## SAL HEAVY LIFT



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PRESS RELEASE

# SAL Heavy Lift becomes world's first to equip vessels with new hydrogen / methanol injection technology

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SAL Heavy Lift sets itself as a green-tech front runner and becomes the first shipping company in the world to adopt a new hydrogen/methanol technology to its fleet. With significant emission reductions in terms of CO2, SOx, NOx and other particles, the injection technology developed by FUELSAVE GmbH paves the way for making shipping greener and more energy efficient.

After more than four years of close cooperation, testing and development between SAL and FUELSAVE GmbH, alongside project stakeholders EcoTune Marine, Classification Society DNV GL as RO for Antigua and Barbuda flag, Carl Baguhn, MAN Energy solutions, M.A.C. System Solutions, AVL and last but not least the flag state administration of Germany, the new and advanced FS MARINE+ hydrogen / methanol injection solution is now entering the next stage of validation, after which it will find its way to six SAL vessels as a permanent installation.

By dynamically injecting a mix of hydrogen, oxygen, water and methanol into selected parts of the air intake of both the main engine and the auxiliary engines, the FS MARINE+ system ensures a much cleaner and thorough combustion process, resulting in reduced primary fuel consumption alongside lowering emissions and air pollution.

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"SAL has always been a frontrunner when it comes to innovation and we are dedicated to make shipping more efficient and cleaner by using technologies that creates a long-lasting effect"; says Sebastian Westphal, CTO of SAL Heavy Lift.

He continues: "We have tested a prototype on a generator engine of our MV Annette over more than two years with very convincing results. The FS MARINE+ system not only achieved significant fuel savings, but also emission and air pollution reductions which was verified by 3<sup>rd</sup> parties both during field trials and in laboratory tests.

Marc Sima, CEO of FUELSAVE GmbH comments; "We are proud to have SAL Heavy Lift GmbH as our customer, and help them to become the most innovative, efficient and sustainable shipping company within their field. With this system we are driving the clean fuel transition with a high impact solution. It can optimize the energy consumption and the environmental impact significantly irrespective of what fuel type you operate your vessel with. Thus, it is applicable with MDO, MGO, HFO, LSFO as well as LNG. We are looking forward together with SAL to take a lead in supporting the shipping industry in its efforts to become more environmentally sustainable.

By investing millions of dollars into retrofitting the system to the main engines and auxiliary engines on existing vessels it may appear that SAL is taking a big financial bet, but the results in terms of savings and payback time proves quite the opposite. Jakob Christiansen, Naval Architect and Head of SALs Fleet Development Team, states: "We ran the system for two years without a single incident and obtained results that matched the promised numbers. So, we see a technology that meets our green ambitions while also reducing the technical operating costs of the ships".

The FS MARINE+ generator has proven to make average reductions of 10% less CO2, 15% less SOx, 30-80% less NOx and 40% less particle emissions.

SAL's MV Trina is the first vessel to be retrofitted with the FS MARINE+ system in Q1 2020. Following a successful system integration on MV Trina, five more vessels will follow – ready to pave the way for a greener & more energy efficient shipping service.

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### About SAL Heavy Lift

SAL Heavy Lift, a member of the Harren & Partner Group, is one of the world's leading carriers specialized in sea transport of heavy lift and project cargo. The company was founded in 1980 as "Schiffahrtskontor Altes Land GmbH & Co. KG" and belongs to Harren & Partner Group since 2017. The modern fleet of heavy lift vessels offers highly flexible options to customers both within project shipping as well as in offshore projects. The vessels boast an impressive travel speed of 20 knots, up to 3500 m<sup>2</sup> of unobstructed main deck space and combined crane capacities ranging from 550 to 2000 tons: amongst the world's highest lifting capacity in the heavy lift sector.

With the Type 183 fleet, being equipped with dynamic position systems and an optional mountable Fly-Jib for greater crane outreach, SAL Heavy Lift offers offshore services to multiple sectors. As a leading global company in the heavy lift and project cargo segment, the company meets the highest standards with regard to quality, technical innovation and health, safety and the environment.

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