CASESTUDY 13

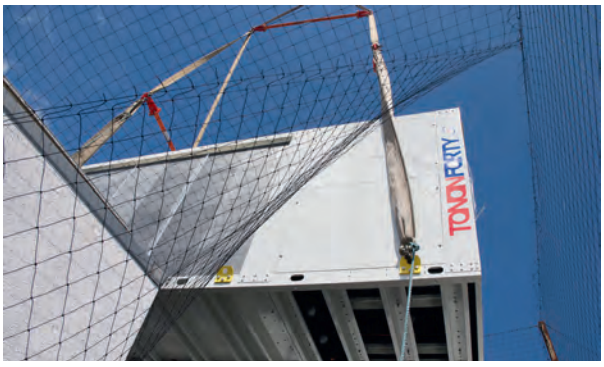
higher education

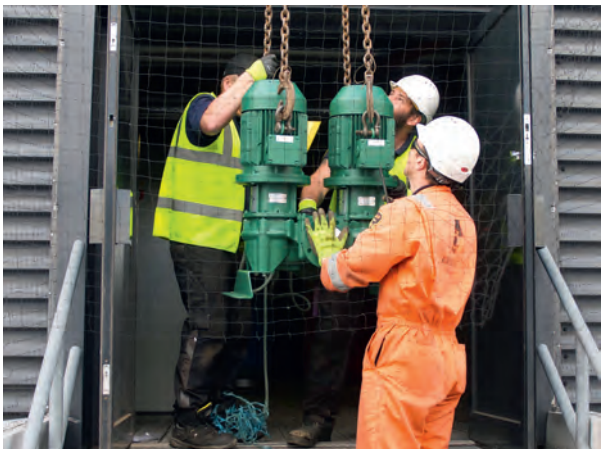
FREE-COOLING TONON CHILLER PROJECT AT UNIVERSITY OF LINCOLN CUTS RUNNING COSTS

The first UK installation of free-cooling Tonon chillers is providing high efficiency air conditioning for students and staff at the University of Lincoln.

The two 165kW Galaxy Free-Cooling Tonon chillers, based on R410A, replaced existing chillers which had reached the end of their working life on the roof of the University's Science Building.

The Tonon machines, with a combined cooling capacity of 330kW, provide cooling for Air Handling Units (AHUs) serving laboratories, teaching spaces and offices.





Reduced running costs

Free-cooling was specified by the University as a means of significantly reducing running costs over time. It is anticipated that energy bills could be cut by as much as 30per cent.

This is made possible by a large capacity twin headed pump which circulates a mixture of water and glycol around the chiller's heat exchangers when ambient temperatures are sufficiently low to provide cooling without use of mechanical refrigeration.

The new chillers are located on the existing footprint on the roof-top of the building. Plant is sized to give capacity for future expansion, with adequate headroom to ensure conditions are met in high ambients.

Turn-key project

The turn-key project involved a full programme of works, including decommissioning and removal of the existing cooling plant and installation of the new units in a central plant room.

Due to site logistics, it required deployment of a temporary aluminium roadway to enable the crane to safely lift plant on and off the building, spanning a grass bank and a drainage dyke.

Martin Sharman, Cool-Therm's Midlands regional manager, said: "Our solution, which included full consultancy at every stage of the process, involved construction of a steel-reinforced aluminium roadway to protect grassed areas in the vicinity of the building and act as a firm platform for craning equipment on and off the building. It was highly effective, and ensured safe operation and timely completion of the project."

"THE SOLUTION INVOLVED CONSTRUCTION OF A STEEL-REINFORCED ALUMNIUM ROADWAY TO ENSURE SAFE ACCESS TO THE ROOFTOP. IT PROVED HIGHLY EFFECTIVE."
MARTIN SHARMAN, COOL-THERM

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