राष्ट्रीय प्रौद्योगिकी संस्थान श्रीनगर
NATIONAL INSTITUTE OF TECHNOLOGY SRINAGAR
(An autonomous Institute of National Importance under the aegis of Ministry of Education, Govt. of India)
हजरतबल, श्रीनगर,जम्मू-कश्मीर, 190006, भारत
Hazratbal, Srinagar Jammu and Kashmir, 190006, INDIA

No.: NIT/CPU/23/ 60-63
Dated: 11.05.2023

CORRIGENDUM

With reference to the Bid Number: GEM/2023/B/3321675 Dated: 31-03-2023, the technical specifications for the purchase of High Temperature Vacuum System and Cryogenic Setup Vacuum Chamber have been revised. The revised technical specification is attached at Annexure A.

Other commercial parameters will remain same as issued earlier.

11/5/23

Officer Incharge
Central Purchase Unit

Copy to:

1. Chairman CRFC for information please.
2. Chairman CSC with the request to upload the corrigendum notice on the Institute website.
3. Purchase Committee for information please.
4. Concerned file.

Annexure A

High Temperature and Cryogenic vacuum system

Description of the equipment

This vacuum tribometer will be utilized for studying tribological properties, like the coefficient of friction, wear rate, etc. This equipment should be capable of testing materials in vacuum conditions (up to 10-7 torr), at cryogenic temperatures (up to -150°C), and at high temperature (1000°C), to obtain the tribological properties.

Technical Specification

Sl. No.	Parameter	Specifications
1	Equipment configuration	High-density/high-stiffness platform Capable of performing various standard and customized tests according to international standards (ASTM/DIN/ISO). Accommodates interchangeable modules for easy change of test configuration. The equipment should have the capability for carrying out tribological tests in rotary motion in the following configurations (a) Pin-on-disc configuration (b) Ball-on-disc configuration
2	Rotary Drive Speed	Up to 1800 Rpm
3	Speed Control	The equipment should have the following speed controls (a) Incremental speed control (b) Constant speed control (c) Continuous Ramping speed control The system should have an Internal feedback position Encoder for Smooth Slow Speed in closed loop control.
4	Speed measurement resolution	Better than ± 1 rpm
5	Radius adjustment of rubbing point	Manual
6	Normal load on the Ball	1N to 200 N,
7	Resolution of Normal load measurement	< 6 mN
8	Loading Type	By Servo Loading (No Deadweight and No Pneumatic)
9	Friction force measurement capability	Up to ± 200 N
10	Resolution of friction force measurement	< 6 mN
11	Temperature measurement on the test specimen	Temperature measurement range from -150°C to 1000°C, ±1°C accuracy,
12	Specimen holder specifications	Suitable holders are to be provided to hold the testspecimens of the following sizes. (a) Ball -6.35mm (b) Disc-: 50 mm Diameter

13	Environment I. Vacuum II. Low-temperature testing III. High Temperature	I. Vacuum: 10-7 torr. Integrated roughening and turbomolecular pump. Typical test vacuum with samples 10-5 torr. II. Provision for testing from ambient (30°C)to low temperature (-150°C). Integrated nitrogen controller with Dewar container included. III. Provision for testing from ambient to high temperature (1000°C)
14	Data acquisition and processing system	I. DAQ System should be 16-bit or better. II. Computer-controlled system for automatedtest sequence and data acquisition III. Continuous real-time acquisition of data. IV. Adjustable sampling rate from 10 Hz to 100 Hz V. Data portability & storage to a personal computer.
15	Power supply	The equipment should be able to operate in 220V AC/50 Hz power supply.
16	Additional Items	I. Extra Sample holders II. Desktop Computer having latest configuration
17	Warranty	3 Years onsite warranty