



FOR IMMEDIATE RELEASE – 16 April 2026

**Amarinth defies space constraints with technical breakthrough
for major LNG expansion project**

Amarinth a world-class, net-zero manufacturer of centrifugal pumps and associated equipment designed to minimise long-term operating costs with high-performance solutions across a diverse range of global markets, from onshore and offshore oil and gas industries to renewable and nuclear energy, defence, desalination, and process and industrial markets, has successfully engineered a bespoke suite of API 685 VS4 magnetic drive pumps for a high-profile LNG processing expansion in the Middle East, overcoming spatial limitations and complex maintenance hurdles to deliver a solution that reduces construction costs while ensuring zero-emission operation.

Renowned for its engineering agility, Amarith was approached to solve the complex technical challenges associated with in-ground hydrocarbon and solvent drain drum tanks, where traditional pumping solutions were deemed insufficient for the project's spatial and safety requirements.

The project centred on massive in-ground hydrocarbon drain drum tanks some 2 metres in diameter and up to 10 metres in length. To ensure the most cost-effective fabrication, the contractor required the upstands and downstands (the vertical sections where the pumps are housed) to be as small as possible.

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Minimising this footprint was critical to reducing flange loading and material costs, but it left Amarith's engineers with a very little room for error. The pumps had to be slender enough to thread through horizontal piping during installation, yet powerful enough to maintain rigorous flow duties, with impeller diameters across the different tanks ranging from 235mm to 635mm.

With very tight deadlines, Amarith couldn't wait for the tanks to be completed to design the pumps and so worked closely with the fabricator during the tank design stages.

Amarinth's engineering team utilised advanced computer modelling to design 5.5-metre-long API 685 magnetic drive vertical pumps that maintain a slim profile without sacrificing stability and require no external seal support system. Key innovations include:

- **Vibration Control:** To prevent resonance in the 5.5-meter shaft assembly, Amarith optimised bearing spacing and design, ensuring the pumps remain within strict vibration tolerances even during the high-stress startup phase.
- **Gulley Sucker Arrangement:** Unlike standard pumps that leave sediment at the tank bottom, Amarith's unique design clears debris and dirty water from the very base of the downstand, protecting the long-term integrity of the system.
- **Optimised Vantage Points:** Due to access restrictions on-site, Amarith designed a custom baseplate that aligns all vital gauges and instrumentation within a narrow, optimised viewing angle, allowing operators to monitor performance safely from a single vantage point.

The pumps have been designed to API 685 3rd edition specifications, ensuring hermetic containment of volatile fluids and eliminating the potential of fugitive emissions associated with traditional mechanical seals.

In-ground tanks are installed at an angle, typically requiring two different pump lengths for each end. However, identical pumps were required to simplify maintenance. Amarith's solution was a bespoke modular design that achieves complete interchangeability. This allows a single bare shaft pump to serve either position in the tank during maintenance, reducing the inventory costs and simplifying long-term servicing.

Recognising an aggressive project schedule, Amarith will bypass traditional manufacturing bottlenecks, such as testing, using its split delivery methodology that it has developed with its supportive supply chain. Instead of waiting for the full order to be completed, where one small issue can delay everything, Amarith will manufacture and deliver tested batches of pumps in parallel with the tank fabrication. This ensures that the moment a tank is completed, the pumps will be on-site and ready for installation.

"This project perfectly illustrates our engineering agility." said Oliver Briggshaw, Managing Director at Amarith. "By collaborating closely with the fabricator and rethinking the modularity of our API 685 VS4 magnetic drive pumps, we have designed a solution that isn't just technically superior, it's more cost-effective and easier to maintain."

OPTIONAL PANEL or BOX ITEMS



Amarinth API 685 VS4 Vertical Magnetic Pump Drives in Assembly

NOTES TO EDITORS:

Amarinth is a carbon net zero organisation delivering world-leading expertise in the design, application and manufacture of centrifugal pumps and associated equipment for critical applications in many of the most arduous and hostile environments around the globe.

Founded in 2002, Amarith has harnessed the skills, creativity and passion of people who have worked in the pump industry for decades, delivering bespoke API and ISO pumps primarily to the offshore and onshore oil & gas industries; nuclear and renewable energy generation; defence; desalination; process and industrial markets.

The company's innovative approach, business agility and use of sophisticated computer applications enables it to deliver robust, reliable and sustainable pumping solutions on the shortest lead times in the industry.

Amarinth's portfolio includes:

- **Process pumps** – API 610, API 685, ISO 5199 horizontal, vertical and in-line bespoke process pumps, including ones that are hydraulically and dimensionally interchangeable with the former Girdlestone and other obsolete pumps.
- **Skid packages and modules** – Supplied with a variety of drives for applications including de-sanding, mixing, filtration and chemical injection and tailored for the oil & gas, water treatment and power generation industries.
- **Condensate recovery** – Cutting-edge design providing low NPSH up to 98°C with variable speed drives to reduce cycle time and lower operating costs, available in stainless steel, galvanised or copper tanks for light or heavy industrial uses.
- **Seal support** – Integrated pressurised and vented seal support systems designed and delivered to API 682 and ISO 5199 standards and specific site specifications and requirements, working closely with AES, Eagle Burgmann, John Crane and Protect System.
- **Spare parts** – Critical spares for all Amarith pumps and related components can be dispatched the same day, reducing potential downtime, and in addition components for the former Girdlestone and other obsolete pumps can be re-engineered often improving the performance of existing assets.
- **Services** – A full range of pump related services, delivered from UK head office or on-site globally, onshore or off-shore, including full commissioning and start-up support; also strip, report and refurbishment of any pump regardless of manufacturer.

Amarinth operates globally from its base in Rendlesham Suffolk, United Kingdom and offices in the Middle East and Malaysia with a global customer base, including BP, Shell, ADNOC, NOV, ExxonMobil, Schlumberger, COSCO, EDF, GlaxoSmithKline, Saudi Aramco, Pfizer, Diageo, Kuwait Oil Company, AMEC, Fluor, Halliburton, and Babcock.

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