storage facility for the specified capacity for each quarter of the year for above points e & f.
- (h) **Approximate cost** for manufacturing setup of machinery, assembly & testing facility of Smart Electronic transmitters & major components shall be given with detailed break up for each type of Transmitter.

**SECTION - 3**  
**QUALIFYING REQUIREMENTS**

3.1 Financial Turnover of the Prospective Technology partner for the past three years shall be more than Rs. 50 Crores per annum.

3.2 Prospective business partner shall have manufactured and supplied to reputed firms in Power & process industry for past 10 years.

**PROFORMA FOR PROSPECTIVE TECHNOLOGY PARTNER'S QUALIFYING EXPERIENCE**

SL. NO	CUSTOMER NAME, REFERENCE & DATE	ITEM DESCRIPTION	QTY	CUSTOMER'S CONTACT DETAILS (NAME, DESIGNATION, PHONE NO., FAX NO., EMAIL ID)	DATE OF SUPPLY/ COMMISSIONING	PERFORMANCE CERTIFICATE FROM CUSTOMER REGARDING SATISFACTORY PERFORMANCE
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3.3 The respondent shall have established Electronic Transmitter Manufacturing Capability of at least 10,000 number of Smart electronic transmitters per year.

3.4 The respondent shall have latest and proven technology for at least 2 years.

3.5 The business partner shall possess license/patent for transfer of manufacturing technology of Smart Electronic transmitter.

3.6 In future, if the respondent is taken over by another firm either by merger or acquisitions, there shall be no hindrance to support for manufacturing technology of Smart Electronics transmitter.

3.7 The business association shall be applicable for minimum of 10 years and further extension of time frame shall be decided later.

**SECTION - 4**  
**COMPANY PROFILE**

<b>4.1</b>	<b>GENERAL INFORMATION:</b>
4.1.1	NAME OF COMPANY (ownership details for the last 5 years):
4.1.2	DETAILS OF HEAD OFFICE: ADDRESS: TELEPHONE: FAX: E-MAIL: WEB SITE: NO. OF COUNTRIES OPERATING FROM:
4.1.3	DETAILS OF FACTORY / WORKS: ADDRESS: TELEPHONE: FAX: E-MAIL:
4.1.4	DETAILS OF MARKETING AGENT (OUTSIDE INDIA, IF ANY): ADDRESS: TELEPHONE: FAX: E-MAIL:
4.1.5	DETAILS OF INDIAN AGENT, IF ANY: ADDRESS: TELEPHONE: FAX: E-MAIL:
4.1.6	CHIEF EXECUTIVE:

4.1.7	CONTACT PERSON(S) FOR PRODUCT OFFERED: NAME(S): DESIGNATION: ADDRESS: TELEPHONE: FAX: E-MAIL:
4.1.8	YEAR OF ESTABLISHMENT:
4.1.9	PRODUCTION CAPACITY PER ANNUM FOR ELECTRONIC TRANSMITTERS: (Manpower in design, R&D, manufacturing, testing, QC and after sales support)
4.1.10	PARTICULARS OF PRODUCT INCLUDING SPECIFICATION AND RANGE: (ATTACH BROCHURES AND CATALOGUES)  Compliance to international standards such as ISO, IEEE, MIL
4.2	<b>COUNTRY OF ORIGIN FOR OFFERED PRODUCTS AND TECHNOLOGY</b>
4.3	<b>FINANCIAL INFORMATION:</b>
4.3.1	ANNUAL TURNOVER AND PROFIT-AFTER-TAX FOR LAST 3 YEARS: (attach copies of audited Balance Sheet and Profit& Loss Account)  YEAR - 2012-13:  YEAR - 2013-14:  YEAR - 2014-15:  (Break-up of overall revenue and revenue from Electronics Transmitters)
4.3.2	DUNN AND BRADSTREET REPORT FOR THE COMPANY (If applicable)
4.4	<b>QUALITY AND ENVIRONMENTAL MANAGEMENT SYSTEM:</b>
4.4.1	IS THE COMPANY ISO: 9001 OR EQUIVALENT CERTIFIED: YES / NO. IF YES, ENCLOSE COPY OF CERTIFICATE
4.4.2	IS THE COMPANY ISO: 14001 OR EQUIVALENT CERTIFIED: YES / NO. IF YES, ENCLOSE COPY OF CERTIFICATE
4.4.3	IS THE COMPANY OHSAS 18001 OR EQUIVALENT CERTIFIED: YES / NO. IF YES, ENCLOSE COPY OF CERTIFICATE

4.4.4	IS THE COMPANY ISO 27001OR EQUIVALENT CERTIFIED: YES / NO. IF YES, ENCLOSE COPY OF CERTIFICATE
4.5	EXPERIENCE LIST FOR OFFERED/SIMILAR ITEMS
4.6	LIST OF COMPLIANCE STANDARDS FOR DEVELOPMENT, DESIGN, TESTING AND LIFE CYCLE MANAGEMENT
4.7	ANY OTHER INFORMATION

## SECTION - 5

### CHECKLIST OF DOCUMENTS TO BE SUBMITTED AS RESPONSE TO EOI

Information/documents to be provided along with response to Expression of Interest:

Sl. No.	Information / Document	Compliance
1	Covering Letter signed by an Authorized Signatory on Company letterhead, listing clearly the Enclosures.	Yes / No
2	Catalogue of Smart Electronic Transmitter of each type.	Yes / No
3	Technical Write-up describing features for Smart Electronic Transmitter of each type.	Yes / No
4	Reference list of systems supplied/commissioned	Yes / No
5	Acceptance for Business Sharing Agreement (BSA )/ToT	Yes / No
6	Organization Chart	Yes / No
7	Details required in Section-1 - Clause 1.8.1	Yes / No
8	Details required in Section-1 - Clause 1.8.2 - a to k	Yes / No
9	Filled-up Qualifying Criteria Format - Section-3	Yes / No
10	Filled-up Company Profile - Section-4	Yes / No