

VISIONARY INVESTMENTS

A MIXED COMMERCIAL
AND RESIDENTIAL ENERGY
UPGRADE PROJECT

Design Envelope solutions delivered pump energy savings of 55%.

Red Sea Global - Hotel and apartments Energy Upgrade Project

Following an initial energy audit, Armstrong was able to offer significant energy savings by upgrading the legacy pumps. The retrofit project delivered a 55% reduction in pump energy consumption and a simple payback on the investment in just over a year.

Background

Red Sea Global is one of the world's most visionary developers, spearheading a new model of development. Leveraging the most innovative technologies, the company seeks to create tourism destinations that not only thrive but also actively contribute to the well-being of people and the planet.

The Red Sea Global portfolio includes world-leading destinations on the west coast of Saudi Arabia.

The company opened the first resort in 2023. Plans call for a total of 16 resorts through 2024 and 2025. Wholly owned by the Public Investment Fund (PIF), Red Sea Global plays a crucial role in the realization of Saudi Arabia's Vision 2030, in which sustainability is a central theme. With a commitment to clean energy and sustainability, Vision 2030 is promoting initiatives such as the Circular Carbon Economy (CCE), with an ambition to reach Net Zero by 2060.

Following a consultation on best practices for a hotel and apartment upgrade project, Armstrong was selected to ensure the most energy-efficient and sustainable cooling systems were installed on site. Armstrong recommended Design Envelope technology to provide industry-leading energy and cost-saving design solutions.

Design Envelope pumps use advanced control technology to maximize pumping efficiency across the entire performance range, matching the flow and

pressure requirements of the actual system demand in real-time. The improved energy efficiency presents significant cost saving opportunities and the design features reduce maintenance and installation costs.

Armstrong has also provided comprehensive support services to the Red Sea Project. From design and consulting to commissioning, performance upgrades, and ongoing optimization, Armstrong is proud to provide services that last the entire lifetime of the product and beyond. Despite its remote location, the site also benefits from uninterrupted monitoring and troubleshooting support through the cloud-based Pump Manager service that ensures optimal performance at all times.

As a result of installing these pumps, Red Sea Global has realized pump energy savings of 55%. Based on these savings, the simple payback timeline for the project is calculated to be 1 year and 2 months.

Tech-info

- Armstrong Design Envelope 4200H Pumps
- Pump Manager

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