



INDIAN INSTITUTE OF TECHNOLOGY KANPUR
DEPARTMENT OF MECHANICAL ENGINEERING
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Enquiry no.: ME/ERL/2013-14/May/05

Enquiry date: May 10th, 2013

Last Date: June 14th, 2013 (Extended)

Enquiry for Coriolis Force based Fuel Measurement System
with Shut -off Valve, Fuel Conditioning Unit and Chiller for
Internal Combustion Engine Applications

The following items are required for engine test cell

1. Fuel measurement system (Coriolis force based) with shut off valve (1 No)
2. Fuel conditioning unit (1 No)
3. Chiller (1 No)

The detailed minimum specifications of these sub-systems are given below:

1. Fuel measurement system with shut –off valve

- Measuring range: 0 -125 kg/h
- Systematic measurement uncertainty: $U_s \leq 0.10\%$
- Step response: $T_{10} - T_{90} < 1$ s
- Maximum measurement frequency: 2 Hz (analogue output)
- Ambient working temperature: 5 to 50°C
- Fuel supply pressure: 10 to 80 kPa
- Fuel supply flow: Max. consumption + 20 kg/h
- Fuel supply temperature: - 10 to + 40° C
- Fuels: Gasoline and gasohol blends; diesel and biodiesel blends
- Interfaces: 1 x RS232, Analogue 0-10 V, Digital I/O

2. Fuel conditioning unit

- Temperature control range: 15°C - 60°C
- Temperature stability: $\pm 0.5^\circ\text{C}$
- Fuels: Gasoline and gasohol blends; diesel and biodiesel blends
- Cooling power: 1.6 kW at 10°C spread and 0.5 bar cooling water differential pressure
- Heating capacity: 1.6 kW
- Fuel circulation capacity at 50 Hz: Standard 240 l/h, optional 540 l/h
- Pressure control: feed pressure: $\sim 0\text{-}6$ bar (rel.), return pressure: $\sim 0\text{-}0.5$ bar (rel.)
- Interfaces: analogue 0 to 10V, digital I/O, RS232
- Ambient temperature: 5-50° C

3. Chiller unit

- Temperature control range: Adjustable from 10°C - 80°C
- Refrigerant gas: CFC Free
- Cooling power: 3.5 kW
- Interfaces: digital I/O
- Ambient temperature: 5 - 50° C

Terms & Conditions:

- (i) Provide “Authorization certificate” from the manufacturer, in case the quotation is submitted by an Indian Agent.
- (ii) Prices should be FOB/ CIF upto Delhi.
- (iii) Validity of quotation should be at least for 90 days.
- (iv) Warranty: Three Years from the date of Installation and Commissioning.

Kindly send your best offer (Technical and Commercial offers separately) so as to reach us on or before June 14th, 2013 (Extended) to the following address:

Prof. Avinash Kumar Agarwal
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In case of any queries/ clarifications related to this tender, you may contact Mr. Dhananjay Srivastava (+91 9935355990).