

Dependability Quality



TECHINCO

CORROSION & NDT MANAGEMENT

Technical Inspection &
Corrosion Control Company
Since 1994

ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007, IMS

Other Asset Integrity Management Tools

- Risk-Based Inspection (RBI)
- Reliability Centered Maintenance (RCM)
- Hazard and Operability Study (HAZOP Study) and Safety Integrity Level (SIL Study)
- Fitness For Service (FFS)
- Failure Mode, Effect and Criticality Analysis (FMECA)
- Fault Tree Analysis (FTA)
- Material and Coating Selection
- Corrosion Monitoring and Controlling System
- Cathodic Protection

Certified By:



Membership of:



PMI



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TECHINCO

Technical Inspection & Corrosion Control Company

Tel:+98-21-88529728-36

Fax:+98-21-88741040

www.techinco.net

info@techinco.net

WHEN YOU NEED

RAPID IDENTIFICATION OF ALLOYS

Address: No. 18, Kooh-e-Noor St., Motahari Ave., Tehran, Iran



PMI (Positive Material Identification) is a portable X-Ray Fluorescence (XRF). The system is utilized to analysis of metallic alloys to determine their composition by percentage of constituent elements.

The **PMI** can determine 22 elements including Chromium, Nickel, Molybdenum, Iron, Titanium and Manganese.



The atoms in the sample under inspection are excited by the X-Rays and the fluorescence, which is re-emitted from the sample is measured. From this, the elements are quickly determined as well are their relative concentrations.

Technical Specifications

Principle of Operation	Analysis of Multiple Elements via X-Ray Fluorescence (XRF) Spectroscopy
Primary X-ray Source(s)	Low Power 35kV 1.0W X-Ray Tube with Ag Anode Target
X-Ray Detector	High-Performance Si-PiN Detector, Peltier Cooled
Analysis Range	22 Standard Alloying Elements in Range Ti(22) to Bi(83)
Testing Modes	Alloy Grade with Chemistry (Fundamental Parameters Analysis) Standard Signature Store/Match Mode Super Chem ID Mode Pass/Fail Sort Mode
Data Storage	Internal 3000 Readings with X-Ray Spectra
Operating Conditions	Ambient Temperature Range: 20°F to 120°F (- 7°C to 49°C) Humidity Range: 0 to 95% RH

Families of alloys that can be accurately identified and analyzed by the **PMI** include:

- Stainless Steels
- Cr-Mo Steels Including Vanadium and Tungsten Stabilized Versions
- Low Alloy Steel
- Tool Steels
- Nickel, Copper, Titanium, and Aluminum Alloys
- Exotics, Such as Zirconium and Tantalum Alloys



Application Range

- Rods and Wire Strands
- Finished Welds and Weld Beads
- Bolts, Rivets, and other Fasteners
- Valves and Flanges
- Complete Reaction Vessels
- Pipes
- Plates
- Wrought Products
- Pressure Vessels
- Scraps



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