



FOR IMMEDIATE RELEASE – 08 JULY 2013

Amarinth awarded Technology Strategy Board grant to develop energy efficient centrifugal molten sulphur pump

Amarinth, a leading company specialising in the design, application and manufacture of centrifugal pumps and associated equipment to the Oil & Gas, petrochemical, chemical and industrial markets, has been awarded a £250,000 grant from the UK's innovation agency, the Technology Strategy Board to invest in the further development of a design and production process to produce highly energy efficient pumps and leverage this work to launch an energy efficient molten sulphur pump for the petro-chemical industry.

Amarinth has been working for some time on 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.

In an ideal world the impeller and casing of a pump would be designed and manufactured to each specific pump requirement (or customer's duty). Being able to manufacture pumps designed to operate at their BEP can offer end-users between 10 and 25% in energy savings. When 95% of pump life cycle costs are energy costs this represents a huge saving and a significant reduction in CO₂.

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Work undertaken by Amarith to date has proven that being able to provide optimised impellers will reduce annual CO₂ emissions in the company's target market by 17,000 tonnes by 2020 and 110,000 tonnes by 2050.

Amarinth will use the £250,000 Technology Strategy Board grant, the maximum funding that can be awarded, to further its development of the design and production processes to deliver the most advanced and efficient bespoke centrifugal pumps on shorter lead times at a commercially acceptable cost. The first application of this work will be an energy efficient centrifugal pump for the sulphur production market with high efficiency, high maintainability and high reliability which the company anticipates it will launch in 2014.

The pumping of molten sulphur in the petro-chemical industry is a particularly aggressive environment requiring high reliability and robustness as the molten sulphur is maintained at temperatures of between 127C and 147C. Significant increases in energy efficiency are now being demanded by the operators and Amarith identified this new application as an ideal focus around which to launch its work on bespoke BEP optimised impellers.

Following the successful introduction of the molten sulphur pump, Amarith will apply the proven design and rapid tooling techniques to many of its other pump ranges in order to deliver higher efficiency pumps on short lead-time to the Oil & Gas and Petrochemical markets.

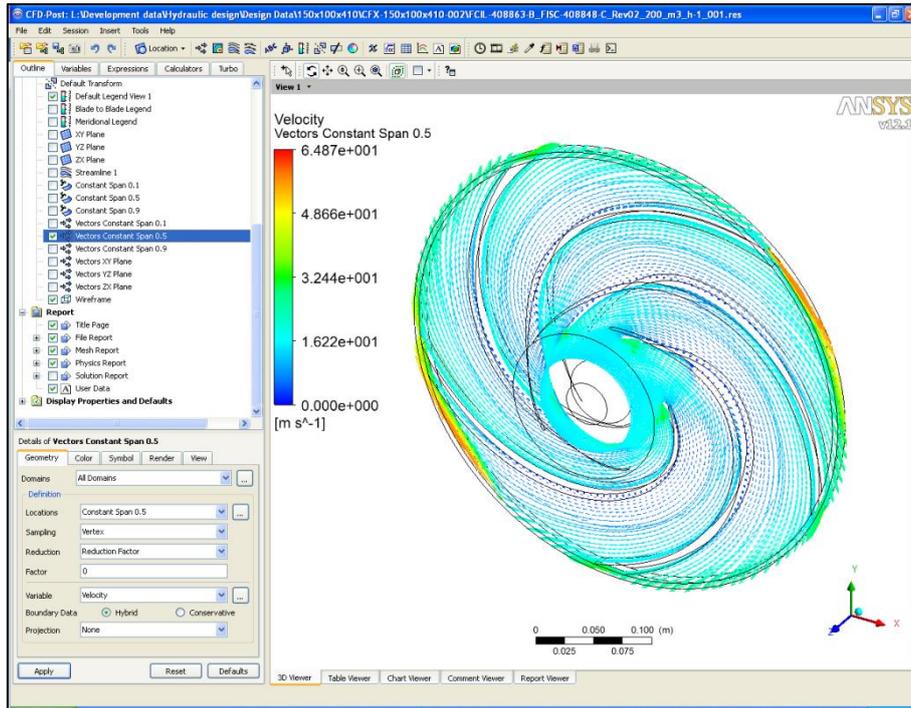
Oliver Briggshaw, Managing Director at Amarith, commented: "We have been working on this project for some time, initially with assistance from the Carbon Trust until the government curtailed that funding. We are delighted that the Technology Strategy Board has now seen the enormous benefits that can be attained from our work and we are looking forward to its first commercial application with the launch of our molten sulphur pump in 2014."

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About the Technology Strategy Board

The Technology Strategy Board is the UK's innovation agency. Its goal is to accelerate economic growth by stimulating and supporting business-led innovation. Sponsored by the Department for Business, Innovation and Skills (BIS), the Technology Strategy Board brings together business, research and the public sector, supporting and accelerating the development of innovative products and services to meet market needs, tackle major societal challenges and help build the future economy. For more information please visit www.innovateuk.org

OPTIONAL PANEL or BOX ITEMS



Amarinth design analysis of energy efficient impeller for the sulphur production market

NOTES TO EDITORS:

Founded in 2002, Amarith has harnessed the skills, creativity and passion of people who have worked in the pump industry for many years. Amarith delivers world-leading expertise in the design, application and manufacture of centrifugal pumps and associated equipment to ISO, ANSI & API standards, primarily for the industrial, chemical & petrochemical markets. Their portfolio includes:

- **Pumps:** Horizontal and vertical API 610 pumps, chemical and industrial pumps, many of which are interchangeable with the Girdlestone pump ranges, eliminating the need for expensive modifications when replacements are required.
- **Pressure Vessels:** Protect System Plan 52 and 53A and 53B sealant systems with inbuilt condition monitoring for pumps and mixers that are suitable for Safe area up to Zone I.
- **Spares & Service:** High quality, fast lead-time re-engineered spare parts to improve performance and extend pump life, including many which are directly interchangeable with the Girdlestone pump ranges.
- **Packages & Modules:** Condensate Recovery Units manufactured for Spirax Sarco incorporating the innovative Ci-Nergy intelligent variable speed control system, plus bespoke packages & skids built to order.
- **Business Systems:** state-of-the-art e-commerce technologies that deliver 24/7 support enabling customers to select pumps and place orders on-line and then track every stage of manufacture through to delivery, any time, anywhere in the world.

The company operates globally from its base in Rendlesham Suffolk, United Kingdom and has a customer base of world-leading companies, including BP, Shell, ExxonMobil, GlaxoSmithKline, Pfizer, Spirax Sarco, Diageo, AMEC, Fluor and Halliburton.

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