

Surveillance safety boost for metal manufacturing



Industry

Manufacturing

Customer

Mechatherm International Ltd

Region

United Kingdom

IDIS Partner

Sunstone IP Systems

Background

World leading metal manufacturing technology

Mechatherm International, based in the West Midlands, is a world leader in the design and supply of specialist casthouse technology, including all types of melting furnaces and casting equipment, predominantly for the aluminium industry. Founded in 1973, the company also provides air recirculation heat treatment and reheating furnaces for flat, rolled, forged, extruded and cast products. With designs customised to suit individual client requirements, it has delivered numerous successful installations worldwide, including furnaces that cast massive slabs of aluminium used to manufacture anything from cans to cars. All equipment is robustly engineered to the highest standards that can withstand the arduous and aggressive conditions in foundries. With health and safety as its foremost priority, the company integrates multiple features and practical solutions into its design and production processes to optimise operator ease of use and ensure that all operations are as user-friendly as possible to manage and maintain.



Challenges

Taking health and safety to the next level

Aluminium batch casting is a complex process that takes place in a hostile foundry environment involving volatile chemicals, molten metal and a dusty atmosphere. Conditions must be carefully controlled to maximise personal safety while minimising the risk of disruption to casting process. Mechatherm wanted to implement a camera system to enable operators to carefully monitor the process, particularly when the molten aluminium enters the moulds. By implementing a surveillance system into the process, Mechatherm wanted to eliminate risks to operators.



Solutions

Embedding surveillance into production systems

Sunstone IP Systems designed and embedded an innovative HD surveillance solution into an existing Mechatherm supplied slab casting machine. Acting as the eyes of the operator, the solution combines networked IDIS DirectIP™ technologies – including sealed, external grade PTZ, dome cameras and software suite.

All designed, developed and manufactured by IDIS, DirectIP offered a proven and revolutionary approach to HD surveillance—one that is truly plug-and-play, single-source, and highly affordable. DirectIP comprises a range of HD cameras, network video recorders (NVR), license free video management software and monitors—including 4K UHD and H.265 capability.

With user-friendly big screen functionality, the IDIS technology was selected for its reliability, ease of use and capability to stream high quality real-time images with no latency. Despite the dusty conditions, operators can now observe the casting process, second by second, at a safe distance from a protected control room.



Results and benefits

Enabling fast, accurate high risk decisions

The surveillance system, which is a pilot project, has further strengthened Mechatherm's health and safety and improved quality control over the casting process. It is enabling operators to make fast, accurate decisions in a volatile environment, while dramatically reducing the risk to personal safety.

“ IDIS DirectIP has enabled us to implement a highly effective surveillance solution to maximise staff safety and quality control. Delivering significant operational improvements combined with a low total cost of ownership, this IDIS and Sunstone solution can offer major health and safety benefits to manufacturing and industrial operations. ”

*Simon Legrand
Director, Sunstone IP Systems*



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