

ARL iSpark OES Metals Analyzer delivers reliable and repeatable results for Baudelet Environnement



The Baudelet Environnement group is one of the major players in the field of recycling business in the North of France. Created in 1964 by Mr. Jean Baudelet, the company was initially exclusively dedicated to ferrous and non-ferrous metals recycling. Nowadays, the activity has been largely extended to new recycling activities, through three main departments: waste recycling, polluted soil treatment and metals recycling.

The catchment area has just been extended to the North of Paris, thanks to the 11 subsidiaries which allow the massification and preparation of the 700'000 tons of waste treated each year by the group.

During the 80's, the company developed an aluminum smelting activity, with a treatment capacity of 1'000 tons per month. A large part of the production is dedicated to 226D alloys (for automotive industry), deoxidation drops (for steelworks industry), and high added value ingots.

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Mr. Bernard, Laboratory Technician, Baudelet Environnement

Challenges

The main objective of the laboratory at the Blaringhem site in France is the verification of the samples, working with a dozen of various aluminum alloys. The laboratory technicians analyze four to five samples at each workstation which work 24/24 and three sparks are required for each analysis. For aluminum cast, the scrap is first removed and then the metal is melted prior to the OES analysis.

Phosphorus is a critical element, as well as sodium and lithium. The laboratory analyzes approximately 20 elements that are requested by their customers. The concentration of phosphorus shall not exceed 15 ppm.

Mr. Bernard, Laboratory Technician at Baudelet Environnement, explains: “We are looking for a reliable instrument with repeatable analyses and no disparity in the results.”

Solution

“The Thermo Scientific™ ARL iSpark™ enables repeatable and stable analyses – much more than our previous spectrometer.” shared Mr. Bernard. “Besides this instrument is much faster than the older generations of optical emission spectrometers. It is also very convenient for users thanks to only one software window to deal with, on one computer screen. Operators just have to choose the shade and fill only two or three fields before launching the acquisition.” Mr. Bernard added: “We check one different standard every day since our ARL iSpark installation in 2014 and we are very satisfied with the results. We clean the electrode after each spark with the scraper. It is really facilitated by instant teardown of the new table. There are no consumables.

We love the new Thermo Scientific™ OXSAS™ software interface with the side scrolling banner, as well as menus dedicated to managers and to operators – which was not possible with our former spectrometer. Maintenance is very simple with the replacement of the argon container. We clean the table once every two weeks and it only takes about five minutes. There is no need to recalibrate the instrument after routine cleaning. The Eco mode enables to restart analyses as before cleaning and the attacks on the samples are identical.



There are no real operating costs. The ARL iSpark is very easy to use and allows to easily meet with the customers technical requirements. The Eco mode also allows Argon savings with a use of approximately 200 mbar every two months – compared to 200 mbar monthly with previous brand – that is a saving of 300 euros per month.”

Conclusion

Mr. Bernard wrapped up: “We recommended the ARL iSpark to Montupet company and they were also impressed by this innovative OES spectrometer. We also advised it to the foundry of Poitou. There is nothing simpler in use. While previously we should have one program for each alloy, now a single program of analysis displays all the results curves for all alloys.”

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▼ Mr. Bernard, Laboratory Technician at Baudelet Environnement, Blaringhem, France, operating the ARL iSpark metals analyzer



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Finland /Norway/Sweden
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