

Action code: WHEN CONVENIENT

EEXI ComplianceSL2022-723/CRBD
March 2022**Concerns**

Owners and operators of vessels above 400 GT with an MAN B&W two-stroke engine.

Types: all types of MC and ME engines

Summary

Ensure timely EEXI compliance without compromising safety and without risking IP infringement.



Dear Sir or Madam

IMO's Marine Environment Protection Committee (MEPC 76) has adopted the MARPOL Annex VI regulations for implementation of EEXI (Energy Efficiency Existing Ship Index) for existing vessels above 400 GT. In response to these new regulations, there are now several solutions available on the market.

When purchasing and installing an EEXI solution, it is therefore necessary to ensure that it fulfils the various regulations associated with it.

Furthermore, the chosen solution must not infringe IP rights of any party and must not compromise operational safety. Also, it must be ensured that the chosen solution can be delivered, installed and commissioned prior to the effective date stated in the regulations.

MAN Energy Solutions has developed EEXI solutions for all MC and ME engines that cover both the technical solution and the regulatory and operational aspects described in this service letter.

Any questions regarding our EEXI solutions can be directed to: RetrofitDK@man-es.com

Yours faithfully



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Considerations regarding EEXI solutions for MAN B&W engines

Regulation compliance and authority approval

All marine propulsion engines on board ships in seagoing services must have a valid engine certificate.

As ship propulsion is qualified as essential service, the engine certificate can only be issued upon proof of design compliance with numerous rules, such as, but not limited to:

- ISO certification of engine designer and builder
- IMO resolutions, notices etc.
- SOLAS
- MARPOL
- IACS unified requirements
- rules and regulations of all IACS classification societies
- flag state regulations
- port authority regulations

When introducing new applications to an existing engine, such as an EEXI solution, it is mandatory to ensure that the new application is aligned with all the existing functionalities. If this is not done properly, it may lead to dangerous situations where the safety of the engine is compromised. This could consequently lead to violation of the statutory certificates for the vessel.

When applying an EEXI solution to an MAN B&W two-stroke engine, the shipowner must consider the following rules and regulations, such as, but not limited to:

- SOLAS II-1 regulation 31: Remote control for the main and auxiliary machinery is essential for the propulsion.
- SOLAS II-1 part C regulation 31.2.6: It must be possible to control the propulsion machinery locally, even in the case of failure in any part of the remote system.
- MEPC. 335(76) 2.2.4: The engine power limitation (EPL) should be tamper-proof.

To comply with both MEPC.335(76) 2.2.4 and SOLAS II-1 part C regulation 31.2.6, any EPL solution on an MAN B&W engine is controlled directly on the engine by a mechanical limitation (MC engines) or electronically in the engine control system (ME engines). This is to ensure that any attempt to operate the engine via local control will still be limited by the EPL. If the EPL solution is controlled directly on the engine, it is not possible to override the EPL unless the operator intentionally decides to do so.

It is of importance to ensure a cross-industry understanding of the product safety, functionality, and risks to

the operation and safety of the vessels. Therefore, the technical design and specifications of any EEXI solution should be presented by the manufacturer to multiple flag states, authorities, port state authorities and classification societies; and, be acknowledged to be consistent with resolution MEPC.335(76).

Therefore, if an EEXI solution is to be integrated with MAN B&W engines, the shipowner should ensure that such a solution has been approved for implementation by the engine manufacturer. Further, the engine manufacturer should be able to provide proof of a no objection letter from the engine designer for such an EEXI solution.

IP infringement and operational safety

Any modification performed on parts of the existing engine may pose a risk of IP infringement. Thus, unauthorised modification of engine software, wrongful utilisation of software passwords, and installation of a new application on the engine, such as an EEXI solution, may pose a risk of IP infringement and is not covered by the existing engine certification.

Moreover, unapproved alteration can affect the overall engine functionality and may pose safety and operational risks, inevitably leading to a violation of the engine's statutory certificate.

Availability and timely delivery

The enforcement of the EEXI regulations for the individual vessels is on the first annual, intermediate or renewal survey in 2023. If an EEXI solution has not been installed, commissioned, and approved before the enforcement of the regulations, and the vessel is not EEXI compliant, the vessel may not be allowed to sail by the authorities.

In consideration of the enforcement of the EEXI regulations, it is of great importance that the procurement of an EEXI solution is planned to ensure timely delivery, installation, and commissioning of the solution.

MAN Energy Solutions has developed EEXI solutions for all MC and ME engines that cover both the technical solution and the regulatory and operational aspects described in this service letter.

Any questions regarding this service letter or our EEXI solutions can be sent to: RetrofitDK@man-es.com