

Innov-Xsystems

INNOVATIVE X-RAY TECHNOLOGIES

The Innov-X Handheld Alloy Analyzer

A Field-Proven, X-ray Tube-Based System – *No Radioactive Isotopes*

Engineered for the Most Demanding Testing Environments – *Designed for In-service PMI*



Difficult alloy analyses performed in seconds!

- Low-Alloy, Stainless, Nickel, Titanium, Cobalt, Copper based alloys & more.
- Confidently separate challenging alloys such as 304 & 321; P91 & 9 Cr; Ti Grade 7 & CP Ti

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THE INSTRUMENT

The Innov-X Systems **InSpector** - a hand-held X-Ray Fluorescence (XRF) alloy analyzer - features a miniature, rugged x-ray tube. The X-ray tube provides unsurpassed performance on the most challenging alloys and simplifies or eliminates the regulatory admin associated with isotope systems. Our industry-leading SmartBeam technology covers a wide range of elemental analysis -replacing all three isotopes used in traditional alloy analyzers. The InSpector will meet your analytical requirements today and for years to come.

- **Defy Obsolescence:** A snap-in HP iPAQ Pocket PC delivers speed and flexibility. The lightning-fast advances of Intel, HP and Microsoft ensure Innov-X analyzers remain state-of-the-art for years to come.
- **Field Proven:** Systems at work in some of the most demanding environments: Gulf Coast plants, Iraq (UN Weapons Inspectors), Saudi Arabia, Mexico (Pemex), Brazil, India, China and many more locations - Innov-X System's satisfied customers span a world of demanding applications.
- **Unequaled Versatility.** - The Inspector empowers the customer. Operators may add new grades, fine-tune or add calibrations, even add new elements to analysis. Software upgrades available via email or web.
- **No radioactive sources:** Cross Off your "to do" list licensing, emergency response plans, wipe tests, detailed log books, radiation surveys, travel restrictions & routine isotope replacement. Our x-ray tube system eliminates the headache of controlling and accounting for radioactive materials.

ELEMENTS AND ALLOYS ANALYZED

We're pleased to offer the most "customizable" XRF in the business. Innov-X offers a standard element package, with common additions and upgrades listed below. Please feel free to discuss your custom or proprietary needs with our technical sales and applications personnel at any time.

- Standard 20-element package: Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Hf, Ta, W, Re, Pb, Bi, Zr, Nb (Cb), Mo, Sn, Cd
Common additions or upgrades: Au, Pt, Pd, Sb and/or Ag
- Precious Metal package: Ir, Au, Pt, Ru, Rh, Ag, Pd, plus selected others from above Alloy Families
- Stainless, tool steels and Cr/Moly steels (P 11, P22, P5, P9, etc.)
- Wide range of high-temperature alloys including nickel, cobalt, titanium, zirconium, molybdenum alloy families
- Copper and copper/nickel alloy groups
- Tin, lead, antimony solder and Babbitt alloys

Alloy Grades The Innov-X Inspector is equipped with a Standard Grade library containing > 200 common alloy grades. Operators may add hundreds more on-the-spot, or by copying from the PC. Multiple libraries are available for creating customized libraries for different departments, sites or inspection groups.

SOFTWARE MODES

- **Analytical Mode.** The ultimate in "Point and Shoot" simplicity. A standard-less, fundamental parameters method for quantitative chemistry calculation, then searches Grade Library for *ID* based on ASTM grade specifications. No user-calibrations or setup required.
- **Empirical Mode.** User may generate calibration curves for fine-tuning chemistry on specific alloy groups, or for other applications such as coatings thickness.
- **FAST ID, PASS/FAIL Modes.** Features rapid alloy grade and chemistry results via spectral signature matching to library of pre-programmed standards. Grade *ID* and chemistry, or simple PASS or FAIL results provided.

BRIEF SPECIFICATIONS

Weight	4.5 lbs. (2 kg)
Excitation Source	X-ray tube, 10-35 kV, 5-50 uA, silver anode, up to 5 filter positions.
Detector	Si PiN diode, thermoelectrically cooled, typical resolution 250 eV or better (FWHM at Mn K-alpha line).
Power	Li-ion batteries, or AC Power with Testing Stand.
Battery life	4-8 hours depending on duty cycle.
Display	Color, high resolution display with variable backlighting.
Data Storage	Minimum 10,000 tests with spectra.
Computer	Compaq Ipaq with 400 mHZ Intel StrongArm Processor, 64 Mb memory; Windows CE OS; Color, high resolution display with variable backlighting
Accessories	Bluetooth wireless printing and data downloading, integrated bar-code reader, wireless data and file transfer.

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