

INDIAN INSTITUTE OF TECHNOLOGY-KANPUR
(Department of Mechanical Engineering)

Enquiry Number: JRK/NSV/HAL/2014-2015-06 Closing date: 23.12.2014

Through: Head Mechanical Engineering

Name of Item: Sealed Quotations (technical bid and price bid separately sealed) are invited by the undersigned for the supply of following services:

1. Design, Fabrication and Assembly of Electronics for the Hall based Speed Transducer unit

Specifications:

- a. Input Voltage: 18 Volt DC
- b. Size: 34 mm dia or less
- c. Two parallel circuits for redundancy
- d. Circuit should be realized using high reliability components
- e. Hall sensor should be able to reliably sense teeth at all speeds(100 RPM – 5000 RPM)
- f. Nominal Gear Pitch: 1.75 mm
- g. Working Temp. (-40 Deg Centigrade to + 105 Deg Centigrade)
- h. Output of circuit should have following characteristics
 - a. Min. voltage: 0.8 Volt, Max : 5 Volt
 - b. Stable output in high vibration environment
 - c. Circuit should have inbuilt signal processing to compensate for the shaft wobbling or alignment errors.

2. Design and Development of Test bed for testing of Hall based Speed Sensor

A test bed to give input rotation to Hall sensor unit. Also position sensing of shaft to verify the sensor output with that of the test bed output.

Specifications:

- a. Hall Sensor Shaft Dia: Φ 6.3 x 12 serrations, 12 mm length
- b. Angular Position Sensing: 1 deg or less
- c. Motion: 100 RPM to 6000 RPM with speed control
- d. Small and Compact size

3. Test Trials

Instrumentation, Testing and Data collection is needed at 10 different speeds (for varying acceleration/deceleration). Further, onsite support needed for testing and data collection for 1 year (upto 4 visits).

Terms and Conditions

1. All quotations must reach undersigned by 23rd December 2014
2. The technical evaluation committee will decide to purchase the services irrespective of cost offered by the service providers and this will depend upon the availability of funds & technical specification and the usage of product in our institute.
3. Payment: As IITK standard terms.
4. Taxes as applicable
5. Delivery: within 12weeks
6. Validity of Quotation: 60 days
7. Review meeting/teleconference will be held once in two weeks to review the progress of the project.

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