PMI-MASTER SMART

HITACHI
Inspire the Next

Complete metals analysis – a portable laboratory



When you need to reliably analyze steels, stainless and other alloying materials like aluminum, nickel and copper in a safety critical environment, you need a trusted analyzer that rapidly delivers ultimate analytical performance you can trust first time.

Spark optical emission spectrometers excel at providing full chemistry of critical alloy elements at low detection limits that handheld X-ray and LIBS analyzers can't: carbon, phosphorus, sulfur, boron, arsenic and tin in low alloy and stainless steels, and nitrogen in duplex steels. That's why spark OES is the most trusted and widely used method for creation and verification of MTR's (mill testing reports) in the world.

Hitachi High-Tech's PMI-MASTER Smart OES analyzer, which is made in Germany, is light weight and compact, making it ultra-portable so you can easily take it where you need it; whether at height, in a ditch, material inspection areas outside and inside, or in a laboratory.

Our optical emission spectrometers meet the world's most stringent PMI metallurgical alloy chemistry testing requirements including API 5L, ASME section IX B& PV, ISO 17025 and A2LA standards.





Why choose a PMI-MASTER Smart?

RESULTS YOU CAN TRUST

Reliable low levels of detection not just for carbon but also phosphorus, sulfur, boron, arsenic and tin in low alloy stainless steel and nitrogen in duplex steels. Stable measuring results even with temperature changes outside.

HOT SAMPLE MEASUREMENTS

Measure elements, including carbon and silicon, reliably from hot surfaces up to 300°C.

LOW OPERATING COSTS

Minimized argon consumption thanks to concentric electrode shielding argon flow technology that reduces air gaps and optimizes the gas flow.

BUILT TO LAST

Optimized for use in tough environments with robust and dust-proof touch screen. Temperature monitoring ensures protection against overheating.

EASY OPERATION

Simply hold the probe to the sample, push the trigger and read the result. The alloy grade and full chemical composition appear within in seconds, indicating where concentration limits are exceeded or material is outside of specification.

DATA MANAGEMENT

Easy to use and customized report generator. You can share results to remote devices and export results into other software.

LONG BATTERY LIFE

Use either with an external power supply or with a rechargeable battery, which provides 300 measurements in spark mode and 200 in arc mode before needing to be recharge.

FREE FROM REGULATORY CONSTRAINTS

GRADE DATABASE INCLUDED

The largest available metals database for fast and easy grade identification is preinstalled, providing more than 12 million records for over 340,000 materials from 69 countries and standards.

A choice of probes

Simply hold the probe to the sample, push the trigger and read the result. The alloy grade and the full chemical composition appear within a few seconds on the integrated touch screen. Tailored to your specific application, different operation modes offer complete analysis, grade identification or sorting of metals. The PMI-MASTER Smart identifies the metal grade automatically and indicates where concentration limits are exceeded.

UVTOUCH – MOST POPULAR CHOICE

Choose for low detection level of carbon, phosphorous, sulfur, boron, arsenic and tin in low alloy and stainless steels. It also offers L grade separation and nitrogen in duplex steels.

The probe includes a screen for easy viewing of analysis results and control of main spectrometer functions. Extended wave length range of probe's optic – 165 to 210 nm.



SPARK

Choose for reliable spark analysis of standard elements including carbon.

Various sample adapters available to measure e.g. small samples and wires.

ARC

Choose for sorting of metals with arc in air atmosphere, especially tubes, wires and small parts.

No argon needed and results in seconds.

Major Applications



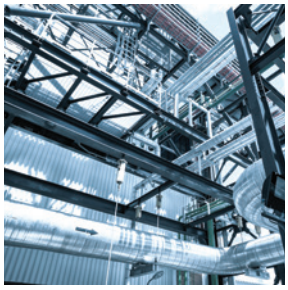
OIL AND GAS – *UPSTREAM*

Material verification both on and offshore.



OIL AND GAS – *MIDSTREAM*

Pipeline safety asset verification with reliable, fast and full chemistry measurements.



OIL AND GAS – *DOWNSTREAM*

Complete PMI for components before, during and after use, including welds.



POWER GENERATION

Complete PMI for components that meets ASME Section IX B&PV code standards and flow accelerated corrosion (FAC) analysis.



OTHER PLANTS

Verifying materials for weldability, providing a library of carbon equivalent and other formulas.

Our Service

Our global network of service hubs offers a full range of technical support to keep you up and running.

- **Telephone help-desks**
  For a fast response to your problem.
- **Online diagnostics**
  In-depth support over the internet saving down time and service costs.
- **Preventive maintenance**
  Ensures your analyzer produces the right result year after year.
- **Training**
  Understand your analyzer and its features.
- **Extended warranties**
  Avoid unplanned costs.
- **Consumables and accessories**
  From sample preparation to calibration standards.
- **Repairs**
  Fast and efficient turnaround.

WHAT NEXT?

Contact one of our experts today at contact@hitachi-hightech-as.com to arrange a demo.

MORE INFORMATION

To find out more about the PMI-MASTER range of analyzers, visit www.hitachi-hightech.com/hha



Other products

We've been providing industrial analysis products for safety inspection and quality control for over 45 years.

- **Handheld LIBS:** latest technology for 1-second alloy identification with no X-rays.
- **Handheld XRF:** for fast, reliable, non-destructive identification and analysis of alloys.
- **Benchtop XRF:** fast and easy quality control of fuels and oils.

CE

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Science for a better tomorrow