Amarinth supplies water recirculation pumps to Masdar in Abu Dhabi to service its ‘green city in the desert’

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Amarinth, a leading company specialising in the design, application and manufacture of centrifugal pumps and associated equipment to the Oil & Gas, petrochemical, chemical, industrial and renewable energy markets, is leveraging the knowledge from its carbon reduction pump project to supply new pumps into Masdar City in Abu Dhabi, the world's most sustainable eco-city.

Masdar City is successfully pioneering a "greenprint" for how cities can accommodate rapid urbanisation and dramatically reduce energy, water and waste. It also plays an integral role in transforming Abu Dhabi's economy from an oil foundation to a knowledge-and-innovation base by serving as a centralised test bed for global renewable-energy and technology companies.

When Masdar City required pumps for its water recirculation system it needed to best utilise the clean energy generated onsite from roof top solar panels and one of the largest photovoltaic installations in the Middle East. Masdar approached Amarinth who, for the past two years, have been working on the design and production of energy efficient pumps aided by a grant from the United Kingdom's innovation agency, the Technology Strategy Board, and saw Masdar City as an opportunity to put the knowledge gained into practice.

To deliver energy savings in pumps, Amarinth has been developing a cost effective and rapid process for the design and manufacture of bespoke best efficiency point (BEP) optimised impellers that can be produced on short lead times and at an acceptable commercial cost for use in industrial pumping applications. The centrifugal pumps used throughout industry are often a ‘best fit’ selection for a given application from a standard range of pumps and the majority of pumps in use today do not run at their BEP and energy inefficiencies of up to 25% can often be found.

When 95% of pump life cycle costs are energy costs this represents a huge saving.To meet the needs of Masdar City, Amarinth used its reliable and proven C-Series pump as a base unit and then working with the Masdar project team Amarinth has leveraged the learnings from its energy efficient pumps project to design the most suitable solution for Masdar City whilst still delivering within the required 18 week timescale.

Oliver Brigginshaw, Managing Director of Amarinth, commented: “Masdar City has provided us with a unique opportunity to showcase the work we have been doing to provide energy efficient pumps at a commercially acceptable cost and timescale.

We are looking forward to working closely with Masdar City on the project and learning further from it so that we can bring this technology to all businesses around the world. Studies we have undertaken have shown that being able to provide optimised impellers for a specific duty will reduce annual CO2 emissions in our target markets by 17,000 tonnes by 2020 and 110,000 tonnes by 2050.”

For more information, please visit: Amarinth