

TECHNICAL SPECIFICATIONS AND OTHER ALLIED REQUIREMENTS

SI No.	Description of items	Quantity
PUR/106/NDT/CK/E/2020-21		
01.	Hand Held XRF Alloy Analyser (Detailed Specification as per Annexure)	01 No.

1. INSTALLATION/COMMISSIONING

1.1. Not Required

2. Training

2.1. As per specification detailed in Annex – I, in case COVID – 19 situation persists, online training shall be provided.

Note: Manufacturer's Authorization Form in prescribed format must be submitted by Non-OEM Bidders.

General Specification for Handheld XRF

Annexure I

Sr. No.	Parameter	Specification
1.	Description:	Handheld XRF for In-situ Elemental (Chemical Composition) analysis of Metal and Alloys
2.	Elemental Range	Instrument must be capable of measuring elements from Mg (12) to U (92)
3.	Calibration	The instrument must be factory calibrated for Ferrous and Non-ferrous Alloys. It must have an extensive Alloy Grade Library covering international standards such as AISI, EN-DIN, JIS, SAE etc.
4.	Excitation Source:	The X-ray tube must include Silver (Ag) or Rhodium (Rh) as anode materials, 1-200 micro Amp, and voltage not more than 50kV, The Equipment must include a low power X-ray tube (< 4 Watts power consumption)
5.	Detector	Silicon Drift Detector (shall provide energy resolution less than 185 eV at MnK α). Detector must have a Detector Protection on it.
6.	Battery and Battery Charger	Rechargeable Li-ion batteries minimum 02(two) sets required along with suitable AC charger/adaptor to be included as standard accessories in the instrument.
7.	Spot Size	Spot size must not be more than 10 mm
8.	Sample Positioning	Integrated micro camera for locating and recording measurement positions
9.	Display/Readout Unit	Tilting, colour, Touch Screen display
10.	Instrument Weight	<2.5 Kg
11.	System Software	Licensed operating and Software required (compatible with Windows 10) downloading the test file as and when required. The software suite of the analyzer must provide export options of all spectrum raw data per application. The software suite of the analyzer must enable elements identification on display.
12.	Data storage	Internal memory must be at least 512 MB capable to store approximately 10000-20000 readings with spectral images.
13.	Data Transfer	USB, Bluetooth and RS 232 serial communication port.
14.	Calibration Accessories	A suitable set of reference, calibration or control samples must be provided. Additionally, Calibration certificates must be provided.
15.	Warranty	The instrument should carry a warranty of 12

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		months from date of installation or 14 months from date of supply, whichever is earlier.
16.	IP Rating	Must be IP54 or better
17.	Safety Compliance	Safety certificate from Atomic Energy Regulatory Board of India for safe limits of X-ray exposures for good occupational health and safety practices. Must be AERB-Type Approved.
18.	Carrying Case	Suitable carrying Case
19.	Training	Hands on training through authorised representative shall must to be provided to user(a) at Purchasers SITE for safe operation of handheld XRF analyser including details of hardware components, OS, application software, calibration checking, chemical composition, analysis of various standard specimens and others(sheet, rod, weld metal samples etc.) trouble shooting, report generation, data transfer and saving the spectra and composition results to other computers through USB or other means.

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