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An integrated pit-mounted Eurodeck SB weighbridge and radiation detection system, supplied by Weightron Bilanciai, is playing a dual safety and measurement role for specialist non-ferrous metal recycler Cupral UK Ltd at their Middlesbrough plant.

Cupral UK Ltd recycles and upgrades copper and aluminium to a high-purity, furnace-ready resource, with significant reductions in CO2 emissions compared with primary production processes. By-products of the recycling process also include high-value metals including gold, silver and nickel.

The 18 x 3 metre, 50 tonne steel weighbridge is providing accurate weight information for material movements in and out of the plant, whilst the radiation detection system provides an important safety system for detecting low-level artificial and natural radioactive sources in vehicles and containers entering the site.

## 02

As more and more materials are recycled and as waste sources become more complex and diverse, there is a growing need to monitor these materials for traces of radiation before they are reprocessed or incinerated. Failure to detect radioactive sources can lead to serious environmental contamination, leaving recycling companies with the extremely high costs of clean-up operations and complex disposal of contaminated material.

By investing in such a detection system, Cupral recognize their responsibilities and understand the importance of the early detection of contaminated materials entering their plant.



The weighbridge installation at Cupral is a critical control point for vehicles entering the site, making it the ideal location to install the radiation system. As the loaded vehicle or container passes through the sensitive radiation detector plates, positioned at each side of the weighbridge, it is scanned for traces of radioactivity. The system can be programmed for specific radiation thresholds and if it determines that a radioactive source is present, either in the load or the vehicle, the system activates an alarm to immediately notify site security.

The Eurodeck weighbridge is connected to Weightron's versatile FLYNET50 High Specification Weight Indicator, which is Ethernet & MPP enabled for interfacing with Cupral's SAP system. The radiation system, which features a central unit with colour LCD touchscreen display, uses an innovative algorithm, designed to compensate for the background attenuation caused by the vehicle driving through. This feature allows the system to perform enhanced radiation detection with a lower false alarm rate compared to other systems, even in the case of small radiation sources. The system is calibrated using a traceable Caesium 137 source.



Cupral

*"Here at Cupral our investment in a new weighbridge and radiation protection system from Weightron has proven invaluable. The support from initial enquiry through to installation, maintenance and customer support has been extremely effective. The equipment was installed smoothly and the advice given by Weightron first class."*

**- CUPRAL'S CHIEF OPERATING OFFICER MARK BROOKES**

As Weightron's Sales Director Nick Burley concludes: *"We have extensive experience in the design and supply of integrated weighbridge and radiation detection systems, especially in the recycling and energy from waste sectors. This single-source supply, calibration and support capability ensures the customer receives a seamless hardware and software solution for their application."*

If you are looking for a new pit-mounted or surface-mounted weighbridge, and need a radiation detection system, contact our team to speak with our local sales managers.

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