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Amarinth designs innovative low-shear vertically mounted API 610 OH I pump for the produced water nutshell filters from AI Energy Solutions

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, has designed a bespoke vertically mounted API 610 OH I pump with Plan I3 seal support system for AI Energy Solutions to use with its nutshell filters for cleaning produced water.

Al Energy Solutions (AIES) approached Amarinth to design a pump for the final cleaning phase of produced water using its nutshell filters on an offshore platform. Amarinth has successfully delivered pumping solutions for numerous produced water treatment systems and so already had a good understanding of the requirements. The location of the platform however, posed project specific challenges of high daytime and low night time temperatures, high salinity and a high 30% rated solids concentration.

The pump had to exhibit good low shear properties in order for the AIES nutshell filters to work optimally by ensuring that the oil and water was not emulsified. This could be achieved using an API 610 OHI pump but in order to fit with the nutshell filter package, Amarinth had to design a bespoke solution. This involved taking the proven OH I hydraulic design and engineering a vertically mounted close coupled arrangement so that the suction was at the bottom and the discharge at the top.

Amarinth designs innovative low-shear vertically mounted API 610 OH 1 pump Page 2 of 4 Alex Brigginshaw Tel: +44 (0)1394 462131 Phil Harland Tel: +44 (0)118 971 3790

Manufactured in stainless steel, the pump incorporated an open impeller design to handle the high solids concentration and a vacuum operated backwash facility to allow for ease of cleaning and maintenance. A single seal plan 13 seal support system, normally used on vertical pumps, was integrated with the vertically mounted OHI pump. In line with project schedule, Amarinth was able to supply the bespoke pump on a fast track basis, with delivery in just 23 weeks.

Oliver Brigginshaw, Managing Director of Amarinth, commented: "Amarinth has successfully delivered reliable pumping solutions for nutshell filters in the past and is pleased to be continuing our successful working relationship with AIES established during previous projects."

OPTIONAL PANEL or BOX ITEMS



Final preparation of Amarinth vertically mounted API 610 OH I nutshell filter pumps before shipment to AI Energy Solutions

NOTES TO EDITORS:

Founded in 2002, Amarinth has harnessed the skills, creativity and passion of people who have worked in the pump industry for many years. Amarinth 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 1.
- **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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