

# SKYSCRAPER PUMP RETROFIT

A COMMERCIAL  
FACILITY INSTALLATION

The pump motor replacement, combined with the future usage of Pump Manager, is expected to produce a payback period of just 17 months.

The key to sustainability lies in the ability to obtain real-time performance data.

UK National Sales Manager

## London Skyscraper

Design Envelope 4300 pumps use integrated intelligent controls for easy installation and commissioning. Compared to traditional pump designs, Design Envelope 4300 pumps reduce pump energy use by up to 75%. Active Performance Management using the Pump Manager app ensures the lowest lifecycle operating cost.

### Background

A retrofit project carried out by Armstrong Fluid Technology is expected to deliver significant improvements in environmental performance for a landmark London skyscraper. Using an innovative approach to upgrade commercial-scale pumps, Armstrong was able to provide Design Envelope technology and Active Performance Management by replacing only the pump heads and leaving the pump casings and pipework in place. This approach to the retrofit reduced first costs substantially and made the project more sustainable. Retaining so much of the existing pump equipment, means the embedded carbon involved in carrying out the pump upgrade was significantly reduced.

The new pump heads combine new, replacement motors and Design Envelope technology, for expected pump energy savings of up to 70%. The upgrade project was completed with minimal disruption and has an expected payback period of just 17 months.

Armstrong was chosen to provide an upgrade strategy for pumps at the site. While other upgrade options delivered only upgraded control capabilities, the Armstrong solution delivered improved pump efficiency in addition to advanced connectivity.

The upgrade involved replacing the existing motors with new integrated drives on six Armstrong DE4300 Vertical In-Line pumps, three operating at 55kW and three at 111kW.

A particular advantage of the Armstrong upgrade solution for this project was the ability to achieve leading-edge efficiency without the need for complete replacement of the pumps. Armstrong was able to reduce the cost and complexity of the project by retaining as much as possible of the existing pump installation. In addition to improving energy efficiency, the retrofit has provided the estates team with far greater access to real-time information on the operation of each pump. This will enable the estates team to reduce the risk of downtime through more effective predictive maintenance of the pumps throughout their lifetimes.

Reflecting on the success of the project, UK National Sales Manager, commented 'It was great to be able to provide an upgrade of environment performance which offers such a rapid return on investment. Reducing embodied carbon is a major priority in our research and development strategy. Upgrading the pump while retaining the casing is an important action in support of Net Zero.'

### Tech-info

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- 6 X Design Envelope 4300 Vertical In-line pump motors - 55KW