

# Maritime Rules

## Part 24E: Carriage of Cargoes — Offshore Containers

MNZ Consolidation

*1 April 2015*

ISBN 978-0-478-44735-4

Published by

Maritime New Zealand, PO Box 25620, Wellington 6146, New Zealand

Maritime New Zealand Copyright 2015

## **Part objective**

The objective of Part 24E is to prescribe requirements for 'offshore containers' loaded and unloaded at offshore terminals.

Most shipping containers, including 'convention containers', are designed only for handling at ports and use in inland transport. Part 24E specifies requirements for cargo containers handled in open seas where adverse weather and sea conditions and the dynamic lifting and impact forces that may be experienced by the container, can be far greater than those provided for under the International Convention for Safe Containers 1972 and Part 24D. The various types of offshore containers are often purpose built and many are smaller than the standardised 'ISO' containers covered by the Convention.

The requirements of Part 24E, therefore, take into account handling conditions and container type in the design approval, manufacture and testing of offshore containers. Part 24E also provides requirements for the manufacture and inspection, identification and marking of offshore containers. The control provisions include prohibitions on the lifting of unsafe and overloaded containers and unauthorised use or removal of approved identification plates and markings.

Recognising that many purpose built offshore containers may be currently in use in the offshore industry, transitional provisions are provided in Part 24E to enable either continued use or phase out, where existing containers do not meet the design and testing requirements of the Part.

Maritime rules are disallowable instruments under the Legislation Act 2012. Under that Act, the rules are required to be tabled in the House of Representatives. The House of Representatives may, by resolution, disallow any rules. The Regulations Review Committee is the select committee responsible for considering rules under that Act.

### **Disclaimer:**

This document is the current consolidated version of Maritime/Marine Protection Rules Part XX produced by Maritime New Zealand, and serves as a reference only. It has been compiled from the official rules that have been signed into law by the Minister of Transport. Copies of the official rule and amendments as signed by the Minister of Transport may be downloaded from the Maritime New Zealand website. [www.maritimenz.govt.nz](http://www.maritimenz.govt.nz)

## History of Part 24E

Part 24E first came into force on 30 June 2005 and now incorporates the following amendments:

<b>Amendment</b>	<b>Effective Date</b>
Amendment 1	1 April 2014
Amendment 2	1 July 2014
Amendment 3	1 April 2015

### Summary of Amendments

#### **Amendment 1**

Parts 20, 31, 32, 34 and 35: Consequential Amendments      24E.2

#### **Amendment 2**

Part 24A: Carriage of Cargoes — Dangerous Goods      Removed footnote from Paragraph (b)  
of the definition for offshore container

#### **Amendment 3**

Maritime Rules Various Amendments 2015      Part Objective

All signed rules can be found on our website:

<http://maritimenz.govt.nz/Rules/List-of-all-rules/Part24E-maritime-rule.asp>

## Contents

<b>Part objective</b>	ii
<b>Section 1 — Preliminary</b>	
24E.1 Entry into force	1
24E.2 Definitions	1
24E.3 Application	3
<b>Section 2 — New Zealand approved offshore containers</b>	
24E.4 Approval	4
24E.5 Design type approval	4
24E.6 Modified offshore container approval	5
24E.7 Individual offshore container approval	5
24E.8 Withdrawal of offshore container approval	6
<b>Approval and inspection data plates</b>	
24E.9 Offshore container approval plate and inspection data plate	7
<b>Maintenance and inspection</b>	
24E.10 Maintenance and inspection	7
24E.11 Records	7
<b>Section 3 — Control of offshore containers in New Zealand waters</b>	
24E.12 Unauthorised affixture of offshore container approval plate	9
24E.13 Validity of offshore container approval plate	9
24E.14 Removal of offshore container approval plate when no longer valid	9
24E.15 Offshore containers that are not to be loaded or unloaded	9
24E.16 Director may authorise loading or unloading	10
24E.17 Unauthorised inspection date or mark	10
24E.18 Maximum gross mass markings	10
<b>Section 4 — Transitional provisions</b>	
24E.19 Existing Offshore Containers	11
Appendix 1 – Design and testing of offshore containers	12
Appendix 2 – Tests for offshore containers	14
Appendix 3 – Approval plate and inspection data plate for offshore containers	15



## General

### Section 1 – Preliminary

#### 24E.1 Entry into force

This Part comes into force on 30 June 2005.

#### 24E.2 Definitions

In this Part –

**Act** means the Maritime Transport Act 1994;

**approved** means approved by an approving authority;

**approving authority** means an authorised organisation or a New Zealand based engineering approval, inspection or testing agency approved by the Director for the purposes of this Part;

**authorised organisation** means an organisation that has entered into a memorandum of agreement with the Director in compliance with IMO Assembly Resolution A.739(18) and its Annexes entitled '*Guidelines for the Authorisation of Organisations Acting on Behalf of the Administration*', whereby that organisation may verify that the design, construction and testing of an offshore container is in accordance with the requirements of MSC/Circ.860;

**cargo** means goods, wares, merchandise and articles of any kind carried in an offshore container;

**corner fittings** means an arrangement of apertures and faces at the top and/or bottom of a container for the purposes of handling, stacking and/or securing;

**dangerous goods** –

(a) means any –

- (i) substance listed and classified according to its hazards in the IMDG Code;
- (ii) harmful substance;
- (iii) empty receptacle or packaging that has been used previously for a substance specified in paragraph (i) or (ii), unless the receptacle or packaging has been cleaned, subsequently dried and, if appropriate, gas freed, and adequate precautions have been taken to ensure the receptacle or packaging contains no residue;

(b) does not include ship's stores and equipment;

**design type series** means manufactured in accordance with an approved design type;

**enclosed water limits** has the same meaning as in Part 20;

**exclusive economic zone of New Zealand** has the meaning given to it by section 9 of the Territorial Sea, Contiguous Zone and Exclusive Economic Zone Act 1977;

**existing offshore container** means an offshore container built, or the construction of which commenced, before the date on which this Part came into force;

**IMDG Code** means the *International Maritime Dangerous Goods Code* published by the IMO;

**IMO** means the International Maritime Organisation;

**inspector** means an inspector employed by an approving authority;

**maintained** means maintained in an efficient state and working order and in good repair;

**MSC/Circ.860** means the 'Guidelines for the Approval of Offshore Containers Handled in Open Seas' approved by the IMO's Maritime Safety Committee at its 69<sup>th</sup> session and published as MSC/Circ.860;

**New Zealand marine waters** means –

- (a) the territorial sea of New Zealand; and
- (b) the waters of the exclusive economic zone of New Zealand;

**offshore container** means a portable unit specially designed for repeated use in the transport of cargo to, from or between offshore terminals; and may include –

- (a) a container to which Part 24D applies;<sup>1</sup> or
- (b) a portable tank for dangerous goods as defined in the IMDG Code;

**offshore terminal** means any place in the sea where cargo is loaded or unloaded;

**owner** means –

- (a) the owner; or
- (b) the lessee or bailee of a container, if, under an agreement with the owner, the exercise of the owner's responsibility for the maintenance and examination of the container has been assumed by the lessee or bailee;

**Part** means a group of rules made under the Act;

**payload** means the difference between the maximum gross mass and the tare mass;

**prototype** means a container representative of those manufactured or to be manufactured in a design type series;

**tare mass** means the mass of an empty offshore container including any permanently affixed ancillary equipment;

**type series** means design type series;

**unsafe** means having a defect that could place any person in danger.

### **24E.3 Application**

- (1) Section 2 applies to offshore containers for which New Zealand approval is requested.
- (2) Section 3 applies to offshore containers that are loaded onto or unloaded from –
  - (a) a ship at an offshore terminal within New Zealand marine waters but beyond enclosed water limits;
  - (b) a New Zealand ship at an offshore terminal within international waters.
- (3) Nothing in this Part precludes the application of additional structural safety requirements or tests to an offshore container –

---

<sup>1</sup> See Part 24D for details regarding the construction and approval of Safe Container Convention containers.



**Part 24E: Carriage of Cargoes — Offshore Containers**

- (a) specially designed and constructed, or adapted, for the transport of dangerous goods; or
- (b) designed and constructed, or adapted, for the carriage of bulk liquid.

## **Section 2 – New Zealand approved offshore containers**

### **Approval**

#### **24E.4 Approval**

- (1) Application for approval of an offshore container must be made by the manufacturer to an approving authority.
- (2) An approving authority may approve an offshore container in accordance with this Part, having regard to the design and testing requirements of Appendix 1.

#### **24E.5 Design type approval**

- (1) An application for design type approval must include –
  - (a) a design specification, drawings and such other data related to the design and manufacture as may be required by the approving authority; and
  - (b) details of the identification symbols that the manufacturer will assign to the type series.
- (2) For design type approval, the manufacturer must –
  - (a) institute and maintain a quality system, acceptable to the approving authority, for the manufacture of the prototype and any subsequent type series offshore containers;
  - (b) supply, to the approving authority, such prototype as the approving authority may wish to examine;
  - (c) upon request, ensure that the approving authority is granted all necessary facilities for inspecting the manufacturing process and witnessing tests of the prototype;
  - (d) under the supervision of the approving authority, subject a prototype to –
    - (i) the tests specified in Appendix 2 of this Part; or
    - (ii) tests otherwise required by the approving authority;
  - (e) notify the approving authority of –
    - (i) an intention to commence the manufacture of any type series offshore container; and
    - (ii) the identification number to be assigned to each manufactured type series offshore container;
  - (f) for each type series offshore container, keep a record that must –
    - (i) contain the manufacturer's identification number of the offshore container, the date of delivery and the name and address of the customer to whom the offshore container is delivered;
    - (ii) be retained for a period of not less than 15 years from the date of delivery of that offshore container; and
    - (iii) be made available to the Director and the approving authority upon request;
  - (g) notify the approving authority of any change in the design specification; (h) in addition to the tests of the prototype, subject additional type series offshore

containers to tests as and when the approving authority may require; and

- (i) not affix an offshore container approval plate to any container to which the design relates until the approving authority has approved the design and manufacture in writing.

**24E.6 Modified offshore container approval**

- (1) The manufacturer of type series offshore containers must apply to an approving authority for approval of any design modification to those offshore containers.
- (2) Subject to subrule (3), the manufacturer of the modified design type offshore containers must comply with rule 24E.5 in respect of an application for approval of a modified design type.
- (3) If the approving authority is satisfied that the modifications do not affect the structural integrity of the offshore container or the validity of tests conducted in the course of design type approval the authorised approving authority may waive tests of a prototype.
- (4) The manufacturer may not affix an offshore container approval plate, to any offshore container to which the design modification applies, until the approving authority has approved the modified design type in writing.

**24E.7 Individual offshore container approval**

- (1) An application for approval of an individual offshore container must include –
  - (a) a design specification, drawings and such other data related to the design and manufacture as may be required by the approving authority; and
  - (b) details of the identification symbols that the manufacturer will assign to the offshore container.
- (2) The manufacturer must –
  - (a) notify the approving authority of an intention to commence manufacture of the offshore container;
  - (b) upon request, ensure that the approving authority is granted all necessary facilities for inspecting the manufacturing process and witnessing tests of the offshore container;
  - (c) manufacture the offshore container under the inspection of and to the satisfaction of the approving authority; and
  - (d) not affix an offshore container approval plate to the offshore container until the approving authority has approved the design and manufacture in writing.

**24E.8 Withdrawal of offshore container approval**

- (1) If the Director considers that an approved offshore container does not comply with the requirements of this Part, he or she may withdraw the approval issued in respect of that offshore container.
- (2) If the Director withdraws an approval under subrule (1), he or she must give written notification of the withdrawal to –
  - (a) the applicant to whom the approval was issued; and
  - (b) the approving authority that issued that approval.
- (3) If an approving authority considers that an approved offshore container does not comply with the requirements of this Part, it may withdraw the approval issued by it in respect of

that offshore container.

- (4) If the approving authority withdraws an approval under subrule (3), the approving authority must give written notification of the withdrawal to –
- (a) the applicant to whom the approval was issued; and
  - (b) the Director.

## **Approval and inspection data plates**

### **24E.9 Offshore container approval plate and inspection data plate**

Subject to rule 24E.14, the owner of an approved offshore container must ensure that –

- (a) an offshore container approval plate; and
- (b) an offshore container inspection data plate,  
in the form prescribed in Appendix 3, are permanently affixed to the offshore container –
  - (i) in a readily visible place;
  - (ii) adjacent to any other plate issued for official purposes; and
  - (iii) where it will not be readily damaged.

## **Maintenance and inspection**

### **24E.10 Maintenance and inspection**

The owner of an approved offshore container must ensure that –

- (a) it is maintained in a safe condition;
- (b) it is inspected by the approving authority –
  - (i) annually; or
  - (ii) if it is out of service when the annual inspection is due, before it is brought back into service;
- (c) an inspection data plate is affixed to it in the form prescribed in Appendix 3; and
- (d) the date of inspection and the mark of the inspector is marked on that inspection data plate.

### **24E.11 Records**

The owner of an approved offshore container must maintain a record, in respect of that offshore container, of –

- (a) the name of the manufacturer;
- (b) the identification number;
- (c) the approval number;
- (d) inspections, inspection dates and the name of the approving authority; and
- (e) the test certificates associated with any attached lifting gear.

### Section 3 – Control of offshore containers in New Zealand waters

#### 24E.12 Unauthorised affixture of offshore container approval plate

No person may affix an offshore container approval plate, or order an offshore container approval plate to be affixed, to an offshore container except –

- (a) in accordance with this Part; or
- (b) by or under the authority of a government that has implemented the requirements of MSC/Circ.860.

#### 24E.13 Validity of offshore container approval plate

An offshore container approval plate affixed to an offshore container remains valid until the approval under which it was affixed is withdrawn.

#### 24E.14 Removal of offshore container approval plate when no longer valid

The owner of an offshore container must remove the offshore container approval plate if–

- (a) the offshore container has been modified in a manner that would invalidate–
  - (i) the approval under which the plate was affixed; and
  - (ii) the information recorded on the plate; or
- (b) the offshore container is removed from service and is not being maintained in accordance with –
  - (i) this Part; or
  - (ii) the regulations of a government that has implemented the requirements of MSC/Circ.860; or
- (c) the approval under which the plate was affixed has been withdrawn.

#### 24E.15 Offshore containers that are not to be loaded or unloaded

No person may load an offshore container onto, or unload an offshore container from, a ship if –

- (a) that person has reason to believe that the offshore container is unsafe;
- (b) the offshore container does not have affixed to it –
  - (i) a valid offshore container approval plate;
  - (ii) a valid offshore container inspection data plate;
- (c) more than 12 months has elapsed since the date of the last periodic inspection indicated on the inspection data plate;
- (d) the mass of the offshore container (including its contents and any affixed ancillary equipment) exceeds the maximum operating gross mass of the offshore container indicated on the offshore container approval plate or the offshore container inspection data plate;
- (e) the offshore container is used for the transport of bulk liquids and –
  - (i) that person has reason to believe the container has; or

**Maritime Rules**

- (ii) the container shows evidence of,  
damaged or corroded areas, leakage, or other conditions that indicate a deficiency that could affect the integrity of the container.

**24E.16 Director may authorise loading or unloading**

The Director may allow an offshore container to be loaded or unloaded contrary to rule 24E.15, subject to such conditions as he or she considers reasonable and proper in the circumstances.

**24E.17 Unauthorised inspection date or mark**

No person may mark, or order to be marked, an inspection date or inspector's mark on an offshore container inspection data plate except –

- (a) in accordance with this Part; or
- (b) by or under the authority of a government that has implemented the requirements of MSC/Circ.860.

**24E.18 Maximum gross mass markings**

The owner must ensure that all maximum operating gross mass markings on an offshore container are consistent with the maximum operating gross mass indicated on the affixed offshore container approval plate.

## **Section 4 – Transitional provisions**

### **24E.19 Existing offshore containers**

- (1) Rules 24E.9 and 24E.15(b) do not apply to an existing offshore container until the date –
  - (a) 12 months after the day on which this Part comes into force; or
  - (b) on which approval is given under Section 2,whichever is the earlier.
- (2) An existing offshore container that does not comply with the design and testing requirements of Appendices 1 and 2 may be approved by an approving authority if it –
  - (a) was approved by the approving authority before this Part came into force; and
  - (b) has been continuously maintained under inspection by, and to the satisfaction of, that approving authority.
- (3) An existing offshore container that would not have been approved but for subrule (2), may remain in service for a period of 10 years after this Part comes into force.

## **Appendix 1**

### **Design and testing of offshore containers**

- (1) The design and testing of offshore containers must take into account the dynamic lifting and impact forces that may occur when an offshore container is handled in open seas in adverse weather and sea conditions.
- (2) Offshore containers must –
  - (a) be fitted with special pad eyes, suitable for the attachment, by shackles, of purpose-built slings. If corner fittings are mounted in conjunction with pad eyes, the corner fittings must not be used for lifting the offshore container when offshore;
  - (b) be pre-slung in order to facilitate handling in open seas. Slings must be permanently attached to the offshore container and are to be considered to be part of the offshore container. The design requirements for slings must take into account the higher dynamic forces that will occur when handling offshore containers in open seas and the normal safety factor for slings must be increased by a factor acceptable to the approving authority. Components of the slings must be secured against accidental release. If high strength steel is used for chains, links, shackles or other components of slings, it must meet the minimum impact toughness specified by the approving authority;
  - (c) be designed to withstand a 30 degree tilt in any direction when fully loaded and, for this purpose, the cargo may normally be assumed to be distributed evenly with its centre of gravity at the half height of the container, except in the case of special purpose containers (for example, gas bottle rack containers), for which the actual centre of gravity must be used;
  - (d) not have protruding parts that may catch on other containers or structures; and
  - (e) not have doors and hatches that may open during transport or lifting.
- (3) Strength calculations for offshore containers must include –
  - (a)
    - (i) lifting with the attached lifting sling;
    - (ii) lifting with any other applicable means of handling (e.g. lifting with fork lift truck); and
    - (iii) consideration of impact loads on the sides and bottom of the offshore container; or
  - (b) static equivalency of point loads, in combination with the tests set out in Appendix 2.



## Appendix 2

### Tests for offshore containers

- 1 In this Appendix, **R** means the maximum gross mass of the container and its cargo.
- 2 At least one offshore container of each design type must be subjected to the following tests –

Test	Requirements
4-point lifting test	The internal load must be uniformly distributed such that the total mass of the container and test load is equal to 2.5R. (A container fitted with four pad eyes must be lifted with a lifting sling attached to each of its four pad eyes with an angle to the vertical equal to the design angle.)
2-point lifting test	The internal load must be uniformly distributed such that the total mass of the container and test load is equal to 1.5R. (A container fitted with four pad eyes must be lifted with a lifting sling attached to only two pad eyes situated diagonally opposite each other.)
Vertical impact test	The internal load must be uniformly distributed such that the total mass of the container and test load is equal to R. The container must be suspended at an inclined angle with the lowest corner at least 50mm above a rigid floor. The container must then be quickly released so that it will have a speed of at least 1 m/s on initial impact.
Other tests	Other tests, designed to demonstrate the ability of a container type to withstand other handling or transport forces, as may be required by the approving authority.

- 3 Approval cannot be given if, in any test, the container suffers permanent damage or deformation that would render it incapable of being used for its designed purpose.
- 4 In order to ensure that offshore containers of the same design type are manufactured to the approved design, the approving authority may examine and test as many type series containers as that authority considers necessary.

## Appendix 3

### Approval plate and inspection data plate for offshore containers

#### 1 Definitions

In this Appendix –

**fireproof** means capable of withstanding, and remaining legible after, not less than 5 minutes exposure to a temperature of 500°C when mounted on the material of construction of the container;

**non-corroding** means capable of resisting the effects of the marine environment, so as to remain legible for the working life of the container;

**permanent**, in relation to a plate, means having a legible life expectancy equal to or greater than the life expectancy of the container to which the plate is affixed.

#### 2 Offshore container approval plate

The offshore container approval plate must –

- (a) be made of a permanent, non-corroding, fireproof material;
- (b) be not less than 200mm width by 100mm height;
- (c) have the words 'OFFSHORE CONTAINER', permanently and legibly stamped into, embossed or otherwise indicated on the surface of the plate at a minimum height of 8 mm;
- (d) have all other words and numbers permanently and legibly stamped into, embossed on or indicated on the surface of the plate at a minimum height of 5 mm;
- (e) conform to the model shown in figure 1 below and contain at least the following information on the line numbers indicated –
  - (i) line 1: the name of the manufacturer of the offshore container;
  - (ii) line 2: the month and year in which the offshore container was manufactured;
  - (iii) line 3: the manufacturer's identification number of the offshore container;
  - (iv) line 4: the maximum operating gross mass of the offshore container expressed in kilograms;
  - (v) line 5: the tare mass of the offshore container expressed in kilograms;
  - (vi) line 6: the maximum permissible payload of the offshore container expressed in kilograms;
  - (vii) line 7: the country of approval (designated by the letters "NZ" in the case of New Zealand), the name of the approving authority and the approving authority's approval number for that offshore container;
- (f) if fitted to an existing offshore container to which rule 24E.19(3) applies, be clearly marked with the 10 year expiry date prescribed in that subrule.

FIGURE 1

<b>OFFSHORE CONTAINER</b>	
Name of manufacturer:	
Month/year of manufacture:	
Identification No:	
Maximum gross mass:	kg
Tare mass:	kg
Maximum Payload:	kg
Approving Authority/Approval No:	

### 3 Inspection data plate

- (1) The inspection data plate for an offshore container must –
  - (a) be made of a permanent, non-corroding, fireproof material;
  - (b) be not less than 200mm in width by 250 mm in height;
  - (c) have the letters and words 'INSPECTION DATA–OFFSHORE CONTAINER', permanently and legibly stamped into, embossed or indicated on the surface of the plate at a minimum height of 8 mm;
  - (d) have all other words and numbers permanently and legibly stamped into, embossed on or indicated on the surface of the plate at a minimum height of 5 mm;
  - (e) conform to the model shown in figure 2 below and contain at least the following information on the line numbers indicated –
    - (i) line 1: the manufacturer's identification number of the offshore container;
    - (ii) line 2: the maximum operating gross mass of the offshore container expressed in kilograms;
    - (iii) line 3: the tare mass of the offshore container expressed in kilograms;
    - (iv) line 4: the maximum permissible payload of the offshore container expressed in kilograms;
    - (v) line 5: the owner's name and contact details; and
    - (vi) line 6: the record of inspections, indicating the date(s) of inspection and identification of the inspection agency.
- (2) The offshore container inspection data plate may be combined with the offshore container approval plate and any other official approval or data plates on a single base plate.
- (3) The offshore container approval and inspection data plates must –
  - (a) if possible, be fully welded to the container; or
  - (b) be permanently attached to the satisfaction of the approving authority.

FIGURE 2

INSPECTION DATA – OFFSHORE CONTAINER		
Identification No:		
Maximum gross mass:	kg	
Tare mass:	kg	
Maximum Payload:	kg	
Owner:		
Date .....	Date .....	Date .....
Inspected by .....	Inspected by .....	Inspected by .....
Date .....	Date .....	Date .....
Inspected by .....	Inspected by .....	Inspected by .....
Date .....	Date .....	Date .....
Inspected by .....	Inspected by .....	Inspected by .....
Date .....	Date .....	Date .....
Inspected by .....	Inspected by .....	Inspected by .....
Date .....	Date .....	Date .....
Inspected by .....	Inspected by .....	Inspected by .....