

Degerfors Laboratory Highly Recommends new Thermo Scientific ARL iSpark OES Spectrometer

for Quality Metals Analysis

ARL iSpark™ 8880 benefits

- Unique dual CCD/PMT optics
- Revolutionary digital spark generator
- Innovative spark stand design
- Advanced acquisition technologies and processing algorithms for PMT and CCD signals
- Spectral investigation
- Single and multi-matrix configurations
- Smart argon management with argon saving modes
- Most advanced analysis of micro-inclusions
- Instrument of choice for metal recycling industries, laboratories or any companies that need high analytical versatility



ARL iSpark OES spectrometer



Degerfors Laboratory (D-LAB) in Degerfors, Sweden

Degerfors Laboratory (D-Lab) is an independent contract laboratory serving the Nordic market that started nine years ago when the Degerfors steel plant of Outokumpu Stainless was closed.

Since the beginning the laboratory has developed to one of the most modern laboratory specialized in inorganic analysis in particular in metals and minerals.

Today, the laboratory has several OES and XRF/XRD spectrometers.

“The Thermo Scientific ARL iSpark 8880 is a very good instrument and it fulfills all our needs of today and of the years to come.

It is flexible, silent, easy to use, it has low operation cost, it makes easy to get wider range of calibration, and finally our next instrument will be an ARL iSpark.”

Mr. Svererik Bäckman, General Lab Manager at Degerfors Laboratorium AB, Sweden states: “The laboratory has the highest degree of accreditation, the fastest response time for samples (typically one day) and the lowest prices. This is because the Thermo Scientific instruments perfectly meet our needs.”

The challenge

As a contract laboratory, D-Lab needs high-performance, very flexible and long term stable instruments. The flexibility is necessary in order to accommodate the ever changing levels of alloying elements and also the lack of reference materials.

Mr. Bäckman explains: “We need therefore a versatile instrument for research, i.e. able to scan over peaks and overlaps, and for serving our customers with extended element range and also number of elements. We also need the possibility for inclusion determinations.”



Mr. Svenerik Bäckman, General Lab Manager at Degerfors Laboratorium AB, Sweden

The evaluations

D-Lab performed various evaluations of the new Thermo Scientific ARL iSpark OES spectrometer for 3 months (October 2012 – January 2013). The model tested was an ARL iSpark 8880 with dual PMT/CCD optics for iron and steel matrix. Every evaluation was made in comparison with the seven other optical emission instruments used in their laboratory (ARL 3460 or ARL 4460). The instrument was run for several hours per day with test materials ranging from low alloyed to high alloyed steels.

The results

Mr. Bäckman reports: "Our evaluations and comparisons with the instruments used in the laboratory lead to the following main conclusions:

- Performance and analyses were as good or better
- Performance of the CCD detector really impressed us and gave very good results and better flexibility in choosing element lines, etc
- Stability was so good that we did not need to recalibrate the instrument during the whole test period
- Maintenance was tested by several of our scientists and all of them found it easier
- Using ECOmodes allowed reducing argon consumption by 35% (we only do daytime work and can turn argon off during the night)

- Argon consumption was reduced by 60% compared with our ARL 4460
- Spark-DAT methods for fast inclusion analysis are very promising for our laboratory, probably as much as already reported by many steel companies
- Instrument is very silent, which is important in a laboratory like ours using several instruments in the same room
- OXSAS is a modern and very easy to use analytical software. For the new ARL iSpark spectrometers, it brings interesting features like Smart Argon Management tool, Maintenance Management tool or the graphical ARL iSpark Synoptics tool."

Conclusion

Mr. Bäckman concludes: "The Thermo Scientific ARL iSpark 8880 is a very good instrument and it fulfills all our current needs and for the years to come. It is flexible, silent, easy to use, it has low operation cost, it makes easy to get wider range of calibration and it includes methods for ultra-fast inclusion analysis that are very important for the steel manufacturers to measure the cleanness of the steel. Our next instrument purchase will be an ARL iSpark."



ARL iSpark 8880 metals analyzer stand



Thermo Fisher Scientific Ecublens SARL, Switzerland is ISO certified.

ISO 9001
CERTIFIED SYSTEM

www.thermoscientific.com/ispark

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