

ANNEXURE-A

Supply, commissioning, training to users and guarantee of “Handheld alloy composition analyser” for investigation of material chemical composition along with accessories and Technical specifications as following:

Basic Handheld XRF Analyzer including following accessories:			
Sr. No.	Description of items	Unit	Qty
A.	Tungsten (W) Anode 35 KV X-Ray Tube Handheld Analyzer Machine along with Silicon PIN Detector	No.	01
B.	Carrying case	No.	01
C.	Li-Ion Rechargeable battery	No.	02
D.	USB cable for data transfer	No.	01
E.	Dedicated Laptop for installation of Software along with USB Key	No.	01
F.	Spare analysis window guard	No.	03
G.	Charger/Adopter with Power Cord	No.	01
H.	Standard Calibration block	No.	01
I.	User Guide and manual	No.	02

Note: - Supplier may include additional accessories along with above mentioned if applicable.

- The equipment shall be based on modern XRF (X-ray fluorescence) technique of material identification.
- The instrument shall use miniaturized X-Ray tube technology and electronics with low power and current consumption (preferably 4W X-ray tube).
- The instrument shall be capable to analyse minimum (49nos.) of the following elements: Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, W, Hf, Ta, Re, Pb, Bi, Zr, Nb, Mo, Pd, Ag, Cd, Sn, Sb, Au, Ti, Cr, Mn, Fe, Co, Ni, Cu, W, Zn, Ga, Ge, Ir, Pt, Au, Rh, Ru, Pb, Bi, Zr, Pd, Cd, In, Ag, Sn, Sb.
- The instrument shall be equipped with LCD or TFT display which should be readable in bright day light.
- The equipment shall have internal storage capacity for storage of at least 100 readings at a time.
- The instrument shall have library of different material grade specification and shall also capable to suggest the corresponding material grade after analysis.
- The instrument shall have fast boot-up and data acquisition.
- The instrument shall be provided with standard calibration block of material confirming to ASME SA 316 to calibrate the machine at site.
- The laptop dedicated for the machine shall have processor Intel CORE-i7-1065G-10th Gen, RAM-8GB, 1 TB (HDD), 15.6” screen, licensed version of window-10 or above operating system and Input and out port compatible with handheld alloy machine .
- The equipment shall be IP54 rated for protection against dust and moisture.
- Machine shall be Drop tested (MIL-STD-810G) to protect against sudden falls and reduce the need for costly repairs
- The Equipment shall be rated for the temperature range from –10 °C to 45 °C (14 °F to 113 °F)
- The equipment shall have the Stainless-steel, tough, thick faceplate for wear protection.

14. The equipment shall have easy, tool less window replacement facility if possible.
15. The software provided for the equipment shall be a licensed version with life time validity. Supplier shall also provide the software setup in CD for the re-installation of software as per the requirement.
16. The software provided shall be compatible with latest version of window i.e. window's-10 or higher and shall generate report in portable document in printable format.
17. The instrument shall be safe to use for the user from radiation point of view. Precautions and statutory requirement, if any shall be clearly bought out in offer.
18. The Instrument shall be supplied to :
 - Stores Officer,**
 - Heavy Water Plant-Kota**
 - Via-Kota, Anushakti**
 - PO: Anushakti**
 - Rajasthan - 323303.**
19. Commissioning and training:
 - a. Commissioning of the "Handheld alloy composition analyser" with all its accessories shall be carried out by the supplier at HWPK site.
 - b. The supplier shall depute his experienced engineer at HWPK site for commissioning of the related software and training about the use of equipment.
 - c. During commissioning the machine shall be used to check its intended performance.
20. The bidder shall have valid respective authorization of original equipment manufacturer for the sale of equipment. Bidder shall submit the authorization certificate with offer otherwise offer may not be considered.
21. Supplier shall submit the calibration certificate of the equipments at the time of delivery valid upto minimum 1 year.
22. The bidder shall include charges like installation, commissioning and training along with unit rates.
23. The supplier shall also give minimum one year guarantee and warranty of the equipment along with the offer.

QUALITY ASSURANCE PLAN

Supply, commissioning, training to users and guarantee of “Handheld alloy composition analyser” for investigation of material chemical composition along with accessories

S N.	Components & Operation	Characteristics	Type of Check	Quantum of check	Ref.Doc.	Acceptance Norms	Form of Record	Insp. Agency		
								P	W	R
1	Handheld alloy composition analyser	Visual and Functionality inspection	Major	100%	As per the technical specifications	--	Conformance via calibration Certificate submitted by Supplier	2,3	-	3

LEGENDS;

P = Performing Agency, W = Witnessing Agency, R = Review of Documents Agency

1 = Sub-Vendor, 2 = Supplier/Manufacturer, 3 = HWP (K) Representative