

ERIEZ

Building Materials

METALARM 
METAL DETECTOR

Boosting Quarry Efficiency with **Advanced Metal Detection** Technology

Headquartered in Heidelberg, Germany, with a global footprint across more than 50 countries, Heidelberg Materials stands as one of the world's largest manufacturers of a diverse range of innovative building materials, including cement, aggregates, ready-mixed concrete, and asphalt. These products are fundamental in the construction of residential dwellings, infrastructure, and commercial as well as industrial facilities.





History and **Expansion**

The [Craig yr Hesg quarry](#), situated in the Taff Valley near Pontypridd, Wales, has been a prominent source of high-quality blue pennant sandstone for more than a century. This sandstone has been integral to significant road surfacing projects, including the heavily used Heathrow Airport runway and the M25 motorway in the UK.

With reserves dwindling, the Welsh Government commissioned Heidelberg Materials to undertake a quarry expansion to extract an additional 10 million tonnes of aggregate stone. The rugged nature of this project presented challenges, including frequent lodging of tramp metal in the aggregate cone crusher, leading to considerable equipment downtime.

Tackling Tramp Metal

In pursuit of a solution, Heidelberg Materials consulted with Eriez, known for its exceptional equipment performance and customer service. Eriez proposed a three-month trial of its state-of-the-art MetAlarm metal detector prototype, designed to maximize metal recovery during the inspection process.

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Innovation Through Collaboration

“The MetAlarm was developed through a strategic collaboration between Eriez-Europe and Cardiff University,” explains Liam Gulwell, Business Development Manager—Heavy Industry, Eriez-Europe. He says this initiative involved the launch of a cutting-edge research and development hub located on the university’s campus in Wales’ capital city. He explains, “Tapping into the technical expertise of Cardiff University has been instrumental to pioneering groundbreaking new technologies like our MetAlarm metal detector. Furthermore, this partnership approach accelerates our ability to introduce new products to the market.”



Performance Outcomes

Implementing the MetAlarm not only addressed the immediate issue of equipment downtime but also provided ancillary benefits. The significant reduction in blockages led to increased production and throughput, translating into considerable cost and time savings for Heidelberg Materials during the quarry expansion project.

Perhaps even more importantly, the MetAlarm’s reliable detection capabilities have significantly improved safety at the worksite by minimizing the need for manual handling of materials and reducing associated health risks. This technological advancement also supports Heidelberg Materials’ commitment to sustainability. By facilitating the recovery and recycling of valuable metals, the MetAlarm helps promote a circular economy within the building materials industry, aligning economic activities with environmental responsibility.



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Field Validation

Mike Wilkes, General Foreman for the Craig yr Hesg quarry, expresses high satisfaction with the results: “The MetAlarm metal detector has greatly exceeded our expectations not only in terms of performance and reliability but also in driving process efficiencies. Eriez has truly been an invaluable partner for us, tailoring solutions to suit our specific needs and providing customer service that is second to none.”

For more information
about Eriez® MetAlarm
and other separation
technologies,
visit Eriez.com

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Mike Wilkes
General Foreman
Craig yr Hesg quarry

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Established in 1942, Eriez is a global leader in separation technologies. Our commitment to innovation has positioned us as a driving market force in several key technology areas, including magnetic separation, flotation, metal detection, and material handling equipment. The company's 900+ employees are dedicated to providing trusted technical solutions to the mining, food, recycling, packaging, aggregate, and other processing industries. Headquartered in Erie, Pennsylvania, USA, Eriez designs, manufactures, and markets on six continents through 12 wholly owned international subsidiaries and an extensive sales representative network. For more information, visit www.eriez.com.

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CASE STUDY: **Building Materials**