

# MSC.1/Circular.1421 – Guidelines on Exemptions for Crude Oil Tankers Solely Engaged in the Carriage of Cargoes and Cargo Handling Operations not Causing Corrosion – (13 June 2012)

## Circular

1. The Maritime Safety Committee, at its eighty-seventh session, adopted amendments to the SOLAS Convention by [resolution MSC.291\(87\)](#).
2. The new SOLAS [regulation II-1/3-11.5](#) introduced by this amendment allows an Administration to exempt a crude oil tanker from the requirements if the ship is built to be engaged solely in the carriage of cargoes and cargo handling operations not causing corrosion.
3. The Committee, at its ninetieth session (16 to 25 May 2012), having recognized the need for guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion, considered a proposal by the Sub-Committee on Ship Design and Equipment, at its fifty-fifth session, and approved the Guidelines on exemptions for crude oil tankers solely engaged in the carriage of cargoes and cargo handling operations not causing corrosion, set out in the annex.
4. The purpose of this circular is to provide guidance to Administrations. It should not, however, be considered as precluding Administrations from their right to grant exemptions from corrosion protection of cargo oil tanks of crude oil tankers, or to impose any conditions when granting such exemptions under the provisions of SOLAS [regulation II-1/3-11.5](#).

## Annex – Guidelines on Exemptions for Crude Oil Tankers Solely Engaged in the Carriage of Cargoes and Cargo Handling Operations not Causing Corrosion

### 1 Preamble

- 1.1. The new SOLAS [regulation II-1/3-11](#) adopted by [resolution MSC.291\(87\)](#) requires that all cargo oil tanks of crude oil tankers shall be coated during construction or protected by alternative means of corrosion protection or corrosion resistant material.
- 1.2. However, the Administration may exempt a crude oil tanker from the requirement if the ship is built to be engaged solely in the carriage of cargoes and cargo handling operations not causing corrosion.
- 1.3. These Guidelines are intended for use by Administrations when granting such exemption.

### 2 Corrosion mechanism and causations

- 2.1. In general, corrosion protection, either by coating or other means, is required at the top side (underdeck) part and bottom part of cargo oil tanks of crude oil tankers. However, the corrosion mechanisms are different.
- 2.2. Due attention should be paid to the fact that, regardless of the nature of the cargo, the bottom side is susceptible to pitting corrosion while the upper deck side is exposed to corrosive chemical composition of inert gas, i.e. hydrogen sulphide (H<sub>2</sub>S).
- 2.3. Other factors, such as oil and temperature inside the tank, are key factors in deciding on the vulnerability of these areas.

### 3 Criteria for identifying "benign crude oil"

. The following criteria should be used when identifying "benign crude oil". A ship which is built to be engaged solely in the carriage of such oil and cargo handling operations not causing corrosion may be exempted from the requirements of SOLAS [regulation II-1/3-11.3](#).

.1. The hydrogen sulphide (H<sup>2</sup>S) content of the crude oil shipment is below recognized detectable limits, i.e. it does not contain this vapour type as transforming into the vapour phase of the cargo tank.

.2. It is a no heat crude oil whose carriage temperature does not exceed 25°C.

.3. The water content of the crude oil is less than 500 ppm.

.4. The salt content of the crude oil is not more than 25 ppm.

.5. The Acid Number of the crude oil is less than 0.05 mg KOH/g. This level of concentration is developed from a review of hundreds of crude oil assays reporting this concentration and represents a "reasonable worst case" scenario for what could be considered a benign crude oil, including Alaskan North Slope Crude Oil.

## 4 Cargo handling operations

. When blending of two or more crude oils is undertaken on board a tanker, and where at least one of the crude oil's characteristics meets the criteria of the benign crude oil definition given above, this does not constitute that the final blend, whose characteristics will not be known until the blend is created and homogenized on board the tanker, can be considered as a benign crude oil by itself for transportation on board an uncoated tanker.

## 5 Exemption procedure

5.1. An exemption certificate should be issued ONLY to a tanker that will be carrying a crude oil meeting the above characteristics and associated with particular and concrete long-term trade. The following needs to be considered by the Administration prior to the issuance of an exemption certificate:

.1. a proposal for a crude oil tanker to be built without coated cargo tanks should be approved by the Administration in each particular case;

.2. the owner should provide evidence to the satisfaction of the Administration that the crude oil tanker is purpose-built for the benign crude oil trade for the duration of the tanker's commercial life;

.3. approval for exemption should be obtained from the Administration prior to signing the building contract with the shipbuilder and presented to the recognized organization;

.4. the trading limitation and the particular benign crude oil should be stated on the Exemption Certificate which is issued in addition to the Cargo Ship Safety Construction Certificate or Cargo Ship Safety Certificate; and

.5. in case the crude oil tanker ceases trading in the approved benign crude oil trade, a new approval for exemption should be obtained from the Administration for alternative benign crude oil trade.

5.2. During the surveys required by SOLAS [regulation I/10](#), the conditions under which the exemption was granted have to be verified and, during inspection of the exempted ship's cargo tanks, the condition of the tanks should be taken into account when considering the continued validity of the exemption certificate.

5.3. In case the crude oil tanker ceases trading in benign crude oil, the cargo tanks will need to be brought into compliance with SOLAS [regulation II-1/3-11](#), adopted by [resolution MSC.291\(87\)](#) and as may be amended, to be able to continue trading in non-benign crude oil transport.