



SIKA AT WORK SELLAFIELD, UK

ROOFING: Sika Liquid Plastics' Decothane Ultra, S-Vap 5000 SA and Decotherm insulation



DECOTHANE ULTRA AND SIKA POWER ROLLER PROVIDE THE PERFECT DOUBLE FOR SELLAFIELD

BACKGROUND

Sellafield is the UK's largest nuclear processing and decommissioning plant, with a wide range of property assets that need to be refurbished as part of a planned maintenance schedule.

Two of those properties, located on the same site in nearby Workington, are a large warehousing facility with a 21,000 m2 roof, and an administration office block, which features a 1300m2 roof. The existing roof covering for both buildings had reached the end of its service life, leading to a phased programme roof refurbishment.

REQUIREMENT

Sellafield adheres to a strict procurement process and Sika Liquid Plastics' Decothane Ultra cold-applied roofing system has previously been used on a number of Sellafield buildings. As the low-odour, cold-applied liquid system has already been approved for use by Sellafield, and is backed by a comprehensive 25-year guarantee for product performance and workmanship the client requested it as a preferred choice for this project.

SIKA LIQUID PLASTICS SOLUTION

Sika Liquid Plastics' Area Technical Manager carried out a site visit and condition survey of each roof to inform the technical specification. Quality Assured (QA) contractor, Mitie Roofing Limited, was then appointed to the project.

The existing warehousing facility roof build-up comprised a galvanised metal deck with a bituminous vapour barrier, 30mm of PUR insulation board and three layers of felt covering, with heavy chippings on the top. This had already undergone a number of previous refurbishments.

The condition survey revealed that the insulation had perished in the most vulnerable areas around the gutters, where water ingress had been most severe.

The insulation element of the project areas – around 3000m2 in total – were stripped back to the metal deck. Mitie Roofing Limited installed a new S-Vap 5000e SA air and vapour control layer (AVCL), followed by 80mm of Decotherm insulation and a further layer of S-Vap 5000e SA to these areas, before installing the Decothane Ultra 25-year system.

For the remaining 18,000m2 of the warehousing facility roof, the Decothane Ultra system was installed as an overlay. The chippings were removed and the Mitie Roofing Limited team mechanically fixed a 40mm layer of Decotherm insulation to the roof, followed by a layer of S-Vap 5000e SA.

The Decothane Ultra cold-applied system was then installed, with the aid of the Sika Power Roller in some areas to enhance speed of installation and support consistent installation quality. Using spray-head technology to deliver a controlled flow of liquid membrane onto a roller-head, the Sika Power Roller enables contractors to cover larger areas of roof much more quicker, reducing installation times by as much as 50%.

A maintenance walkway was installed on the main roof, with a red coloured finish and a non-slip surface, created using quartz aggregates broadcast into the semi-cured membrane.

Iain Maberly at Mitie Roofing Limited commented: "The warehousing facility has an extremely large roof and the combination of the simple-to-install, low odour liquid system and the innovative Sika Power Roller helped us to complete this major project within programme, enabling us to begin on the administration block."

Stuart Jackson BFD&W Project Manager at Sellafield added: "The professional contractor with well-coordinated works and well managed and executed scope, achieved all Project requirements and deliverables"

PROJECT PARTICIPANTS

Contractor: Mitie Roofing Limited

Roofing Client: Sellafield

Size: 21,000m² + 1300m²

Products: Decothane Ultra, S-Vap 5000 SA and Decotherm insulation



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