



# SIKA AT WORK

## GE ENERGY FACILITY, RUGBY

FLOORING: Sikafloor®-EpoCem, Sikafloor®-161 Primer, Sikafloor®-540W and Sikafloor®-263SL



HIGHLY COMMENDED LARGE INDUSTRIAL PROJECT AWARD 2015/16

BUILDING TRUST



# GE ENERGY FACILITY, RUGBY



**SIKA COMFORTFLOOR USED AT GE ENERGY FACILITY.** As part of the upgrade of GE Energy's facility in Rugby, the power conversion company required a new hard wearing and fast applied flooring system which would replace the uneven existing concrete floor. The challenge was to create a floor for the factory that would not only offer long term performance, durability and able to withstand constant traffic but one that was also ultra-smooth to ensure the fluid movement of heavy equipment on air film movers.

GE Energy's facility produces high efficiency electric power conversion components such as generators, motors drives and automation controls. With the 3000m<sup>2</sup> factory floor needing to be totally flat (+/- 1mm over a 2m straight edge) and hard



# GE ENERGY FACILITY RUGBY



wearing, specialist contractor Zircon Flooring worked with Sika who provided a series of high performance solutions that offered minimal disruption and transformed the existing uneven concrete floor to facilitate the safe and fluid movement of heavy 100 tonne equipment on air film movers.

Thanks to Sika's advanced floor system, the technical know-how and attention to detail of specialist contractor Zircon and the understanding of close collaboration between client, contractor and manufacturer, the ideal solution was created. Throughout this project the two companies demonstrated a dedicated commitment to careful planning; true partnership and collaboration; minimal disruption; delivering a long-term, cost effective solution; expert craftsmanship; ease of installation; health and safety; fast, effective problem solving and sustainable specification.

For a building which dates back to 1895, Zircon and Sika came up with a flooring solution that met the specific requirements of GE Energy. The facility had previously used rail tracks to move generators but as the generators got bigger they required another method to the equipment. The tracks also made it too high to go through the short tunnels which connect the various buildings of the facility. This is where the air movers came in.

The new floor had to be finished into an incredibly smooth surface to ensure the air film movers, which run on a thin film of air, are able to move around efficiently without the threat of damage. The smooth surface also limits the resistance of the flooring, reducing the compressed air requirements and thereby making the whole system more energy efficient.

Sika offered a range of solutions to meet the challenge. Combining anti-slip properties and durability with an attractive finish, Sika's resin flooring systems met the client's requirements, whilst delivering a hard-wearing system that guarantees outstanding long term performance.

With a combination of excellent technical and aesthetic solutions, Sika helped to create a flooring system that would meet and exceed the client's demands for this highly-trafficked facility.

For this challenging application, Zircon provided a team of 12 installers who were able to transform the existing concrete floor and create an ultra-smooth floor using a range of high performance resin flooring solutions from Sika. With the factory operational, the works were phased to minimise disruption to the client. In terms of logistics, Zircon off-loaded, stored and set up more than 120 tonnes of materials to be used on the project. The company also arranged temporary heating in order to maintain a constant temperature of over 18°C during the installation.

One of the first challenges was the cutting out and removal of the existing rail tracks, some of which had concrete stuck to the side of them. Using a fork lift truck, the team removed 520 linear metres or 96 tonnes of steel. These areas were then cleaned and reinforced ready for a concrete infill. Old manholes were cut out and replaced with new frames and 40mm thick manholes. After shotblasting and vacuuming these areas, Zircon applied Sikafloor®-EpoCem®, an epoxy cementitious combination material, which acts as a surface mounted DPM.

To level the surfaces of the factory floor and to achieve the spec of +/- 1mm over a 2m straight edge, the team drilled over 1800 screws within 1mm of the FFL (finished floor level). The fast setting Sikafloor Level 30 was spike rolled to a nominal thickness of 20mm followed by a layer of Sikafloor®-161 primer which was broadcast with quartz aggregate. This was then finished off with a combination of Sikafloor®-540W and a 3mm topcoat of Sikafloor®-263SL in a Dusty Grey colour, a proven high strength screed that offers excellent resistance to wear when subjected to heavy loading.

To identify at risk areas of the factory where the heavy machinery will be moved, demarcation and air film moving lines were then marked out on the seamless resin floor.

**For further information call 0800 112 3865.**

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