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Case Study

BAE Systems Weld Pre-Treatment Installation

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Issued on behalf of George Koch Sons Europe Ltd

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George Koch Innovation Meets Aerospace Process Line Needs

A combination of proven technology and innovative thinking is at the heart of a process line facility now installed by George Koch Sons Europe Ltd. for BAE Systems Military Air & Information. The work, part of a pre-weld clean process line, designed to support the ongoing manufacture of specialist aerospace high precision components using advanced alloys, has been undertaken at BAE Systems' advanced manufacturing site at Samlesbury, Lancashire, and has addressed key functional and installation considerations.

"We have installed a multi-stage de-greasing facility alongside an aggressive chemical etch and rinsing system," says Tom Mercer, Managing Director at George Koch's UK head office in Lichfield. "This is with particular focus on the need for the chemical cleaning process to remove the risk of contamination in the aluminium and stainless steel weld process by removing any oxidation from the surface."

The George Koch solution, which Tom Mercer says includes a state of the art pickling system, has been designed for manual application with the operator's position located remote from the operation where a touch screen control facility is used. The plant was also configured to accommodate significant space restrictions at the site.

"One of the major considerations was the need for the plant to operate in a highly corrosive environment," continues Tom Mercer. "This placed great emphasis on our selection of build materials and also pointed us towards the use of a double containment design for the chemical lines and process equipment."

George Koch was also required to ensure the facility addressed the fact that the operation creates both low and high PH process points. "We developed the innovative solution alongside BAE Systems to manufacture the tanks using different coloured materials, which was both an aid to the process itself and, additionally, provides rapid identification should an emergency situation arise," adds Tom Mercer.

The installation, which used a de-ionised water rinse as part of the process, was also directly linked to an effluent treatment plant – itself part of the George Koch installation.

“The result is a facility which not only helps BAE Systems to continue to meet the high levels of production quality and consistency with which the name is associated worldwide, but also makes an important contribution to the company’s environmental credentials,” says Tom Mercer. “We believe the project also demonstrates George Koch’s ability to create purpose-designed process systems that address specific considerations associated with each site and we are delighted to be working with one of the leading organisations in its field,” he concludes.

Issued on behalf of –

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