## efficient engines



The European Union's new MRV (Monitoring,

Reporting and Verification) legislation is causing significant confusion within the shipping industry, with shipowners continuing to grapple with the requirements.

However, like it or loathe it, the MRV regulation is now a fact of life for more than 12,000 vessels visiting European ports every year and compliance is non-negotiable.

From 1 January 2018, any vessel over 5,000 gt, regardless of flag or nationality, which calls at an EU port must monitor and report CO2 emissions on a per-voyage basis, as well as the associated transport work.

Questions about what is classed as a voyage are common. In simple terms, a port of call is a port where a ship stops to load or unload cargo, or to embark or disembark passengers. A voyage is a trip between two ports of call. Stops for the sole purposes of bunkering, crew changes, or maintenance, and so on, are not considered to be a port of call. A reportable voyage is a voyage that involves at least one EU port. Consequently, all stops and voyages, as well as the purpose of the stops, must be appropriately recorded so reportable voyages can be correctly identified and monitored.

## Acceptable measures

To calculate fuel consumption, there are four acceptable emissions-monitoring methodologies to choose from: bunker fuel delivery notes (BDNs) and periodic stocktakes of fuel tanks; onboard bunker fuel tank monitoring; the use of flow meters for applicable combustion processes; and direct emissions measurements.

Ships can use a combination of these methodologies if it results in an improvement in the accuracy of monitoring.

The applicability of each methodology will take into consideration variables such as what technology the vessel already has in place, which fuel measurement data are already collected and stored electronically, and

whether the ship must monitor fuel consumption on a per-voyage basis.

In terms of which emissions sources are included or excluded, only the main engines, auxiliary engines, boilers, inert gas generators and gas turbines shall be considered.

There remains some confusion over the various key deadlines that shipowners must adhere to. For every vessel that anticipates making a commercial call in an EU port in 2018, the first requirement is the design of a robust monitoring plan.

In particular, the plan must specify which of the four allowed emissions monitoring methodologies the shipping company intends to use, as well as how transport work will be calculated. The plan must be submitted to the verification body by 31 August 2017 and successfully assessed by 31 December 2017, before the start of the first monitoring period.

The emissions and transport work data for 2018 must then be consolidated in an annual report, which must be verified by an independent accredited verifier by 30 April 2019. Once this is done, the report must be submitted to the European Commission and the flag state. By 30 June 2019, every vessel must carry on board a document of compliance issued by the verification body. This procedure is then repeated each calendar year.

While it is not mandatory for shipowners to submit their plans before 2017, many proactive organisations are undertaking a 'pre-verification GAP-analysis audit' to identify compliance and system design issues, enabling correction before enforcement begins.

Working with MRV experts to effectively guide and simplify the process provides the confidence that the right systems, capabilities and understanding are in place to efficiently achieve compliance.

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