



CSIR-NML

सीएसआईआर - राष्ट्रीय धातुकर्म प्रयोगशाला

(सीएसआईआर की एक संघटक प्रयोगशाला, विज्ञान एवं प्रौद्योगिकी मंत्रालय)

भारत सरकार, बर्मामाइंस, जमशेदपुर - 831007, झारखण्ड (भारत)

CSIR-National Metallurgical Laboratory

(A Constituent Laboratory of CSIR, Ministry of Science & Technology)

Govt. of India, Burmamines, Jamshedpur - 831 007, Jharkhand (India)

16.01.2026

CORRIGENDUM

Tender Reference No. :- PUR/135/PKM/DB/EQM/2025-26

Tender ID :- 2025_CSIR_261204_1

Item Name :- VIBRATING SAMPLE MAGNETOMETER 3 TESLA

NOTE: The Bids must be submitted in the Central Public Procurement Portal (URL:<https://etenders.gov.in/eprocure/app>) only. Manual/Offline bids shall not be accepted under any circumstances. Bidders should quote in INR only.

Consequent to the Pre-Bid Meeting held on 12.01.2026, the revised technical specifications are attached in Annexure-A.

The bidders are requested to submit their bid based on this revised technical specifications as per Annexure-I.

All other terms and conditions shall remain same.

Stores & Purchase Officer,
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ANNEXURE-I

Annexure-I

Detailed Technical Specifications

Vibrating Sample Magnetometer (3 Tesla)

S.No	Specification	Requirement
01	General Description	State of the art vibrating sample magnetometer to conduct magnetic characterization of bulk solid, powders, thin film and liquid type samples with wide temperature range.
02	Vibrating Sample head	Sample locking feature.
03	Electromagnet	<ul style="list-style-type: none"> a) Variable Air gap b) Pole diameter: ≥ 100 mm or higher c) Pole face diameter = 50 mm or higher d) Safe working distance between high temperature sample holder and pickup coils. e) Suitable closed circuit cooling arrangements operable at ambient temperature f) Suitable power supply compatible with the system with all safety features.
04	Maximum Magnetic field strength	± 3 Tesla at Room temperature ± 2.3 T or higher with temperature option
05	Magnetic field accuracy	$\pm 1\%$ of reading or $\pm 0.05\%$ of full scale
06	Magnetic field resolution	0.001 Oe or better
07	Magnetic moment noise	0.1 μ emu or lower
08	Magnetic field ramp rate	1 T/s (10000 Oe/s) or higher
09	Dynamic magnetic moment measurement range	10^{-6} emu to 100 emu
10	Moment sensitivity	$<10^{-6}$ emu or better
11	Temperature measurement range	80 K or lower to 950 K or higher (experimentation temperature)
12	Temperature stability	≤ 0.2 °C
13	Temperature ramp rate	5°C/min or higher
14	Cool down time	<1 hour from RT to 80 K 10 degree/min or higher from 950 K to RT
15	Experimental output parameters	<ul style="list-style-type: none"> (a) Moment (emu). (b) Moment/gram (emu/g). (c) Saturation Magnetization. (d) Coercivity (e) Susceptibility



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		<p>(f) Remanence (g) BH max (h) Curie Temperature</p>
16	Control unit and Software	<p>a) Connecting cables, required ports, slots and interfaces for operation and control of system b) Operation and control of system, gauss meter, electromagnet power supply, temperature controller, cryostat, oven. c) Temperature control should be fully automated. System should have fully automatic and precise low and high temperature controller. d) Data acquisition, control and analysis with plotting & printing options of parameter. e) Operating Software for conducting experiments and data analysis compatible to latest windows version.</p>
17	Software	<p>Software for performing experiments and analysis of</p> <p>a) DC Hysteresis curve, $M(H)$ b) Temperature and time dependent magnetization curve, $M(T,t)$ c) Isothermal magnetization curve within the specified temperature. d) minor loop e) programmable M-H loop at incremental temperatures for magneto-caloric samples f) provision for rotational hysteresis and anisotropy and FORC. g) Licensed Software compatible with the latest windows version and capable of upgrade with newer versions during warranty period.</p>
18	Computer	<p>a) Intel core i9 or equivalent or higher b) 16GB DDR4 RAM c) 500 GB SSD storage or higher, d) 23 inch FHD display or better e) Pre-installed latest windows version. f) Mouse, Keyboard and printer.</p>
19	Calibration and standards	<p>a) NIST based standard samples (Nickel or palladium) must be provided for periodic calibration of magnetic moment at low and high magnetic fields/temperatures. b) Temperature Calibration certificates</p>



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19	Calibration and standards	<ul style="list-style-type: none"> a) NIST based standard samples (Nickel or palladium) must be provided for periodic calibration of magnetic moment at low and high magnetic fields/temperatures. b) Temperature Calibration certificates
20	Sample Holder	Sample holders for bulk samples (10 nos) , thin film (05 nos), powder (10 nos) and liquid (05 nos) suitable for entire operating range.
21	Power supply	The power supply to the equipment should be as per Indian Standards.
22	Accessories	Mandatory accessories like gas regulator, kits for sample loading, non-magnetic tweezers, allen key.
23	Warranty (include in the quote)	<ul style="list-style-type: none"> a) One-year Comprehensive warranty from the date of successful installation and acceptance at CSIR-NML, b) three year of non-comprehensive AMC after the warranty period.
24	Training	5 days of training at CSIR-NML Jamshedpur after successful installation and commissioning.
25	NML scope	NML will provide three phase or single phase or both power supply and space required for the equipment.
26	Vendor Qualification Criteria	<ul style="list-style-type: none"> a) The bidder shall be an OEM or OEM authorized distributor. A valid certificate by the OEM to be submitted. b) The OEM Authorized bidder/OEM should have supplied two VSM systems of offered or similar model/configuration in last 05 Years in India. Copy of supply order should be enclosed with technical bid. c) Datasheet Catalogue of the offered system/model to be submitted and available in OEM/distributor website.

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