
First published in the *Government Gazette*, Electronic Edition, on 22nd June 2015 at 5.00 pm.

No. S 376

PREVENTION OF POLLUTION OF THE SEA ACT
(CHAPTER 243)

PREVENTION OF POLLUTION OF THE SEA (AIR)
(AMENDMENT) REGULATIONS 2015

In exercise of the powers conferred by section 34 of the Prevention of Pollution of the Sea Act, the Maritime and Port Authority of Singapore, with the approval of the Minister for Transport, makes the following Regulations:

Citation and commencement

1. These Regulations may be cited as the Prevention of Pollution of the Sea (Air) (Amendment) Regulations 2015 and come into operation on 1 September 2015.

Amendment of First Schedule

2. The First Schedule to the Prevention of Pollution of the Sea (Air) Regulations 2005 (G.N. No. S 134/2005) is amended —

(a) by deleting paragraph 26 of regulation 2 and substituting the following paragraph:

“26 “Gas carrier” in relation to Chapter IV of this Annex means a cargo ship, other than an LNG carrier as defined in paragraph 38 of this regulation, constructed or adapted and used for the carriage in bulk of any liquefied gas.”;

(b) by inserting, immediately after paragraph 37 of regulation 2, the following paragraphs:

“38 “LNG carrier” in relation to Chapter IV of this Annex means a cargo ship constructed or adapted and used for the carriage in bulk of liquefied natural gas (LNG).

39 “Cruise passenger ship” in relation to Chapter IV of this Annex means a passenger ship not having a cargo deck, designed exclusively for commercial transportation of passengers in overnight accommodations on a sea voyage.

40 “Conventional propulsion” in relation to Chapter IV of this Annex means a method of propulsion where a main reciprocating internal combustion engine(s) is the prime mover and coupled to a propulsion shaft either directly or through a gear box.

41 “Non-conventional propulsion” in relation to Chapter IV of this Annex means a method of propulsion, other than conventional propulsion, including diesel-electric propulsion, turbine propulsion, and hybrid propulsion systems.

42 “Cargo ship having ice-breaking capability” in relation to Chapter IV of this Annex means a cargo ship which is designed to break level ice independently with a speed of at least 2 knots when the level ice thickness is 1.0 m or more having ice bending strength of at least 500 kPa.

43 A ship *delivered on or after* 1 September 2019 means a ship:

- .1 for which the building contract is placed on or after 1 September 2015; or
- .2 in the absence of a building contract, the keel of which is laid, or which is at a similar stage of construction, on or after 1 March 2016; or
- .3 the delivery of which is on or after 1 September 2019.”;

- (c) by deleting the words “a ship” in paragraph 4.2 of regulation 5 and substituting the words “a new ship”;
- (d) by deleting paragraph 2.2 of regulation 13 and substituting the following paragraph and footnote:

“2.2 For a major conversion involving the replacement of a marine diesel engine with a non-identical marine diesel engine, or the installation of an additional marine diesel engine, the standards in this regulation at the time of the replacement or addition of the engine shall apply. In the case of replacement engines only, if it is not possible for such a replacement engine to meet the standards set forth in paragraph 5.1.1 of this regulation (Tier III, as applicable), then that replacement engine shall meet the standards set forth in paragraph 4 of this regulation (Tier II), taking into account guidelines developed by the Organization*.

* Refer to the 2013 Guidelines as required by regulation 13.2.2 of MARPOL Annex VI in respect of non-identical replacement engines not required to meet the Tier III limit, adopted by the MEPC by resolution MEPC.230(65).”;

(e) by deleting paragraphs 5.1 and 5.2 of regulation 13 and substituting the following paragraphs:

“5.1 Subject to regulation 3 of this Annex, in an emission control area designated for Tier III NO_x control under paragraph 6 of this regulation, the operation of a marine diesel engine that is installed on a ship:

- .1 is prohibited except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_x) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):
 - .1 3.4 g/kWh when n is less than 130 rpm;
 - .2 $9 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm; and
 - .3 2.0 g/kWh when n is 2,000 rpm or more;

when:

- .2 that ship is constructed on or after 1 January 2016 and is operating in the North American Emission Control Area or the United States Caribbean Sea Emission Control Area;

when:

- .3 that ship is operating in an emission control area designated for Tier III NO_x control under paragraph 6 of this regulation, other than an emission control area described in paragraph 5.1.2 of this regulation, and is constructed on or after the date of adoption of such an emission control area, or a later date as may be specified in the amendment designating the NO_x Tier III emission control area, whichever is later.

5.2 The standards set forth in paragraph 5.1.1 of this regulation shall not apply to:

- .1 a marine diesel engine installed on a ship with a length (L), as defined in regulation 1.19 of Annex I to the present Convention, of less than 24 metres when it has been specifically designed, and is used solely, for recreational purposes; or
- .2 a marine diesel engine installed on a ship with a combined nameplate diesel engine propulsion power of less than 750 kW if it is demonstrated, to the satisfaction of the Administration, that the ship cannot comply with the standards set forth in paragraph 5.1.1 of this regulation because of design or construction limitations of the ship; or
- .3 a marine diesel engine installed on a ship constructed prior to 1 January 2021 of less than 500 gross tonnage, with a length (L), as defined in regulation 1.19 of Annex I to the present convention, of 24 metres or over when it has been specifically designed, and is used solely, for recreational purposes.”;

- (f) by deleting paragraph 10 of regulation 13 (including the sub-heading);
- (g) by inserting, immediately after sub-paragraph 1 of paragraph 2 of regulation 19, the following sub-paragraph:
 “2 ships not propelled by mechanical means, and platforms including FPSOs and FSUs and drilling rigs, regardless of their propulsion.”;
- (h) by deleting paragraph 3 of regulation 19 and substituting the following paragraph:
 “3 Regulations 20 and 21 of this Annex shall not apply to ships which have non-conventional propulsion, except that regulations 20 and 21 shall apply to cruise passenger ships having non-conventional propulsion and LNG carriers having conventional or non-conventional propulsion, delivered on or after 1 September 2019, as defined in paragraph 43 of regulation 2. Regulations 20 and 21 shall not apply to cargo ships having ice-breaking capability.”;
- (i) by inserting, immediately after the words “regulations 2.25 to 2.35” in paragraph 1 of regulation 20, the words “, 2.38 and 2.39”;
- (j) by deleting the footnote in paragraph 1 of regulation 20 and substituting the following footnote:
 “* Refer to the *Code for Recognized Organizations (RO Code)*, adopted by the MEPC by resolution MEPC.237(65), as may be amended.”;
- (k) by inserting, immediately after the words “regulations 2.25 to 2.31” in paragraph 1 of regulation 21, the words “, 2.33 to 2.35, 2.38 and 2.39”;
- (l) by inserting, immediately below the item relating to “Combination carrier” in Table 1 of regulation 21, the following items:

“

LNG carrier***	10,000 DWT and above	n/a	10**	20	30
Ro-ro cargo ship (vehicle carrier)***	10,000 DWT and above	n/a	5**	15	30
Ro-ro cargo ship***	2,000 DWT and above	n/a	5**	20	30
	1,000 – 2,000 DWT	n/a	0-5*,**	0-20*	0-30*

Ro-ro passenger ship***	1,000 DWT and above	n/a	5**	20	30
	250 – 1,000 DWT	n/a	0-5*,**	0-20*	0-30*
Cruise passenger ship*** having non-conventional propulsion	85,000 GT and above	n/a	5**	20	30
	25,000 – 85,000 GT	n/a	0-5*,**	0-20*	0-30*

”;

(m) by deleting the footnote of Table 1 of regulation 21 and substituting the following footnotes:

“* Reduction factor to be linearly interpolated between the two values dependent upon ship size. The lower value of the reduction factor is to be applied to the smaller ship size.

** Phase 1 commences for those ships on 1 September 2015.

*** Reduction factor applies to those ships delivered on or after 1 September 2019, as defined in paragraph 43 of regulation 2.

Note: n/a means that no required EEDI applies.”;

(n) by inserting, immediately below the item relating to “2.31 Combination carrier” in Table 2 of regulation 21, the following items:

“

2.33 Ro-ro cargo ship (vehicle carrier)	$(DWT/GT)^{-0.7}$ • 780.36 where $DWT/GT < 0.3$ 1812.63 where $DWT/GT \geq 0.3$	DWT of the ship	0.471
2.34 Ro-ro cargo ship	1405.15	DWT of the ship	0.498
2.35 Ro-ro passenger ship	752.16	DWT of the ship	0.381
2.38 LNG carrier	2253.7	DWT of the ship	0.474
2.39 Cruise passenger ship having non-conventional propulsion	170.84	GT of the ship	0.214

”; and

(o) by deleting the footnote of the “SUPPLEMENT TO INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE (IAAP CERTIFICATE)” in Appendix I and substituting the following footnote:

“* Completed only in respect of ships constructed on or after 1 January 2016 that are specially designed, and used solely, for recreational purposes and to which, in accordance with regulation 13.5.2.1 and regulation 13.5.2.3, the NO_x emission limit as given by regulation 13.5.1.1 will not apply.”.

*[G.N. Nos. S 620/2006; S 331/2010; S 398/2011; S 21/2012; S 661/2012;
S 467/2013]*

Made on 17 June 2015.

LUCIEN WONG
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Maritime and Port Authority of Singapore.*

[MPA 46/06.011.V06/LSK; AG/LEGIS/SL/243/2015/1 Vol. 1]