

ประกาศกรมเจ้าท่า

ที่ ๒๕๘/๒๕๖๖

เรื่อง แก้ไขเพิ่มเติมหลักเกณฑ์ วิธีการ และเงื่อนไขในการออกใบสำคัญรับรองเกี่ยวกับความปลอดภัยแห่งชีวิต
ในทะเล พ.ศ. ๒๕๕๙ สำหรับการตรวจเรือที่ใช้แก๊สหรือเชื้อเพลิงที่มีจุดวาบไฟต่ำ

เพื่อให้การปฏิบัติงานเกี่ยวกับการตรวจเรือที่ใช้แก๊สหรือเชื้อเพลิงที่มีจุดวาบไฟต่ำ การออก
และการสลักหลังใบสำคัญรับรอง ของกฎข้อบังคับสำหรับการตรวจเรือ กำหนดหลักเกณฑ์ วิธีการ
และเงื่อนไขในการออกใบสำคัญรับรองเกี่ยวกับความปลอดภัยแห่งชีวิตในทะเล พ.ศ. ๒๕๕๙
และประกาศกรมเจ้าท่า ที่ ๖๕/๒๕๖๔ เรื่อง แนวทางปฏิบัติในการตรวจและออกใบสำคัญรับรอง
เกี่ยวกับความปลอดภัยแห่งชีวิตในทะเล เป็นไปอย่างมีประสิทธิภาพ สอดคล้องกับข้อกำหนดของ
อนุสัญญาระหว่างประเทศว่าด้วยความปลอดภัยแห่งชีวิตในทะเล ค.ศ. ๑๙๗๔ และที่แก้ไขเพิ่มเติม
(International Convention for the Safety of Life at Sea, 1974 (SOLAS), as amended)

เพื่อให้สอดคล้องกับข้อ ๗ และ ๘ ของกฎข้อบังคับสำหรับการตรวจเรือ กำหนดหลักเกณฑ์
วิธีการ และเงื่อนไขในการออกใบสำคัญรับรองเกี่ยวกับความปลอดภัยแห่งชีวิตในทะเล พ.ศ. ๒๕๕๙
อธิบดีกรมเจ้าท่าจึงประกาศกำหนดให้ใช้แนวทางปฏิบัติเพิ่มเติมสำหรับเรือที่ใช้แก๊สหรือเชื้อเพลิง
ที่มีจุดวาบไฟต่ำ ตามข้อมติ ดังต่อไปนี้

๑. ข้อมติของคณะกรรมการความปลอดภัยทางทะเล ที่ ๔๗๕(๑๐๒) (Resolution
MSC.475(102) Amendments to the International Code of Safety for Ships Using Gases or
Other Low-Flashpoint Fuels (IGF Code)) ตามที่ปรากฏในภาคผนวก ๑ ที่แนบท้ายประกาศนี้

๒. ข้อมติของคณะกรรมการความปลอดภัยทางทะเล ที่ ๕๒๔(๑๐๖) (Resolution
MSC.524(106) Amendments to the International Code of Safety for Ships Using Gases or
Other Low-Flashpoint Fuels (IGF Code)) ตามที่ปรากฏในภาคผนวก ๒ ที่แนบท้ายประกาศนี้

ประกาศ ณ วันที่ ๒๗ ตุลาคม พ.ศ. ๒๕๖๖

กริชเพชร ชัยช่วย

ผู้ตรวจราชการกระทรวงคมนาคม รักษาราชการแทน

อธิบดีกรมเจ้าท่า

ภาคผนวก ๑

ข้อมติของคณะกรรมการความปลอดภัยทางทะเล ที่ ๔๗๕(๑๐๒) (Resolution MSC.475(102) Amendments to the International Code of Safety for Ships Using Gases or Other Low-Flashpoint Fuels (IGF Code))

RESOLUTION MSC.475(102)
(adopted on 11 November 2020)

**AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR SHIPS USING GASES
OR OTHER LOW-FLASHPOINT FUELS (IGF CODE)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO resolution MSC.391(95), by which it adopted the International Code of Safety for Ships Using Gases or Other Low-flashpoint Fuels ("the IGF Code"), which has become mandatory under chapter II-1 of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"),

RECALLING FURTHER article VIII(b) and regulation II-1/2.28 of the Convention concerning the procedure for amending the IGF Code,

HAVING CONSIDERED, at its 102nd session, amendments to the IGF Code proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the IGF Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the amendments shall be deemed to have been accepted on 1 July 2023 unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified their objections to the amendments;

3 INVITES Contracting Governments to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2024 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 REQUESTS ALSO the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY FOR SHIPS USING GASES OR OTHER LOW-FLASHPOINT FUELS (IGF CODE)

PART A-1

SPECIFIC REQUIREMENTS FOR SHIPS USING NATURAL GAS AS FUEL

6 – FUEL CONTAINMENT SYSTEM

6.7 Regulation for pressure relief system

- 1 Regulation 6.7.1.1 is replaced by the following:

"All fuel storage tanks shall be provided with a pressure relief system appropriate to the design of the fuel containment system and the fuel being carried. Fuel storage hold spaces, interbarrier spaces and tank connection spaces, which may be subject to pressures beyond their design capabilities, shall also be provided with a suitable pressure relief system. Pressure control systems specified in 6.9 shall be independent of the pressure relief systems."

11 – FIRE SAFETY

- 2 The following new regulation 11.8 is added after existing regulation 11.7:

"11.8 Regulation for fuel preparation room fire-extinguishing systems

For ships constructed on or after 1 January 2024, fuel preparation rooms containing pumps, compressors or other potential ignition sources shall be provided with a fixed fire-extinguishing system complying with the provisions of SOLAS regulation II-2/10.4.1.1 and taking into account the necessary concentrations/application rate required for extinguishing gas fires."

PART B-1

16 – MANUFACTURE, WORKMANSHIP AND TESTING

16.3 Welding of metallic materials and non-destructive testing for the fuel containment system

- 3 Regulation 16.3.3.5.1 is replaced by the following:

".1 tensile tests: cross-weld tensile strength is not to be less than the specified minimum tensile strength for the appropriate parent materials. For materials such as aluminium alloys, reference shall be made to 6.4.12.1.1.3 with regard to the regulations for weld metal strength of under-matched welds (where the weld metal has a lower tensile strength than the parent metal). In every case, the position of fracture shall be recorded for information;"

ภาคผนวก ๒

ข้อมติของคณะกรรมการความปลอดภัยทางทะเล ที่ ๕๒๔(๑๐๖) (Resolution MSC.524(106) Amendments to the International Code of Safety for Ships Using Gases or Other Low-Flashpoint Fuels (IGF Code))

ANNEX 6

**RESOLUTION MSC.524(106)
(adopted on 10 November 2022)**

**AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY
FOR SHIPS USING GASES OR OTHER LOW-FLASHPOINT FUELS (IGF CODE)**

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING resolution MSC.391(95), by which it adopted the International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code), which has become mandatory under chapters II-1 and II-2 of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"),

NOTING ALSO article VIII(b) and regulation II-1/2.28 of the Convention concerning the procedure for amending the IGF Code,

HAVING CONSIDERED, at its 106th session, amendments to the IGF Code proposed and circulated in accordance with article VIII(b)(i) of the Convention:

1 ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to the IGF Code the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that the said amendments shall be deemed to have been accepted on 1 July 2025, unless, prior to that date, more than one third of the Contracting Governments to the Convention or Contracting Governments the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet have notified their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2026 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article VIII(b)(v) of the Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Contracting Governments to the Convention;

5 ALSO REQUESTS the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CODE OF SAFETY
FOR SHIPS USING GASES OR OTHER LOW-FLASHPOINT FUELS (IGF CODE)**

**PART A-1
SPECIFIC REQUIREMENTS FOR SHIPS USING NATURAL GAS AS FUEL**

7 – Material and general pipe design

7.4 Regulations for materials

7.4.1 Metallic materials

Table 7.3 is replaced in its entirety, by the following:

"Table 7.3

PLATES, SECTIONS AND FORGINGS ^{see note 1} FOR FUEL TANKS, SECONDARY BARRIERS AND PROCESS PRESSURE VESSELS FOR DESIGN TEMPERATURES BELOW MINUS 55°C AND DOWN TO MINUS 165°C ^{see note 2} Maximum thickness 25 mm ^{see notes 3 and 4}		
Minimum design temp. (°C)	Chemical composition ^{see note 5} and heat treatment	Impact test temp. (°C)
-60	1.5% nickel steel – normalized or normalized and tempered or quenched and tempered or TMCP ^{see note 6}	-65
-65	2.25% nickel steel – normalized or normalized and tempered or quenched and tempered or TMCP ^{see notes 6 and 7}	-70
-90	3.5% nickel steel – normalized or normalized and tempered or quenched and tempered or TMCP ^{see notes 6 and 7}	-95
-105	5% nickel steel – normalized or normalized and tempered or quenched and tempered ^{see notes 6, 7 and 8}	-110
-165	9% nickel steel – double normalized and tempered or quenched and tempered ^{see note 6}	-196
-165	Austenitic steels, such as types 304, 304L, 316, 316L, 321 and 347 solution treated ^{see note 9}	-196
-165	High manganese austenitic steel – hot rolling and controlled cooling ^{see notes 10 and 11}	-196
-165	Aluminium alloys, such as type 5083 annealed	Not required
-165	Austenitic Fe-Ni alloy (36% nickel). Heat treatment as agreed	Not required
TENSILE AND TOUGHNESS (IMPACT) TEST REGULATIONS		
Sampling frequency		
◆ Plates	Each "piece" to be tested	
◆ Sections and forgings	Each "batch" to be tested	
Toughness (Charpy V-notch test)		
◆ Plates	Transverse test pieces. Minimum average energy value (KV) 27J	
◆ Sections and forgings	Longitudinal test pieces. Minimum average energy (KV) 41J	

Notes

1. The impact test required for forgings used in critical applications shall be subject to special consideration by the Administration.
2. The regulations for design temperatures below -165°C shall be specially agreed with the Administration.
3. For materials 1.5% Ni, 2.25% Ni, 3.5% Ni and 5% Ni, with thicknesses greater than 25 mm, the impact tests shall be conducted as follows:

Material thickness (mm)	Test temperature (°C)
25 < t ≤ 30	10°C below design temperature
30 < t ≤ 35	15°C below design temperature
35 < t ≤ 40	20°C below design temperature

The energy value shall be in accordance with the table for the applicable type of test specimen. For material thickness of more than 40 mm, the Charpy V-notch values shall be specially considered.

4. For 9% Ni steels, austenitic stainless steels, high manganese austenitic steels and aluminium alloys, thickness greater than 25 mm may be used.
5. The chemical composition limits shall be in accordance with recognized standards.
6. Thermo-mechanical controlled processing (TMCP) nickel steels will be subject to acceptance by the Administration.
7. A lower minimum design temperature for quenched and tempered steels may be specially agreed with the Administration.
8. A specially heat-treated 5% nickel steel, for example triple heat-treated 5% nickel steel, may be used down to -165°C, provided that the impact tests are carried out at -196°C.
9. The impact test may be omitted subject to agreement with the Administration.
10. The use of the material shall be subject to the required conditions specified by the Administration based on the Guidelines developed by the Organization.*
11. The impact test may not be omitted for high manganese austenitic steel."

* Refer to the *Revised guidelines on the application of high manganese austenitic steel for cryogenic service* (MSC.1/Circ.1599/Rev.2).
