

City heat - Vistech solves a sticky problem at Lloyd's of London



Lloyd's of London is the world's leading insurance market. Founded in 1688, Lloyd's may be steeped in history, but its iconic London building strides confidently into the future. Designed by Richard Rogers, the Grade 1 listed Lloyd's building is an internationally renowned London landmark. So when it was time to upgrade their cooling systems,

Thomas Pound, Operations Manager at Lloyd's, needed to find cooling tower engineers of the highest calibre.

The Lloyd's challenge

Completed in 1986, the Lloyd's building was designed to the most exacting specifications. However, as technology boomed, the cooling systems could no longer cope in the height of summer with the increased heat being generated by the explosion in IT equipment.

Replacing these systems would be no easy task because of the building's revolutionary 'inside-out' design. Richard Rogers had taken the usual internal elements of a building and made them design features on the outside. This gives Lloyd's incredible freedom of space inside the building, but means service work involves unique challenges.

This was particularly true for the cooling towers. Typically cooling towers are square, but at Lloyd's they are round. As Mr Pound noted, "To replace them we'd have to put a square peg in to a round hole." Preserving the building's design integrity meant it would be impossible to add extra features to the towers, so the only option was an upgrade. "We needed to optimise what we had within the confines of the original towers and improve the performance."

Keeping cool under pressure

Consulting engineers at MIET designed a solution, but implementing these designs would be far from straightforward. As various companies bid for the contract, Vistech quickly emerged as the frontrunner. More than simply having the ability to install to a design, Vistech engineers were bringing innovative ideas to the table and actively improving the project.

Mr Pound was impressed. "It was the innovation in design presented by Vistech which helped them win the bid. It showed my kind of thinking and my team's kind of thinking. They were looking to make life easier for future maintenance."

But winning the bid was not the end of the story. Lloyd's could take no chances with such an important project. Vistech would have to upgrade the first of three cooling towers to the highest standard or they would not be commissioned to refit the remaining two. What's more, starting work in April, they had to complete the first tower by June - an incredibly demanding deadline, but vital if Lloyd's was to have a viable cooling system for the summer heat.

"If we could not feel confident in their ability to meet deadlines," Mr Pound said, "we would not have continued with their services."

Vistech agreed not only to these conditions, but to refund labour costs if the job did not meet expectations.

Their confidence was not misplaced. The work was completed on time and to an very high standard, pleasing the client and setting in motion the remainder of the contract.

Improved performance and greater efficiency

Vistech's upgrade of the cooling towers involved many elements:

- Internal fittings stripped
- Internal surfaces re-coated
- New internals installed, designed to improve performance
- Fans upgraded

- New variable speed controllers installed on motors, increasing efficiency and saving energy

The cooling towers had to eject 7½ megawatts of heat. Previously, the system struggled to do this with three towers. Now it can achieve this with two.

Mr Pound was very happy with Vistech's work and noted the upgraded towers more than proved themselves in the summer heat. "We've nearly doubled the performance of the towers, which improves efficiency and provides energy saving too. The initial figures pleased us all tremendously. The result they got was very impressive and has improved the towers capacity for heat rejection substantially."

Beyond the physical results, Mr Pound was also impressed by Vistech's project management and ability to work constructively with his team. "They were very professional and responsive to our needs. Whenever we asked for changes or requested flexibility because of other priority activities on site, their response was quick and conclusive."

Since completing the upgrades, Vistech has been asked back by Lloyd's to carry out condition survey work on the cooling towers, where everything is still working at optimum performance.

No less cutting edge now than it was in the Eighties, the Lloyd's building boasts a new cooling system fit for the future. There has been no compromise to its award-winning design, and in a marketplace where face-to-face contact is still central to business, the ability to maintain comfort levels in spite of the increased heat load has been achieved.

"It was extremely enjoyable to work alongside Vistech's engineers," Mr Pound concluded. "They were coming to the table not simply to shove their kind of solution upon us. They listened and responded to our requirements and delivered results."