

# Ship & Offshore

THE INTERNATIONAL PUBLICATION FOR OFFSHORE & MARINE TECHNOLOGY

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There is an increasing demand for pod drives. For one, they feature excellent overall maneuverability. Because the drive is located under the ship's hull, they also offer greater flexibility for the layout and design of vessels. With SISHIP eSiPOD, Siemens offers a solution in the power range from 5–25 MW that provides maximum vessel design and layout flexibility thanks to its minimal inboard space requirements. Whether you opt for a mono propeller (SISHIP eSiPOD-M) or twin (SISHIP eSiPOD-T) version, both propulsion systems can be optimally adapted for your needs according to the vessel type and operating profile.

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cantly lower. For fuel suppliers it ensures a reliable supply of compliant fuel oil, which they can provide to customers at a reduced cost, but at a higher margin than traditional distillate products.

Port authorities will be able to increase their competitive advantage by guaranteeing a continuous supply of MARPOL Annex VI-compliant, cost-effective fuel, delivered through a state-of-the-art bunkering infrastructure. Genoil's GHU unit can be easily placed in locations including receiving terminals, pipelines and ports.

### Recent investments

Genoil has invested more than USD 50 million over the past several years in research and development from its 147-acre site in Alberta, Canada, delivering an abundance of test data, which verifies the viability of the product. The company continues to invest significant capital and has also filed more than 20 patents in relation to its GHU technology, including the process of treating crude oil using hydrogen in a special reactor unit.

Further emphasising its commitment to growth, Genoil announced in 2016 that it

had received a USD 5 billion letter of intent (LOI) for the funding of a 500,000-barrels per day (bpd) desulphurisation and upgrading project located in the Middle East. After installation of the GHU technology, the facility will have a production capacity of 500,000 bpd of low sulphur crude oil. More recently, Genoil signed a USD 50 billion LOI for work in Russia and Chechnya, with funding from Chinese banks. The project will run over several years, covering various initiatives including raising refinery capacity.

## Gearing up for the first EU MRV legal deadline

**GHG EMISSIONS** | It is estimated that more than 12,000 vessels will be affected by the regulation 2015/757 ('Shipping MRV Regulation'), requiring shipowners and operators to prepare and submit a monitoring plan which outlines fuel consumption, carbon emissions and transport work. Julien Dufour, CEO of Verifavia Shipping, an independent carbon emissions verification body for aviation and maritime transport, outlines the key consideration of a verifier and how owners and operators can comply.

### Ambitions to reduce emissions

As the world shifts to a low carbon economy, the shipping industry is under increasing scrutiny to play its part in reducing carbon (CO<sub>2</sub>) emissions. The attention is warranted. According to the Third IMO GHG Study 2014, "International shipping accounts for approximately 2.2% and 2.1% of global CO<sub>2</sub> and GHG emissions on a CO<sub>2</sub> equivalent (CO<sub>2</sub>e) basis, respectively". In addition, it is estimated that ships of 5,000gt and above account for approximately 85% of the industry's CO<sub>2</sub> emissions. With clear ambitions to reduce greenhouse gas (GHG) emissions from ships, the EU has mandated processes for vessels of this size and above to achieve their goals.

After a two-year legislative process involving all EU institutions, the European Commission's (EC) proposed strategy for progressively integrating maritime emissions into the EU's wider policy to reduce its domestic GHG emissions was adopted by the European Parliament. And on July 1st 2015, regulation 2015/757 ('Shipping MRV Regulation') came into force.

According to the regulation, shipowners and operators must prepare and submit a monitoring plan (MP), outlining the procedures in place to monitor and report their fuel consumption, carbon emissions, and transport work completed by each vessel in their fleet by August 31st 2017. The MP must then be successfully assessed by an accredited verifier by December 31st 2017, before the start of the first monitoring period.

Verifavia Shipping is on course to be among the first fully accredited global verifiers, having declined the option of merely achieving short-term MP Assessor status, and will be in a position to provide advice and guidance on all matters relating to EU MRV verification.

### Owners have to act now

With just seven months until the first legal deadline, shipowners and operators of vessels sailing in the European Union (EU) and exceeding 5,000gt must act now to ensure they are MRV-ready, and that their vessels are compliant.

Companies choosing to act now will be in a stronger position to take timely corrective action and avoid the potential verification bottleneck that may ensue. Moreover, this will be the first time that owners and operators are expected to prepare an MP that adheres to the strict guidelines documented within the regulation.

As with any new complex process or regulation, it makes sense to start upon the road to compliance as soon as possible, ensuring sufficient opportunity to identify and close the gaps. With the MP template and Delegated and Implementing Acts now fi-

nished, owners and operators are equipped with a good reference point when starting to develop their MPs.

To comply with MRV requirements, shipowners must consider the type of data they need to submit, the mechanics of how it can be collected on the ship, and the type of IT system to be used. In addition, they must also consider how data will be stored, transferred, extracted, controlled and checked, as well as how the calculations will be made and ultimately how the report will be compiled.

These are all key considerations that the verifier will check when conducting an MRV GAP analysis to ensure that the processes, procedures and methodology described for collecting and reporting emissions and other data comply with the regulations.

A key concern has been the costs relating to EU MRV compliance, particularly in today's challenging market conditions. However, the cost of complying will vary from one shipping company to another, depending on their individual and specific needs. For example, additional costs may be incurred if a shipping company decides to use a consulting company to develop its MP or prepare the emissions report.

There may also be a need to purchase a dedicated EU MRV IT system to facilitate the collection of data and automate the generation of the emissions report. In addition, some shipping companies may have to develop in-house tools to allow the collection of the required data. The cost of verification is not expected to be that high but will largely depend on the size of fleet and the associated economies of scale.