

PMI-MASTER Smart



OBJECTIVES

- | Incoming inspection of metal alloys and parts
- | Portable, light-weight instrument
- | Accurate and precise results

RESULTS

- | Prevents power failures
- | Improved productivity, reduced downtimes

The portability, stability and mobility makes the PMI-MASTER Smart superior to the competition

The Electricity Generating Authority of Thailand (EGAT) is a state enterprise. Managed by the Ministry of Energy, it's responsible for electric power generation and transmission as well as bulk electricity sales in Thailand. As EGAT supplies electric power to the entire country, any power failure leads to downtime for production and commercial units, which causes losses to industries and in turn to the economy. To prevent these consequences, EGAT's engineering department conducts strict material inspection checks with Hitachi High-Tech's spectrometers at their workshop and parts department within the North Bangkok Power Plant.

WHEN INCOMING MATERIALS AND PARTS INSPECTION IS MANDATORY

Established in 1969, EGAT is the largest power producer in Thailand, owning and operating power plants at 45 sites across the country with a total installed capacity of 15,548 MW. The North Bangkok EGAT plant inspects all incoming materials and parts that go into the power plant to ensure safety and meet specifications. The engineering team has to know the chemical composition of welding components before performing any welding repairs. The components of gas turbines, steam turbines, boilers and valves are critical as any non-conformity can result into power outages which lead to huge commercial losses not only to EGAT but to the whole territory.

“ The portability of the PMI-MASTER Smart enables the team to easily carry the spectrometer to the point of analysis. ”



EGAT used to rely on third party testing labs for material inspection testing but several years ago purchased a Hitachi High-Tech's spark spectrometer to get the tests done in-house and on-site to reduce the time taken and increase productivity. They now use a number of PMI-MASTER Smarts as part of their quality control processes. EGAT uses the PMI-MASTER Smart with six calibrated bases, which is appropriate for a power plant and suited to analyse carbon content in SPP steel grade. The instrument is used to analyse Fe, Al, Cu, Ni, Co and Ti based alloys including the ability to determine all relevant elements of these matrices in the components. The portability of the PMI-MASTER Smart enables the team to easily carry the spectrometer to the point of analysis and the design of the instrument is suited for irregular shaped samples like wires, rods and small parts, just like the components that EGAT's team has to analyse. The minimal argon consumption and easy maintenance helps to keep the operating costs low.

WHEN THE BEST INSTRUMENTS DO NOT COMPROMISE ON QUALITY

EGAT has been using Hitachi High-Tech's spectrometers for more than a decade at a number of their facilities. According to Mr Kristda from the engineering team at the workshop and parts centre in EGAT, "only a few models are suited for power plant requirements and the PMI-MASTER Smart suits it best due to its light weight. The stability, repeatability and portability is superior to the competition and this is why we have three PMI-Master Smarts".



If you'd like to see the PMI-MASTER Smart in action, visit www.hitachi-hightech.com/hha or book a demo.

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MOBILE OES RANGE

Our optical emission spectrometers (OES) offer the highest levels of accuracy and precision for analytical results. A powerful yet easy-to-use software package covers almost every application and the analysers come with most comprehensive grade database available for easy and reliable grade identification. Suitable for any metalworking application, starting with tramp element analysis for scrap to inspection of incoming materials and QA/QC in the manufacturing process.

