



**MINISTÈRES
TRANSITION ÉCOLOGIQUE
COHÉSION DES TERRITOIRES
MER**

*Liberté
Égalité
Fraternité*

**ÉPREUVE 3
CONCOURS D'ÉLÈVES STAGIAIRES
ADMINISTRATEURS
DES AFFAIRES MARITIMES**
(article 6.1 du décret statutaire n°2012-1546 modifié)

**ÉPREUVE 4
CONCOURS D'ÉLÈVES ADMINISTRATEURS
DES AFFAIRES MARITIMES**
(articles 4.1 et 4.2 du décret statutaire n°2012-1546 modifié)

SESSION 2021

VERSION ANGLAISE

SANS DICTIONNAIRE NI LEXIQUE

(DURÉE : 2 HEURES – COEFFICIENT : 3)

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Ce document comporte 3 pages y compris celle-ci

The Purpose of the ISM CODE

To ensure safety at sea and prevent damage to property, personnel and environment.

In order to comply with the ISM Code, the Company operating the vessel has to be audited first (after they submit their Safety Management System Manual (SMS) and is approved by Flag Administration or Recognized Organization (RO). Once a Company is Audited, the Document of Compliance (DOC) will be issued (validity 5 years). Every Company is subject to auditing every year (three months before and after anniversary date and before DOC expiration date). Upon issuing DOC to Company (or Managing Company) each vessel can be audited to verify vessel compliance with ISM Code. Each vessel will be issued SMC (Safety Management Certificate) valid for 5 years and subject to verification of Compliance with ISM Code between second and third years of certificate validity.

Safety Management System Manual consists of the following elements :

- Commitment from top management
- A top tier policy manual
- A procedures manual that documents what is done on board the ship, during normal operations and in emergency situations
- Procedures for conducting both internal and external audits to ensure the ship is doing what is documented in the procedures manual
- A designated person ashore to serve as the link between the ships and shore staff and to verify the SMS implementation
- A system for identifying where actual practices do not meet those that are documented and for implementing associated corrective action
- Regular management reviews

Also, the ship must be maintained in conformity with the provisions of relevant rules and regulations and with any additional requirements which may be established by the company. Comments from the auditor and/or audit body and from the ship are incorporated into the SMS by headquarters.

The requirements of the ISM Code may be applied to all commercial ships over 500 GT. The ISM Code is a chapter in SOLAS. If SOLAS does not apply then ISM is not mandatory. Compliance with ISM Code is sometimes required by vessel client regardless of Gross Tonnage (GT).

The ISM Code was created by the IMO and Ferriby Marines Capt. Graham Botterill, Specialist Advisor to the House of Lords in the UK on ship safety, among others.

History of the development of the ISM Code

On the evening of March 6, 1987, the cross-channel Ro-Ro ferry *Herald of Free Enterprise*, carrying more than 450 passengers, around 80 crew, more than 80 cars, and close to 50 freight vehicles, left the Belgian port of Zeebrugge for the English port of Dover. Soon after the *Herald of Free Enterprise* passed Zeebrugges breakwater, water flooded into the ferrys lower car deck and destabilized it, causing it to sink in a matter of minutes. 193 lives were lost.

The immediate cause of the accident was that the bow door remained wide open, allowing a great inrush of water as the vessel increased speed, while the fatigued assistant boatswain directly responsible for closing it lay asleep in his cabin. The public inquiry led by Justice Sheen revealed that the assistant boatswains negligence was simply the last in a long string of actions that laid the groundwork for a major accident. The Sheen Report did not stop at identifying the shortcomings of the ships master and his crew. The inquiry revealed that the shore management, Townsend Car Ferries Ltd., was just as blameworthy. Numerous memos written by Townsend ships masters pointing out the need to implement safety -enhancing measures or address serious deficiencies on board their vessels went unheeded. The report summed up the managements cavalier attitude towards safety in the following statement : From top to bottom the body corporate was infected with the disease of sloppiness (Sheen, 1987).

The *Herald of Free Enterprise* was a modern ferry equipped with advanced technology and manned by a highly qualified crew. Only seven years prior to the accident, it was built in a German shipyard according to international maritime safety regulations.

Further investigation into the accident was held. It found the sinking was caused by three main factors

- The boatswains failure to close the bow doors, as he was asleep at the time in his cabin, the failure to make sure the bow doors were closed, and Captain leaving port without knowing whether the bow doors were closed.
- The design of *Herald of Free Enterprise* was also found to be a contributory cause of the sinking, namely the lack of watertight subdivisions (which was common on other vessels) allowed the weight of water to flow freely and increase the likelihood of capsizing.
- Another factor that contributed to the capsizing was the "squat effect". When a vessel is under way, the movement under it creates low pressure, which has the effect of increasing the vessel's draught. In deep water the effect is small but in shallow water it is greater, because as the water passes underneath it moves faster and causes the draught to increase. This reduced the clearance between the bow doors and water line to between 1.5 metres (4.9 ft) and 1.9 metres (6.2 ft). After extensive tests, the investigators found that when the ship travelled at a speed of 18 knots (33 km/h), the wave was enough to engulf the bow doors.

The general frustration in the shipping industry following the capsizing of the *Herald of Free Enterprise* is typical of the kind of accident that precipitated in a paradigm shift in maritime safety administration and the development of the **ISM Code**.