ASX announcement



06 September 2018

Successful LGS[®] field trial results validate product's capability

Matrix Composites & Engineering Ltd (ASX:MCE, "Matrix" or the "Company") is pleased to announce that it has successfully completed analysis of its 12-month field deployment of Longitudinal Grooved Suppression (LGS®1) in the Gulf of Mexico with a leading oil and gas operator.

LGS®, a patent-protected technology developed by Melbourne-based AMOG Technologies Pty Ltd, reduces drag and vortex induced vibration (VIV) on tubular structures exposed to strong ocean currents, such as risers on floating drill rigs and pipelines.

Analysis of data from the Gulf of Mexico trial has shown that the Matrix LGS® system allowed uninterrupted drilling during periods where traditional buoyancy would have rendered the drill rig inoperable, increasing production and efficiency while reducing downtime and equipment fatigue.

In assessing data from the drill rig fitted with LGS® against comparable data using conventional buoyancy, annual operability improvement was calculated at 12 days. As such, it is estimated that LGS® would deliver annual savings of \$US12.7 million, [based on current average daily drilling rates]. With the deployed LGS® section string costing \$1.4 million, it would take just over 1 day of recovered operability to pay back the purchase cost.

Matrix Chief Executive Officer Aaron Begley said the results would better enable Matrix to market the technology at brownfield and greenfield offshore applications, in line with the Company's diversification strategy.

"I am delighted to see the field results in the Gulf of Mexico confirm that LGS® works as expected in full scale real world operations. This validates the large-scale testing done in 2016 at Canada's National Resource Council in St. John's, Newfoundland," Mr Begley said.

"The results show that operators in strong current conditions can use LGS® to continue drilling safely and effectively when they would ordinarily need to stop, increasing productivity and slashing costs.

"We can now see that the cost savings are in the millions of dollars and the payback period for an LGS® system is very short.

¹ LGS is a registered trademark of AMOG Technologies Pty Ltd. Matrix has the exclusive world-wide licence to commercialise LGS.



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"We are very excited to be at the forefront of VIV reduction technology and will use these results to enhance our marketing to drilling customers at deepwater brownfield and greenfield offshore operations, building on the success we've also had in using the LGS® technology to retrofit pipelines."

LGS® development

In 2014, AMOG Technologies Pty Ltd was looking for a solution to combat the effects of current induced drag and VIV in offshore drilling. Historically, the only way to reduce drag and VIV in marine drilling risers was to fit fairings, which are a large wing type structure, to the outside of the buoyancy. However, fairings are known to be cumbersome, take time to deploy and retrieve, and can come off in service.

In 2016, Matrix entered into an exclusive worldwide licensing agreement with AMOG Technologies for the commercialisation of LGS®. This followed successful, large-scale testing of the LGS® at Canada's National Resource Council in St John's, Newfoundland, Canada. The test facility, the largest of its kind in the world, is renowned for conducting several high-profile industry Joint Industry Project test programs for VIV and drag reduction assessment.

Matrix then conducted its first field trial at a rig in the Gulf of Mexico, over a 6-week period (November – December 2016), with 274 metres (900 feet) of LGS® used in 670 metres (2,200 feet) water depth. This short direction field trial only experienced low current conditions, but even so, provided results that were consistent with the VIV suppression behaviour found in the model tests.

Matrix's second field trial was conducted over a 12-month period (July 2017 – July 2018) for a major oil and gas operator in the Gulf of Mexico, with 609 metres (2,000 feet) of LGS® used in 1920 metres (6,300 feet) water depth.

Matrix LGS® can be applied wherever there is a requirement for VIV and drag reduction around cylindrical structures. This means it can be used beyond oil and gas drilling, include subsea pipelines, jetty pylons, piled structures such as offshore wind turbines, production risers, and cables.

Further information on the test results can be found on Matrix's website: http://www.matrixengineered.com/

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About Matrix Composites & Engineering

Matrix Composites & Engineering specialises in the design, engineering and manufacture of composite and advanced material technology solutions for the oil and gas, civil and infrastructure, resources, defence, and transportation industries. With more than 40 years-experience, Matrix has gained a reputation as an industry leader and has become a major exporter of Australian goods and services with customers located all over the world. From its award-winning head office in Australia and offices in the United states, and a global network, Matrix is uniquely positioned to deliver complete turnkey solutions offerings with localised customer support.

More information can be found at www.matrixengineered.com.