

Case Study

ELG Haniel Metals

Niton XRF Analysers Create the Right Blend at ELG Haniel







ELG Haniel Metals use Thermo Scientific Niton XRF analysers to identify and sort scrap metals received at their Sheffield headquarters and their eight feeder depots across the UK.

The company purchases scrap metal, principally stainless and nickel alloys plus other high grade alloys such as titanium, tungsten and cobalt bearing scrap. Deliveries are weighed then checked with a magnet and with a Niton XRF analyser, the latter for quality and grade. All of the metals collected at the feeder depots are then trucked to ELG Haniel's headquarters at Templeborough in Sheffield. Here the materials are again re-checked with the Niton instruments to verify the grade and quality of the materials, before being blended to produce homogenous mixes for stainless steel manufacturers.

Before ELG started using Niton analysers in 2003, scrap materials had to be tested the old fashioned way, by cutting samples and testing on a spectroscope. The use of Niton analysers thus creates a major benefit for ELG's suppliers, allowing much faster identification and enabling ELG to make prompt payment for material.

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Paul Brown, Operations Director at ELG Haniel commented:

"We could not operate as we do without the Niton analysers. They are an invaluable tool for our business because of their speed and the immediate information they provide."

The Niton XL2 Analyser

The Niton XL2 Analyser provides a number of distinct benefits:

- Very easy to use even by non-technical personnel
- Rugged design for real-world industrial environments
- Truly non-destructive testing with near
 instantaneous results
- From turn-on to trigger-pull to results in seconds
- Confident analysis with technology from the industry leader
- Competitive pricing to suit even smaller organizations

These features make it the perfect choice to:

- Analyze metal alloys for scrap recycling or final
 product QC
- Carry out grade control, plant operations, and near-mine exploration
- Screen electronics and consumer goods for lead

ELG Haniel use a large number of Niton XLT 898 models and have also begun to invest in the latest Niton XL2 instrument, which provides improved display functions and even faster analysis times from a specially designed, tough and durable outer casing.

An example of where the Niton instruments come into their own is with the latest influx of 200 series stainless steels. Here, identification of the low nickel content and higher manganese and copper contents is only possible by use of the Niton instrument or a full laboratory test. The alternative materials are visually very similar and would previously have required a section to be taken and sent to a laboratory for full analysis. Results can be easily obtained using the Niton analysers, even on small items. Whilst ELG Haniel do have their own comprehensive laboratory facilities, which is essential for their business, the laboratory requirements are reduced.

Paul Brown continues:

"All of our staff are fully trained in the use of Niton instruments and receive a refresher course every two years. Indeed, this knowledge has become an integral part of our induction programme for new employees, as much as manual handling and other health and safety requirements."

For further information on ELG Haniel Metals, please visit www.elg.co.uk.

Alternatively, for further information on the Thermo Scientific range of Niton XRF analysers please call Niton UK on 01256 397860 or visit www.nitonuk.co.uk.

Technical Specifications

Weight: 3 lbs 5.8 oz (1.53 kg) Dimensions: 10.25 x 11 x 4 in. (256 x 275 x 100 mm) Tube: Ag anode 45 kV maximum, 80 uA maximum Detector: High-performance semiconductor System Electronics: 400 MHz ARM 11 CPU 300 MHz dedicated DSP 80 MHz ASICS DSP for signal processing 4096 channel MCA 64 MB internal system memory/ 128 MB internal user storage Display: Fixed angle, color, touch-screen display Standard Analytical Range >25 elements from S to U (varies by application) Data Transfer: USB, Bluetooth™, and RS-232 serial communication Alloy Modes: Metal Alloy, Electronics Alloy, Precious Metals Bulk Modes: Mining, Soil Plastic Modes: RoHS Plastics, Toy & Consumer Goods Plastics, TestAll[™]. Painted Products Data Entry: Touch-screen keyboard, User-programmable pick lists, Optional wireless remote barcode reader

