



सत्यमेव जयते

भारत सरकार / GOVERNMENT OF INDIA

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नौवहन महानिदेशालय / DIRECTORATE GENERAL OF SHIPPING

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Subject: Propulsion power for calculating vessel safe manning levels on the engineering side – reg.

1. General:

- 1.1. The Directorate General of Shipping (DGS), Govt. of India, as the Maritime Administration, specifies, from time to time, the safe manning requirements of Indian flag ships, including as applicable on the engineering side. These requirements are based on the type of operations of a vessel and the power of the engines therein used for propulsion purposes.
- 1.2. A Certificate of Registry (CoR) is issued to an Indian flag ship by the jurisdictional Registrar of Ships (RoS), after it is surveyed under section 27 of the Merchant Shipping (M.S.) Act, 1958. This certificate is valid till it is revoked and indicates, among other details, the horsepower of the engines used for propulsion purposes.
- 1.3. It has been the practice prevalent among the various Registrars of Ships to utilize the power marked on the name plate of the engine or power mentioned in the Type Approval Certificate (TAC) of the engine, for stating the horsepower in the Certificate of Registry and, thereby, for computing the safe manning requirements of the vessels, accordingly.
- 1.4. 'Approved Power' is a power which an engine is capable of delivering, continuously, between the normal maintenance intervals indicated by the manufacturer, at the stated speed and under stated ambient conditions. Capability of an engine to deliver this power is verified by the Classification Societies during Type Approval Tests (TATs) and their value is stated in the TAC issued for the same.
- 1.5. 'Certified Power' is a power endorsed by a Classification Society after satisfactory shop testing (Factory Acceptance Test: FAT) against the purchase order requirements and as per the intended application of the engine. This power may be equivalent to or less than the approved power for the engine and shall be reflected in the respective *Engine Test Certificate (ETC)* of a particular engine.

2. Purpose:

- 2.1. Recently, it has come to the notice of the DGS, Govt. of India that many ship-owners / managers are using engines with a 'certified power' that is at variance with the 'approved power' due to de-rating of the engines for operational /commercial / energy efficiency requirements and are approaching various Mercantile Marine Departments (MMDs) to issue Safe Manning Documents (SMDs) in line with the certified / de-rated engine horsepower.
- 2.2. The DGS, Govt. of India, upon a careful examination of such requests from various shipping companies and also after considering the respective Classification Society Rules, in this regard, promulgates the following procedures for the issuance of Safe Manning Documents (SMD) for Indian flag ships, on the engineering side.

3. Procedures:

- 3.1. For **new engines** fitted on vessels, at the **construction stage**, the MMDs may verify the following on the receipt of a request from a ship owner /manager to issue a Certificate of Registry (COR) or Safe Manning Document (SMD) on the engineering side:
 - 3.1.1. An Engine Test Certificate (ETC) from the engine manufacturer certifying the power which the particular engine has been tested for (Certified Power).
 - 3.1.2. A certificate from the vessel's Recognized Organization (RO), authenticating the above certified power of the particular engine. It may be noted here that the 'Certified Power' as mentioned in the certificate, rather than the original 'Approved Power' is to be considered for the purpose of issuance of the said COR or SMD.
 - 3.1.3. In case the 'Certified Power' is varying from the 'Approved Power', the owner may submit a declaration stating the revised/ de-rated engine power, including the method of de-rating and declaring that no attempt will be made to alter the engine power or operate the engine above the de-rated engine power.
 - 3.1.4. Where the above 'Certified Power' is at variance, with the power marked on the name plate of the engine or the 'Approved Power' is mentioned in the type approval certificate, the 'Certified Power' indicated in the certificates is to be considered as the actual power and same is to be permanently punch-marked on the name plate of the engine in the presence of the Maritime Administration/RO Surveyor and record of de-rating is to be entered in the concerned ship's log-book & is to be included in the survey status which, thereafter, may be referred to for the purpose of issuance of the Certificate of Registry and Safe Manning Document, accordingly.
 - 3.1.5. In no case can the new power certified by the RO be more than the original approved power, without an appropriate certificate from the original equipment manufacturer (OEM) and any RO approved by the Govt. of India.
- 3.2. **In the case of existing vessels** where ship owners / managers are de-rating the engines for operational/commercial/energy efficiency requirements after the delivery of the vessels, the Certificate of Registry of the vessel concerned need not be changed with the new power every time de-rating of the engine is carried out. For an issue of a revised safe manning document, the following facts/ documents need to be verified;

- 3.2.1. Certificates as mentioned in paras 3.1.1, 3.1.2 and 3.1.3 foregoing need to be submitted and kept attached to the revised safe manning document.
- 3.2.2. Where the above certified power is at variance with the power marked on the name plate of the engine or the 'Approved Power' as mentioned in the type approval certificate, the 'Certified Power' indicated in the certificates is to be considered as the actual power and same is to be permanently punch-marked on the name plate of the engine in the presence of the Maritime Administration/RO Surveyor and the record of de-rating is to be entered in ship's log-book and is also to be included in the survey status which, thereafter, may be referred to for the purpose of issuance of the Certificate of Registry and safe manning document issued accordingly.
- 3.3. Notwithstanding sub-para 3.2 preceding, in case the owner desires to amend the power mentioned in the Certificate of Registry with the new de-rated power, the speed mentioned in the COR also needs to be correspondingly amended by the locational Registrar of Ships.
- 3.4. De-rating is allowed in the above cases only upto 75% of the original 'Approved Power' or, the original Maximum Continuous Rating (MCR) as applicable.
- 3.5. Considering the advancements and continuous improvements in technology, the permitted methods for de-rating the engines as mentioned in para 3.1.3 above may include, but is not limited to the following ;
 - 3.5.1. Limiting the fuel rack,
 - 3.5.2. Changing the fuel pump,
 - 3.5.3. Changing the governor settings,
 - 3.5.4. Re-programming the electronic governor &
 - 3.5.5. Removing or replacing the turbocharger and associated modifications as recommended by the manufacturer.
- 3.6. The ROs are required to verify and satisfy themselves during the Safety Construction / Class surveys that the vessel is operating within the de-rated power as mentioned in it's certificates and that the de-rating of the engine in no way effects the safety of the vessel with respect to the vessel's maneuverability and navigation in all operational conditions.
- 3.7. The already applicable fee is to be paid to the respective MMD's for issuance of the new safe manning document.
4. This is issued with the approval of the competent authority and comes into effect from the date of the issue of this circular.

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To,

1. The Principal Officers/ Mercantile Marine Department, Mumbai/Kolkata/ Chennai/ Kandla/Cochin.
2. The Surveyor-in-charge, Mercantile Marine Department, Goa/Jamnagar/Port Blair /Visakhapatanam /Tuticorin /Delhi /Haldia/ Paradip /Mangalore.
3. All Recognised Organizations.
4. Indian National Shippers Association (INSA), Mumbai
5. All Shipping Companies
6. CS/NA/CSS/Jt.DG
7. Hindi Cell
8. Guard file.
9. Computer Cell