



Press release: June 7, 2023

## **LR award Approval in Principle for Daphne Technology's PureMetrics™ emission monitoring and reporting system**

*PureMetrics™ uses stack measurement to monitor and report greenhouse gases released from the exhausts of maritime and land-based combustion engines.*

Lloyd's Register (LR) has awarded Daphne Technology with Approval in Principle (AiP) for its PureMetrics™ emission monitoring and reporting system, a key tool for understanding and mitigating emissions resulting from methane slip.

Methane slip, where unburned fuel is not fully combusted in engines, represents a significant obstacle for cutting climate emissions with a global warming potential (GWP100) 28 times that of CO<sub>2</sub>. Reliable and feasible technology is, therefore key to achieving the IMO's 2050 target of cutting annual greenhouse gas emissions from shipping by at least half, compared with 2008 levels.

Daphne's PureMetrics™ solution utilises stack measurement to monitor and report emissions and can be applied to exhaust stacks from different combustion units to provide real-time measurements of greenhouse gasses (GHG) such as CO<sub>2</sub>, methane, and other pollutants such as sulphur oxides and nitrogen oxides. PureMetrics™ provides accurate and comprehensive data on emissions whilst also offering convenient vessel and fleet emission reporting, historical digital emission data access, and cybersecurity measures.

Research shows that methane emissions vary depending on engine types and how the engines run. This makes stack measurement an even greater necessity for ship operators. Mitigating methane emissions is particularly significant in the maritime industry due to increased reliance on natural gas. The industry needs accurate, auditable, and direct data that enables low methane emission operational practices and ship designs.

The solution is easily installable and offers seamless integration with other vessel insight solutions adopted by ship owners. PureMetrics™ can also automate the calculation of Carbon Intensity Indicator (CII) ratings based on actual emissions.

**Panos Mitrou, Global Gas Segment Director, Lloyd's Register,** said: *"LR is delighted to become the first classification society to approve Daphne Technology's PureMetrics™ emission monitoring and reporting system. CO<sub>2</sub> and methane emissions present the biggest challenge to the shipping industry and especially the use of LNG as fuel. PureMetrics™ will help stakeholders to gain comprehensive insights and practical recommendations to reduce emissions, cut costs and enhance their sustainability efforts."*

**Mario Michan, CEO & Founder, Daphne Technology,** said: *"Obtaining an AiP from LR for our PureMetrics™ solution is a significant step in providing businesses with a powerful tool to measure*

*and track their greenhouse gas emissions in real-time, enabling them to make data-driven decisions and take proactive steps towards reducing their carbon footprint. We extend our sincere thanks to LR for their invaluable support, enabling us to enhance transparency and contribute to a sustainable future."*

This [AiP follows last year's Approval for Daphne's methane abatement technology SlipPure](#), designed to benefit a variety of LNG carriers and LNG-fuelled ships facing an imminent threat once methane is integrated into the GHG regulatory regime.

## **ENDS**

### **About Lloyd's Register**

***Trusted maritime advisers, partnering with clients to drive performance across the ocean economy.***

Lloyd's Register (LR) is a global professional services group specialising in marine engineering and technology. Created more than 260 years ago as the world's first marine classification society, to improve and set standards for the safety of ships.

Today we are a leading provider of classification and compliance services to the marine and offshore industries, helping our clients design, construct and operate their assets to accepted levels of safety and environmental compliance.

We also provide advice, support and solutions on fleet performance and optimisation, voyage optimisation, enhancing our clients' digital capability. Our digital solutions are relied upon by more than 20,000 vessels.

In the race to zero emissions, our research, technical expertise and industry-firsts are supporting a safe, sustainable maritime energy transition.

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### **About Daphne Technology**

Daphne Technology is a Swiss climate deep-tech company focused on solving the greenhouse gas (GHG) challenge in tough-to-decarbonise industries. The company develops technologies and scales innovative products to measure and reduce GHG emissions from industrial sources, with a portfolio approach to decarbonisation targeting GHG emission inefficiencies in power generation and energy conversion across the globe.

Daphne's high-tech, innovative approach has attracted global industrial leaders, including Shell Ventures, Saudi Aramco Energy Ventures, Trafigura, AET, Swisscom and JP Morgan, all committed to enabling an economically sustainable energy transition.

Daphne Technology was founded in 2017 by Dr Mario Michan. Headquartered in Lausanne, with a subsidiary in Norway, the company has received multiple awards and recognitions, including the Horizon 2020 EU grant, Vaud Innovation Fund SPEI, Swiss Ministry of Environment Award, VentureKick 2020, Climate-KIC 2020, and Venture Business Idea. Daphne has also been featured as a top Swiss Clean Tech and Top 100 Swiss Start-up by VentureLab five times. The company has won several awards, including the Envirotech Maritime Innovation Award in 2021, the inaugural

Nor-Shipping Ocean Solutions Award in 2022, and was elected Top Emerging Maritime Emission Reduction Solution by StartUs Insights in 2021. [daphnetech.com](https://daphnetech.com)

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