

MARPOL 73/78.

Introduction and ANNEX I



MARPOL 73/78-Technical Annexes

- The international Convention for the Prevention of Marine Pollution from Ships, 1973 as modified by the Protocol of 1978 relating thereto (MARPOL 73/78)



MARPOL 73/78-Technical Annexes

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- The International Convention includes regulations aimed at preventing and minimizing pollution from ships-both accidental pollution and that from routine operations- and currently includes six technical Annexes:



MARPOL 73/78-Technical Annexes

		Entry Into Force
Annex I	Regulations for the Prevention Of Pollution by Oil	02.10.1983
Annex II	Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk.	06.04.1987
Annex III	Regulations for the Prevention Of Pollution by Harmful Substances Carried by Sea in Packaged Form	01.07.1992
Annex IV	Regulations for the Prevention Of Pollution by Sewage from Ships.	27.09.2003
Annex V	Regulations for the Control of Pollution by Garbage from Ships.	31.12.1988
Annex VI	Regulations for the Prevention Of Air Pollution from Ships.	19.05.2005



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- State Parties must accept Annexes I&II, but the other Annexes are optional.



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- **Definitions:**
- *(1) Oil:*
- Oil means petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products(other than those petrochemicals which are subject to the provisions of Annex II of the present Convention) and, without limiting the generality of the foregoing, includes the substances listed in appendix I to this Annex.



OIL SPILLS



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OIL SPILLS



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OIL SPILLS



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MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- *(2) Crude Oil:* means any liquid hydrocarbon mixture occurring naturally in the earth whether or not treated to render it suitable for transportation and includes:
 - (a) Crude oil from which certain distillate fractions may have been removed; and
 - (b) Crude oil to which certain distillate fractions may have been added.
- *(3) Oily Mixture:*
- Means a mixture with any oil content.



OIL SPILLS

RESPONDING TO OIL SPILLS AT SEA

DISPERSION

Chemical dispersion is achieved by applying chemicals designed to remove oil from the water surface by breaking the oil into small droplets.

BURNING

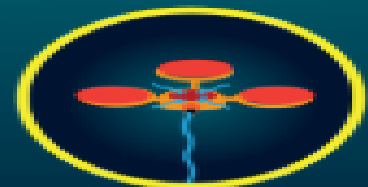
Also referred to as in situ burning, this is the method of setting fire to freshly spilled oil, usually while still floating on the water surface.

BOOMS

Booms are long, floating barriers used to contain or prevent the spread of spilled oil.

SKIMMING

Skimming is achieved with boats equipped with a floating skimmer designed to remove thin layers of oil from the surface, often with the help of booms.



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- *(4) Oil Fuel:*
- Oil fuel means any oil used as fuel in connection with the propulsion and auxiliary machinery of the ship in which such oil is carried.
- *(5) Oil Tanker:* means a ship constructed or adapted primarily to carry oil in bulk in cargo spaces and includes combination carriers, any “NLS tanker” as defined in Annex II of the present convention and any gas carrier as defined in regulation 3.20 of chapter II-1 of SOLAS 74 (as amended), when carrying a cargo or part cargo of oil in bulk.





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MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- *(6) Crude Oil Tanker.*
- Means an oil tanker engaged in the trade of carrying crude oil.
- *(7) Product Carrier:*
- Means an oil tanker engaged in the trade of carrying oil other than crude oil.
- *(8) Combination carrier:*
- Means a ship designed to carry either oil or solid cargoes in bulk.



CRUDE OIL TANKER



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CRUDE OIL TANKER



TANKER FITTED WITH A BOW LOADER



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CHEMICAL TANKER



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LNG CARRIER



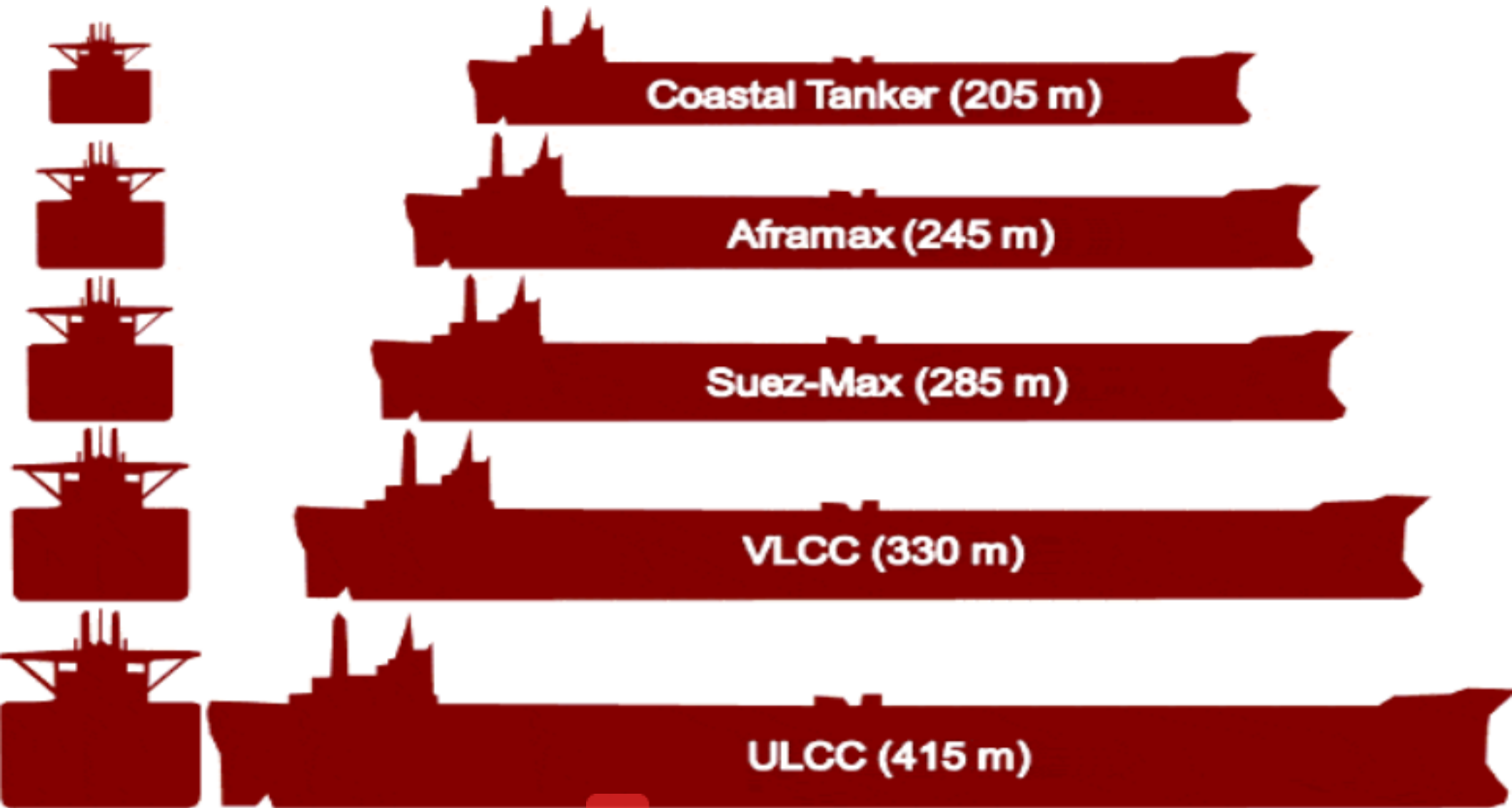
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SIZES OF OIL TANKERS



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- *(9) Special Area.*
- Special area means a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by oil is required.



MARPOL Annex I

Definitions (Ref. Ch.I Req.I)

(10) Special Areas under MARPOL Annex I:

- a. the Mediterranean Sea area.
- b. the Baltic Sea area.
- c. the Black Sea area.
- d. the Red Sea area.
- e. the Gulfs area.
- f. the Gulf Of Aden area.
- g. the Antarctic area.
- h. the Northwest European waters.
- i. the Oman Area of the Arabian Sea.
- j. the Southern South African waters.



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- *(11) Instantaneous rate of discharge of oil content* means the rate of discharge of oil in litres per hour at any instant divided by the speed of the ship in knots at the same instant.
- *(12) Tank* means an enclosed space which is formed by the permanent structure of a ship and which is designed for the carriage of liquid in bulk.
- *(13) Wing Tank:*
 - Means any tank adjacent to the side shell plating.
- *(14) Centre Tank:*
 - Means any tank inboard of a longitudinal bulkhead



MARPOL Annex I

Definitions (Ref. Ch.I Req.I)

- *(15) Slop Tank:*
- Means a tank specifically designed for the collection of tank draining, tank washings and other oily mixtures.
- *(16) Clean Ballast.*
- Clean ballast means the ballast in a tank which, since the oil was last carried therein, has been so cleaned that effluent there-from if it were discharged from a ship which is stationary into clean calm water on a clear day would not produce visible traces of oil on the surface of the water or on



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. If the ballast is discharged through an oil discharge monitoring and control system approved by the Administration, evidence based on such a system to the effect that the oil content of the effluent did not exceed 15 ppm shall be determinative that the ballast was clean, notwithstanding the presence of visible traces.



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- *(17) Segregated ballast.*
- Segregated Ballast means the ballast water introduced into a tank which is completely separated from the cargo oil and the oil fuel system and which is permanently allocated to the carriage of ballast or cargoes other than oil or noxious liquid substances as variously defined in the Annexes of the present Convention.



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- *(18) Parts per million (ppm)* means parts of oil per million parts of water by volume.
- *(19) Oil residue (sludge)* means the residual waste oil products generated during the normal operation of a ship such as those resulting from the purification of fuel oil or lubricating oil for main or auxiliary machinery, separated waste oil from oil filtering equipment, waste oil collected in drip trays, and waste hydraulic and lubricating oils.



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- *(20) Oil residue (sludge) tank:* means a tank which holds oil residue (sludge) from which sludge may be disposed directly through the standard discharge connection or any other approved means of disposal.
- *(21) Oily bilge water* means water which may be contaminated by oil resulting from things such as leakage or maintenance work in machinery spaces. Any liquid entering the bilge system including bilge wells, bilge piping, tank top or bilge holding tanks is considered oily bilge water.



MARPOL Annex I

Definitions (Ref. Ch.I Reg.I)

- *(22) Oily bilge water holding tank* means a tank collecting oily bilge water prior to its discharge, transfer or disposal.
- *Application* (Ref.Ch.1 Reg.2)
- Unless expressly provided otherwise, the provisions of this Annex shall apply to all ships.
- (Most of this Annex applies to:
 - - Oil Tankers of 150 gt and above; and
 - - Ships other than Oil Tankers of 400 gt and above.)



MARPOL Annex I

Chapter 2-Surveys and certification

- *Surveys* (Ref. Ch.I Reg.I)
- Every oil tanker of 150 gross tonnage, and every other ship of 400 gross tonnage and above shall be subject to the following surveys:
 - An initial survey;
 - An annual survey, anniversary date +/- 3months;
 - An intermediate survey, 2nd or 3rd anniversary date +/- 3m;
 - A renewal survey, not exceeding 5 years(-3m);



MARPOL Annex I

Chapter 2-Surveys and certification

- An additional survey, according to the circumstances.



Chapter 2-Surveys and certification

- *Form Of Certificate* (Ref. Reg.9)
- The International Oil Pollution Prevention (IOPP) Certificate shall be drawn up in the form given in appendix II and shall be in at least English, French or Spanish.
- *Duration and validity of certificate* (Ref.Reg.10)
- An International Oil Pollution Prevention (IOPP) Certificate shall be issued for a period specified by the Administration, which shall not exceed five years.



Chapter 2-Surveys and certification

- *Port State Control On Operational Requirements* (Ref.Reg.11)
- A ship when in a port or an offshore terminal of another Party is subject to inspection by officers duly authorized by such Party concerning operational requirements under this Annex, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of pollution by oil.



Chapter 3-Requirements for machinery spaces of all ships.

Part A- Construction.

- *Tanks for oil residues (sludge)(Ref.Reg.12)*
- Every ship of 400 gross tonnage and above shall be provided with a tank or tanks of adequate capacity, having regard to the type of machinery and length of voyage, to receive the oil residues (sludge) which cannot be dealt with otherwise in accordance with the requirements of this Annex, such as those resulting from the purification of fuel and lubricating oils and oil leakages in the machinery spaces.



Chapter 2-Surveys and certification

- Piping to and from oil residue(sludge) tanks shall have no direct connection overboard, other than the standard discharge connection (Ref. Reg.13)
- Tanks for oil residues shall be designed and constructed so as to facilitate their cleaning and the discharge of residues to reception facilities.
- (Minimum Sludge Tank Capacity($V1$):
 - $V1=K1 \cdot C \cdot D(m^3)$
 - Where $K1=0.015$ where heavy fuel oil is purified for main engine use; *OR*



Chapter 2-Surveys and certification

- C = daily fuel oil consumption (m³);
- D = maximum period of voyage between ports where sludge can be discharged ashore(days) or 30 days.

