Department of Materials Science & Engineering

Indian Institute of Technology Kanpur

Enquiry: MSE/KM/04 dated 22-09-2017

Closing Date: 03-10-2017 (before 2:00 PM)

Extended Date: 10-10-2017 (before 2:00 PM)

We are in process to purchase a **High temperature Pin(Ball) on Disk Tribometer system** immediately. The specifications of unit are as follows:

| **Parameter** | **Specification** |
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| 1) Make | Ducom |
| 2) Disk size (diameter x thickness) | 100 mm X 8 mm |
| 3) Pin diameter | Pin: 3, 6, 8, 10, 12 mm (with room temperature and high temperature holders set) |
| 4) Disk rotation speed | 200-2000 rpm with least count of 1 rpm |
| 5) Load | 5-200 N in steps of 5 N (dead weight loading) |
| 6) Frictional force | 0-200 N with least count of 1 N |
| 7) Ball diameter | Ball: 6, 8, 10 mm (with room temperature and high temperature holders set) |
| 8) Wear track diameter | 1 mm to 85 mm (Variable) |
| 9) Wear measurement range | 0-2000 µm |
| 10) Sliding velocity | 5 to 10 m/s |
| 11) Lubrication module (pump based) | 1 – nos. (Re-circulating type), wear testing under lubrication condition |
| 12) Environment chamber | 1-nos. (testing under effect of gaseous environment) |
| 13) Pin/Ball heating (independent) | Ambient temp. to 500˚C (with Temp. Display facility) |
| 14) Universal disk holder to hold different sizes of sample. It should have possibility to hold samples of atleast 4 x 8 mm dimensions | |
| 15) Data acquisition system along with electronic controller and acquisition software | |
| 16) The contact geometry and related parts must be corrosion resistant | |
| 17) Provision to evaluate true wear properties of various materials | |
| 18) Safety interlocks to ensure safe operation | |
| 19) Ducom wear and friction monitor system designed as per ASTM G-99 | |
| 20) Separate ASTM disks need to be provided along with the instrument | |

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| 21) Tribometer capability to upgrade in future for high temp. up to 800 deg. C (i.e. induction type), on-line corrosion system with electro-chemical module, SHM(angular oscillation moment), Diligent Test Script(DTS) and Stribeck Curve. |
| 22) Ducom wear and friction monitor tribometer integrated with ACACA signal processing technology, which provides true compound wear and precise friction value. |
| 23) Ducom data acquisition system used to measure output parameter like Friction, wear and CoF. Acquisition software used to display on-line graph (real data), compare view tables and advance reporting of data. |
| 24) Two year warranty from the date of installation |

Instrument should be research oriented means with highly protected and safe for usage in a lab by students.

You are requested to send a quotation (Sealed and in two bid system) for the above mentioned equipment with all details. All cost, terms and conditions should be clearly mentioned in the quotation. If you are the only authorized company to provide the services than please enclosed proper authorization with the quotation in this regard. Proprietary certificate should be enclosed with the quotation. Minimum warranty will be two year.

The quotation in a sealed envelope with two bid system (technical & financial separate), in all its completeness, should reach us by 10-10-2017 (before 2:00 PM) at following address:

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