



CUSTOMER TESTIMONIAL:

NEDSTAAL combines routine quality control and versatile elemental analysis using one instrument: The Thermo Scientific ARL OPTIM'X XRF

"A very important factor in the choice of the equipment was the analytical flexibility – high concentrations, traces, universal calibration, analyses of ores, steel-grades and slags in combination with a low cost of ownership..." Dr. Antoine Verkooijen, Manager, Laboratory & Quality, Nedstaal

ARL OPTIM'X XRF benefits

- Unique WDXRF platform with sequential and/or simultaneous capabilities
- Innovative UCCO™ technology combined with SmartGonio™ to achieve highest sensitivity
- 200W equivalent analytical performance from 50W X-ray power
- Wide XRF elemental coverage from fluorine (F) to uranium (U) in sequential mode
- No water cooling or gas supply (depending on configuration) required
- Outstanding repeatability and stability to comply with slag analysis requirements
- Low cost of ownership
- Optional MultiChromators for faster analysis or better performance on selected elements

Nedstaal BV

Nedstaal (Alblasserdam - The Netherlands) is a high-quality and innovative steel company that specializes in the production of fast, customized supplies (small batches) in semi-finished products. It works constantly to improve both its products and its production process in order to guarantee a high quality level. Nedstaal is a reliable, flexible and highly customer-oriented supplier.

More info about Nedstaal can be found on www.nedstaal.nl.

The Challenge

A very important factor in the choice of elemental analysis instrument was the analytical flexibility – high concentrations, traces, universal calibration, analyses of ores, steel-grades slags – in combination with a low cost of ownership (analysis speed was less critical). An additional desired benefit was the data transfer of complete results to Nedstaal's LIMS-system system for routine analysis.

The ARL OPTIM'X is a WDXRF (Wavelength Dispersive X-ray Fluorescence) spectrometer with resolution typically 10x better than even high-end EDXRF (Energy Dispersive-XRF) systems. The background/signal-noise ratio is significantly better especially for lighter elements, and therefore better facilitates complex matrix analysis such as ores, slags and steel-grades.

Another key feature was Thermo Scientific OptiQuant™, a standard-less universal calibration program allowing Nedstaal meet the needs of different elemental analysis challenges without without difficult sample preparation such as time-consuming and complicated wet-chemistry analysis. Experience in sample preparation (homogeneity, surfacing, etc.) remains important however for obtaining good qualitative data by X-ray fluorescence, therefore the support of an XRF supplier with such expertise was also very beneficial.



ARL OPTIM'X at Nedstaal

Results

NEDSTAAL BV has many customers in the automotive, railway and shipbuilding industries throughout Europe, meaning that QC-demands are very high. Due to the stability of the ARL OPTIM'X XRF spectrometer, Nedstaal is meeting these needs quite comfortably. Since the installation of the ARL OPTIM'X in October 2007, an SPC setup has been additionally implemented also confirming very good performance.

Typical routine analysis with the ARL OPTIM'X

Steel-grade samples: surfaced by grinding or milling

Slag samples: cast in steel rings

Ores samples: pressed in pellets, particle size and homogenizing very important

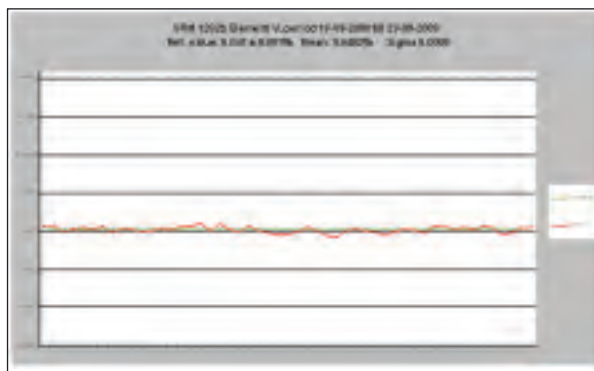
Quality control verification is executed once a week by analyzing 2 steel-grades and 1 slag sample.

Conclusion

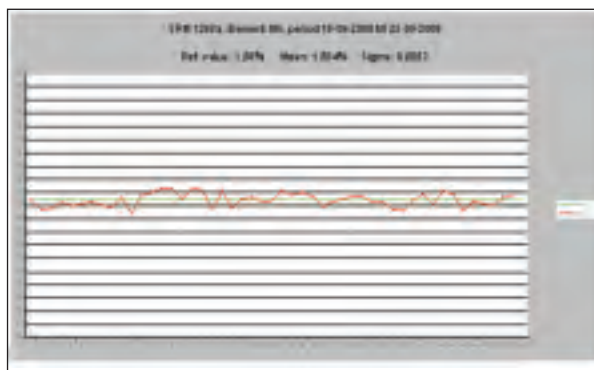
The long term stability and reliability of the ARL OPTIM'X have made a very strong impression on the laboratory staff, and are making Nedstaal another very satisfied ARL OPTIM'X user.



Dr. Antoine Verkooijen, Manager, Laboratory & Quality, Nedstaal-NL



Long term stability for V over 12 months (SPC): Concentration level 0.04% – Sigma 0.0008%



Long term stability for Mn over 12 months (SPC): Concentration level 1.5% – Sigma 0.0052%

For more information on ARL OPTIM'X, please visit www.thermo.com/optislag

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CS41257_E 03/10C