
S T A T U T O R Y I N S T R U M E N T S

1980 No. 687

MERCHANT SHIPPING

SAFETY

**The Merchant Shipping (Fire Appliances—Application to
Other Ships) Rules 1980**

<i>Made - - - -</i>	15th May 1980
<i>Laid before Parliament</i>	27th May 1980
<i>Coming into Operation</i>	1st July 1980

The Secretary of State, in exercise of powers conferred by section 427 of the Merchant Shipping Act 1894(a) and now vested in him(b) and of all other powers enabling him in that behalf, hereby makes the following Rules:

1.—(1) These Rules may be cited as the Merchant Shipping (Fire Appliances—Application to Other Ships) Rules 1980 and shall come into operation on 1st July 1980.

(2) In these Rules the following expressions have the following meanings respectively:—

“Deadweight” means the difference in tonnes between the displacement of a ship at the summer load waterline and the lightweight of the ship;

“Existing tanker” means any tanker which is not a new tanker;

“Lightweight” means the displacement of a ship in tonnes without cargo, oil fuel, lubricating oil, ballast water and fresh water in tanks, stores, passengers and crew and their effects;

“New tanker” means a tanker—

- (i) for which the building contract is placed after 1st June 1979; or
- (ii) in the absence of a building contract, the keel of which is laid, or which is at a similar stage of construction, after 1st January 1980; or
- (iii) the delivery of which is after 1st June 1982; or
- (iv) which has undergone an alteration or modification of a major character—

(a) 1894 c. 60; section substituted by section 2 of the Merchant Shipping (Safety Convention) Act 1949 (c. 43) and amended by section 9 of the Merchant Shipping Act 1964 (c. 47).

(b) See S.I. 1965/145 and S.I. 1970/1537.

- (a) for which the contract is placed after 1st June 1979; or
- (b) in the absence of a contract, the construction work of which is begun after 1st January 1980; or
- (c) which is completed after 1st June 1982;

“Reid vapour pressure” means the vapour pressure of a liquid as determined by laboratory testing in a standard manner in the Reid apparatus;

“Tanker” means a cargo ship constructed or adapted for the carriage in bulk of liquid cargoes of a flammable nature; and

“United Kingdom tanker” means a tanker which is a United Kingdom ship as defined in section 21(2) of the Merchant Shipping Act 1979(a).

Application

2. These Rules apply in relation to tankers, other than United Kingdom tankers, while they are within any port in the United Kingdom:

Provided that these Rules shall not apply to—

- (a) chemical tankers having a valid Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk in compliance with the requirements of the IMCO Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; or
- (b) a tanker by reason of her being within a port in the United Kingdom if she would not have been in any such port but for stress of weather or any other circumstance that neither the master nor the owner nor the charterer (if any) could have prevented.

3. Every new tanker of 20,000 tonnes deadweight or over to which these Rules apply, constructed or adapted to carry crude oil and petroleum products having a closed flashpoint not exceeding 60°C and the Reid vapour pressure of which is below that of atmospheric pressure, and other liquids having a similar fire hazard, shall be provided with a fixed inert gas system complying with the requirements of rule 7 of these Rules.

4. On or after 1st June 1981 every existing tanker of 70,000 tonnes deadweight or over to which these Rules apply, constructed or adapted to carry the cargoes specified in rule 3 of these Rules shall be provided with a fixed inert gas system complying with the requirements of rule 7 of these Rules.

5. On or after 1st June 1983 every existing tanker of 40,000 tonnes deadweight or over but under 70,000 tonnes deadweight to which these Rules apply, constructed or adapted to carry the cargoes specified in rule 3 of these Rules, and every existing tanker of 20,000 tonnes deadweight or over but under 40,000 tonnes deadweight to which these Rules apply, provided with tank washing machines having an individual throughput greater than 60 cubic metres per hour, shall be provided with a fixed inert gas system complying with the requirements of rule 7 of these Rules.

(a) 1979 c. 39.

6. Every tanker to which these Rules apply which operates a cargo tank cleaning procedure using crude oil washing shall be provided with—

- (a) a fixed inert gas system complying with the requirements of rule 7 of these Rules; and
- (b) fixed tank washing machines.

7. Every fixed inert gas system provided in accordance with rules 3, 4, 5 and 6(a) of these Rules shall comply with the following requirements:—

- (a) the inert gas system shall be designed and operated so as to render and maintain the atmosphere of the cargo tanks, including slop tanks, non-flammable at all times, except when such tanks are required to be gas free. In the event that the inert gas system is unable to meet this requirement while the tanker is within any port in the United Kingdom, the master or owner of the tanker shall forthwith report this failure to the port authorities of that port;
- (b) the inert gas system shall be capable of providing to the cargo tanks on demand a gas, or mixture of gases, so deficient in oxygen that the atmosphere within a tank may be rendered inert, that is to say, incapable of propagating flame;
- (c) the inert gas system shall eliminate the need for fresh air to enter a tank during normal operations, except when preparing a tank for entry by personnel;
- (d) empty tanks shall be capable of being purged with inert gas to reduce the hydrocarbon content of a tank after discharge of cargo;
- (e) the atmosphere in the cargo tanks shall be capable of being maintained inert during washing of the tanks;
- (f) during cargo discharge, the system shall be such as to ensure that the volume of gas referred to in paragraph (h) below is available. At other times sufficient gas to ensure compliance with paragraph (i) below shall be continuously available;
- (g) suitable means for purging the tanks with fresh air as well as with inert gas shall be provided;
- (h) the inert gas system shall have a capacity of at least 125 per cent. of the maximum rated capacity of the cargo pumps;
- (i) under normal running conditions, when tanks are being filled or have been filled with inert gas, a positive pressure shall be capable of being maintained at the tank;
- (j) exhaust gas outlets for purging shall be suitably located in the open air. The arrangement and positioning of such outlets in the cargo tanks deck from which gas emission can occur shall be such as to minimize the possibility of gas being admitted to enclosed spaces containing a source of ignition, or collecting in the vicinity of deck machinery and equipment which may constitute an ignition hazard. In every case, the height of the outlet above the deck and the discharge velocity of the gas shall be considered in conjunction with the distance of any outlet from any deckhouse opening or source of ignition;

- (k) a scrubber shall be provided which will effectively cool the gas and remove solids and sulphur combustion products;
- (l) at least two fans (blowers) shall be provided which together shall be capable of delivering at least the amount of gas stipulated in paragraph (h) above;
- (m) the oxygen content in the inert gas supply shall not normally exceed 5 per cent. by volume;
- (n) means shall be provided to prevent the return of hydrocarbon gases or vapours from the tanks to the machinery spaces and uptakes and prevent the development of excessive pressure or vacuum. In addition, an effective water lock shall be installed at the scrubber or on deck. Branch piping for inert gas shall be fitted with stop valves or equivalent means of control at every tank. The system shall be so designed as to minimize the risk of ignition from the generation of static electricity;
- (o) instrumentation shall be fitted for continuously indicating and permanently recording, at all times when inert gas is being supplied, the pressure and oxygen content of the gas in the inert gas supply main on the discharge side of the fan. Such instrumentation shall, where practicable, be placed in the cargo control room if fitted and in any case shall be easily accessible to the officer in charge of cargo operations. Portable instruments suitable for measuring oxygen and hydrocarbon gases or vapour and the necessary tank fittings shall additionally be provided for monitoring the tank contents;
- (p) means for indicating the temperature and pressure of the inert gas main shall be provided;
- (q) alarms shall be provided to indicate at least—
 - (i) high oxygen content of gas in the inert gas main;
 - (ii) low gas pressure in the inert gas main;
 - (iii) low pressure in the supply to the deck water seal, if such equipment is installed;
 - (iv) high temperature of gas in the inert gas main; and
 - (v) low water pressure to the scrubber;and automatic shut-downs of the system shall be arranged on pre-determined limits being reached in respect of (iii), (iv) and (v) of this paragraph;
- (r) an instruction manual covering operational, safety and occupational health requirements shall be provided.

8. Where these Rules require that a particular fitting, appliance or apparatus shall be provided or carried in a tanker or that any particular provision shall be made, the Secretary of State may permit any other fitting, appliance or apparatus to be provided or carried, or any other provision to be made in that tanker, if he is satisfied by trial thereof or otherwise that such other fitting, appliance or apparatus or provision is at least as effective as that required by these Rules.

9. If a tanker to which these Rules apply does not comply with the requirements of these Rules, the owner or master of the tanker shall each be guilty

of an offence and liable on summary conviction to a fine not exceeding £1,000 or on conviction on indictment to a fine.

10. In any case where a tanker to which these Rules apply does not comply with the requirements of these Rules, the tanker shall be liable to be detained.

Norman Tebbit,
Parliamentary Under-Secretary of State,
Department of Trade.

15th May 1980.

EXPLANATORY NOTE

(This Note is not part of the Rules.)

These Rules require all tankers (not being United Kingdom tankers or specified chemical tankers) which operate a cargo tank cleaning procedure using crude oil washing to be provided with a specified type of fixed inert gas system and fixed tank washing machines (or ones which the Secretary of State considers are equivalent thereto) when they are within a port in the United Kingdom (rules 2 and 6). All other new tankers of 20,000 tonnes deadweight or over which are constructed or adapted to carry crude oil and petroleum products are also required to be provided with such a fixed inert gas system (rule 3). Certain other existing tankers which are constructed or adapted to carry such cargoes are required to be provided with such a fixed inert gas system from specified later dates (rules 4 and 5).

The IMCO Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk, referred to in proviso (a) to rule 2, is obtainable from the Inter-governmental Maritime Consultative Organisation, Piccadilly, London, W.1.

