



Ministry of Transport  
TE MANATŪ WAKA

## Maritime Transport Act 1994

### Maritime Rules

#### PART 40G: DESIGN, CONSTRUCTION AND EQUIPMENT – NOVEL SHIPS

Pursuant to sections 34 and 36 of the Maritime Transport Act 1994  
I, Harry James Duynhoven, Minister for Transport Safety, hereby make  
the following maritime rules.

Signed at Wellington

this 11<sup>th</sup> day of December 2006

by HARRY JAMES DUYNHOVEN

Minister for Transport Safety

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## **Objective**

Part 40G prescribes design, construction and equipment requirements for –

- commercial ships not covered by Part 40A, 40B, 40C, 40D, 40E, 40F or 80 including submersible vessels and wing-in-ground (WIG) craft; and
- ships exempted from the provisions of those Parts.

Part 40G requires that every novel ship have a certificate of fitness and a safety case approved by the Director. In addition, Part 40G requires that the approved safety case and the ship's Maritime New Zealand number be displayed conspicuously on the ship.

Part 40G is not intended to apply to pleasure craft, manually powered ships, ships powered solely by sail or warships.

*Rules subject to Regulations (Disallowance) Act 1989*

Maritime rules are subject to the Regulations (Disallowance) Act 1989. 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 the Regulations (Disallowance) Act 1989.

## **Extent of Consultation**

On 30 July 2005, Maritime New Zealand published in each of the daily newspapers in the four main centres of New Zealand a notice inviting comments on the proposed Part 40G. A notice was also published in the *New Zealand Gazette* on 28 July 2005. The Authority then made its Invitation to Comment and draft Part 40G available to the public with approximately 250 copies being sent automatically to interested parties. Comments on the draft Part were requested by 28 September 2005.

Three organisations and one individual provided written submissions on the draft. All submissions and any oral comments were considered, and where appropriate, the proposed rules were amended to take account of the comments made.

#### 40G.1 Entry into force

This Part comes into force on 11 January 2007.

#### 40G.2 Definitions

In this Part –

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

**classification society** means an organisation that has entered into a memorandum of agreement with the Director –

- (a) governing the undertaking, under the Act and the rules, of particular survey and certification functions by that organisation's employees; and
- (b) in compliance with the International Maritime Organisation Assembly Resolution A.739(18) and the Annexes thereto, entitled *Guidelines for the Authorisation of Organisations Acting on Behalf of the Administration*;

**international voyage** means a voyage to or from a port outside New Zealand;

**major alteration** means the alteration, or the replacement, removal or addition of any part, of a ship that is likely to –

- (a) significantly affect the structural integrity, tonnage, freeboard, cargo or passenger capacity, crew or passenger accommodation, conditions of assignment of load lines, watertight subdivision, stability, structural fire protection or safety equipment of the ship; or
- (b) result in significant changes to the propulsion machinery, auxiliary machinery or method of propulsion of the ship;

**major repair** means a repair that is likely to significantly affect the structural integrity, conditions of assignment of load lines, watertight subdivision, stability, structural fire protection, main propulsion machinery, method of propulsion, steering gear or vital auxiliary machinery of the ship;

**New Zealand jurisdiction** means –

- (a) the internal waters of New Zealand;
- (b) the territorial sea of New Zealand;
- (c) the exclusive economic zone of New Zealand; and
- (d) the waters above the continental shelf, but beyond the outer limits of the exclusive economic zone, of New Zealand;

**operate on the New Zealand coast** –

- (a) means to undertake voyages which begin and end at ports or offshore terminals in New Zealand jurisdiction; but
- (b) does not include any voyage of a foreign ship in New Zealand waters that is exercising –
  - (i) the right of innocent passage; or
  - (ii) the right of transit passage through straits used for international navigation;

**pilot**, in relation to a submersible, means the person driving the craft;

**safety case** means a written document prepared by the owner to demonstrate that major hazards arising from the operation of the ship –

- (a) have been reduced to risk levels that are as low as reasonably practicable; and
- (b) will be managed effectively;

**submersible** means a submarine or other ship capable of navigation when totally submerged;

**survey** means a thorough examination of a ship and its equipment –

- (a) performed by, in the presence of, or under the direct control of, a surveyor;
- (b)
  - (i) utilising but not limited to visual inspection, non-destructive testing, destructive testing;
  - (ii) adopting appropriate classification society, or Australian state or territory certification;
- (c) verifying that the owner has –
  - (i) undertaken hazard identification of the ship’s design;
  - (ii) taken all practicable steps to eliminate, isolate or minimise identified hazards;
- (d) to ensure that the ship and its equipment are –
  - (i) fit for their intended purpose and operating limits; and
  - (ii) comply with the applicable provisions of the maritime and marine protection rules, the Ship Registration Act 1992 and the Resource Management (Marine Pollution) Regulations 1998;

**surveyor** means a person –

- (a) recognised by the Director –
  - (i) as a surveyor under rule 46.29;
  - (ii) to undertake the particular function referred to; and
- (b) who holds a valid maritime document as a surveyor issued under section 41 of the Act; and

**wing-in-ground craft** or **WIG craft** means a multimodal craft that in its main operational mode, flies –

- (a) in close proximity to, and without contact with, the water surface;
- (b) by using surface-effect action above the water; and
- (c) supported in the air primarily by an aerodynamic lift generated on the wing(s) or the hull of the craft or their parts.

### 40G.3 Application<sup>1</sup>

This Part applies to every New Zealand and foreign ship that –

- (a) operates on the New Zealand coast; and
- (b) is a commercial ship –

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<sup>1</sup> In certain circumstances, it will not be appropriate for a ship to comply with both Parts 21 and 40G. In those cases, an exemption from some or all of the provisions of Part 21 may be necessary.

- (i) to which the requirements of Parts 40A, 40B, 40C, 40D, 40E, 40F and 80 do not apply;<sup>2</sup> or
- (ii) that is required to comply with this Part as a condition of an exemption.<sup>3</sup>

#### **40G.4 Issue of maritime document**

- (1) No person may operate a ship to which this Part applies without the Director's written approval of the ship's safety case.
- (2) An application for the Director's written approval of a ship's safety case –
  - (a) must be made by the owner;
  - (b) may be made by letter or in such other form as the Director may allow;
  - (c) must include the applicant's –
    - (i) address for service in New Zealand;
    - (ii) telephone number;
    - (iii) fax number (if any);
    - (iv) email address (if any);
  - (d) must be made at least 3 months before the intended commencement of the ship's operation;
  - (e) must include a copy of the ship's certificate of fitness and the contents of the ship's safety case; and
  - (f) is an application for the purpose of section 35 of the Act.
- (3) The Director may, in writing, approve a ship's safety case for a period not exceeding the expiry date of the certificate of fitness, if the Director –
  - (a) has received a copy of the ship's certificate of fitness; and
  - (b) is satisfied that the safety case –
    - (i) complies with the requirements of this rule, Appendix 1 and Appendix 2; and
    - (ii) indicates a level of safety consistent with the requirements for other commercial shipping operations.
- (4) The Director's written approval of a safety case –
  - (a) is a maritime document for the purposes of the Act; and
  - (b) shall cease to be valid if –
    - (i) the ship does not have a valid certificate of fitness;
    - (ii) the ship is not operated in accordance with the approved safety case;
    - (iii) the safety case is revised without the approval of the Director; or
    - (iv) the ship's ownership changes.

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<sup>2</sup> For example: a submersible craft.

<sup>3</sup> For example: a replica of an historic ship or a wing-in-ground craft.

#### **40G.5 Safety case**

- (1) The owner must ensure that a safety case is prepared that contains the relevant particulars set out in –
  - (a) Appendix 1 for the design, construction, equipment and operation of the ship; and
  - (b) Appendix 2 for the safety management system that will operate in respect of the ship.
- (2) The owner must ensure that –
  - (a) the ship is constructed, equipped and operated in accordance with the safety case;
  - (b) the master and all members of the crew –
    - (i) are informed of the parts of the safety case relevant to their duties; and
    - (ii) comply with the requirements of the safety case;
  - (c) any change to the safety case is approved by the Director before it is implemented.
- (3) The owner must ensure that the ship's operation is audited by the Director, in accordance with section 54 of the Act –
  - (a) no less than once per calendar year;
  - (b) to determine whether the ship's safety case and safety management system are –
    - (i) implemented effectively; and
    - (ii) suitable to achieve the safety management system objectives.

#### **40G.6 Certificate of fitness**

- (1) The owner must ensure that a valid certificate of fitness is in force at all times in respect of the ship and its equipment.
- (2) A surveyor may issue an initial certificate of fitness, in respect of a ship and its equipment, if –
  - (a) the surveyor has conducted a survey of the ship and its equipment and determined that they –
    - (i) are fit for their intended operation; and
    - (ii) comply with all of the relevant provisions of the ship's proposed safety case;
  - (b) the ship's design has been approved by a surveyor or a classification society.
- (3) A surveyor may issue a second or subsequent certificate of fitness, in respect of a ship and its equipment, if –
  - (a) the surveyor has conducted a survey of the ship and its equipment and determined that they –

- (i) are fit for their intended operation; and
    - (ii) comply with all of the relevant provisions of the approved safety case; and
  - (b) in the case of a ship that has undergone major alteration, the ship's modified design has been approved by a surveyor or a classification society.
- (4) A certificate of fitness must be in the form shown in Appendix 3 except that the surveyor may add additional information to the certificate if that information is kept to a minimum and does not detract from or conflict with the required content.
- (5) A certificate of fitness may be issued –
- (a) for a period of no more than 5 years; and
  - (b) no more than 3 months after the completion of the survey to which it relates.
- (6) The certificate of fitness shall cease to be valid if –
- (a) the ship or its equipment –
    - (i) undergoes major alteration or repair;
    - (ii) does not undergo a satisfactory annual survey; or
  - (b) an item of equipment, covered by the certificate, is removed without equivalent replacement; and
- to avoid doubt, the ship and its equipment must be re-surveyed prior to the issue of a subsequent certificate of fitness.
- (7) If a ship is surveyed and a new certificate of fitness issued before the expiry date of an existing certificate of fitness, the existing certificate shall cease to be valid.

#### **40G.7 Annual Survey**

The owner must ensure that an annual survey of the ship and its equipment is carried out by a surveyor within 3 months before or after each anniversary date of the issue of the certificate of fitness.

#### **40G.8 Display of maritime document**

- (1) The owner of a ship of 6 metres or more in length overall must ensure that the Director's written approval of the safety case is displayed on the ship in a prominent position accessible at all times to passengers and crew.
- (2) The owner of a ship of less than 6 metres in length overall must ensure that –
  - (a) the Director's written approval of the safety case is displayed in a prominent position on the ship;
  - (b) where it is not practicable to comply with paragraph (a), a copy of the Director's written approval, reduced to a suitable scale, is displayed in a prominent position on the ship; or
  - (c) where it is not practicable to comply with paragraph (a) or (b), the Director's written approval is made available for inspection by the Director.

**40G.9 Maritime New Zealand number**

The owner and the master must ensure that the ship is clearly and permanently marked with its Maritime New Zealand number, being the letters “MNZ” followed by a distinctive number issued to the ship by the Director –

- (a) in characters at least 75 mm high;
- (b) dark on a light background or light on a dark background; and
- (c) on the port and starboard sides of the ship in locations where it can best be seen.

## Appendix 1

### Particulars to be included in the safety case of a ship

- 1 A safety case must include –
  - (1) a general description of the means by which the owner will ensure that the ship's structure, machinery and systems will be designed, constructed, operated and maintained in a way that minimises hazards;
  - (2) particulars of a safety management system, for the operation of the ship, complying with Appendix 2;
  - (3) details of any significant hazards;
  - (4) details of quantitative risk assessments and any consequent measures proposed to ensure that hazards are minimised;
  - (5) a description of –
    - (a) the principal features of the design of the ship, machinery and systems; and
    - (b) the particulars of its construction, outfit and inspection, that are intended to ensure that hazards are minimised;
  - (6) particulars of plant, systems and equipment installed for –
    - (a) detecting explosion, fire, heat, smoke, gas and toxic fumes;
    - (b) preventing and mitigating fires;
    - (c) protecting the crew and passengers from the consequences of explosion, fire, heat, smoke, gas and toxic fumes;
    - (d) detecting, limiting and removing flood water; and
    - (e) evacuating crew and passengers in the event of an accident;
  - (7) the results of any practical demonstration or test to determine whether the plant, systems or equipment essential for –
    - (a) the safety of personnel; or
    - (b) controlling the consequences of an accident, will be capable of functioning in conditions of fire, flooding, adverse heel, adverse trim and climatic conditions;
  - (8) any limitations in the specification of the design of the ship and its equipment in relation to the area, depth or height of operation, climatic conditions, sea state or other limits for its safe operation and use;
  - (9) particulars of applicable requirements of national, international or classification society standards, regulations or codes of practice;
  - (10) details of –
    - (a) the ship's intended area(s) of operation (including applicable charts);
    - (b) intended embarkation/disembarkation facilities;
    - (c) search and rescue facilities in the intended area(s) of operation; and
    - (d) ship to shore/base communications available in the area(s) of operation;
  - (11) particulars of every operation to be undertaken, including –

- (a) if passengers are to be carried –
    - (i) the maximum number that can be carried;
    - (ii) how passengers will be accommodated;
    - (iii) the passenger safety information that will be provided; and
    - (iv) if passengers will enter the water from the ship, the proposed arrangements for monitoring their safety;
  - (b) if cargo is to be carried –
    - (i) the nature of any cargo to be carried;
    - (ii) the means of handling such cargo;
    - (iii) precautions to be taken in respect of any dangerous cargo; and
    - (iv) the relevant safety information to be made available to the crew; and
  - (c) details of any plant permanently or temporarily carried on the ship for the purposes of civil engineering works<sup>4</sup> or heavy lifts and the relevant safety information made available to the crew in respect of operation of such plant;
- (12) details of means of egress, escape routes, embarkation positions and responsibilities of crew in respect of assembling persons, launching life saving appliances and abandoning ship;
  - (13) details of proposed crewing and qualifications;
  - (14) details of specific crew training requirements appropriate to the nature of the ship, its operation, cargoes to be carried or specific hazards identified in the safety case;
  - (15) details of the proposed frequency and scope of reviews of the safety case; and
  - (16) any other relevant details requested, in writing, by the Director.

### **Additional particulars for submersibles**

- 2 The safety case for a submersible must also include details of the –
  - (1) life support systems and equipment for normal and emergency conditions;
  - (2) means of thermal protection, if necessary;
  - (3) arrangements for blowing ballast;
  - (4) stability and trim whilst ascending, descending, submerged and on the surface;
  - (5) means of emergency surfacing;
  - (6) procedures for emergency situations;
  - (7) operational mission including time and depth capabilities;
  - (8) geographical dive site limitations;
  - (9) launch and recovery operation procedures;
  - (10) arrangements for liaison with support ships;
  - (11) procedures for emergency drills; and

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<sup>4</sup> For example – pile driving, dredging, and laying moorings.

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- (12) pilot certification and crew training.

**Additional particulars for WIG craft**

- 3 The safety case for a WIG craft must include the appropriate particulars given in Part B, of the International Maritime Organisation's circular MSC/Circ.1054 entitled *Interim Guidelines for Wing-in-ground (WIG) Craft*.

## Appendix 2

### Requirements of a safety management system

The owner must develop, implement and maintain a safety management system for the operation of the ship, which must include the following –

- (1) a safety policy describing how the ship's operation will ensure safety at sea, prevent human injury or loss of life and avoid damage to the ship and its environment;
- (2) instructions and procedures to ensure the safe operation of the ship in compliance with relevant New Zealand legislation;
- (3) definition and documentation of the responsibility, authority and lines of communication between all personnel (on board and ashore) who manage, perform and verify work that affects safety;
- (4) designation of a person ashore who has –
  - (a) direct access to the highest level of management;
  - (b) responsibility for monitoring the safe operation of the ship; and
  - (c) responsibility for ensuring that adequate resources and shore based support are available as required;
- (5) procedures to identify, prepare for and respond to potential emergency situations; and programmes for drills and exercises to prepare for emergency situations;
- (6) procedures for reporting accidents, non-conformities and hazardous occurrences to the owner and others in compliance with relevant New Zealand legislation; and procedures for the investigation and analysis of these incidents and for the implementation of corrective action;
- (7) procedures to ensure that the ship is maintained in conformity with the provisions of the approved safety case and documentation of that maintenance;
- (8) procedures to control all documents and data relevant to the safety management system;
- (9) procedures for internal audits –
  - (a) to verify whether safety prevention activities comply with the safety management system; and
  - (b) for management reviews of the safety management system; and
- (10) any other safety procedures requested, in writing, by the Director.

## Appendix 3 Form of certificate of fitness

### CERTIFICATE OF FITNESS

*(Issued by or under the authority of the Director pursuant to section 444 of  
the Maritime Transport Act and Rule 40G.6 of the maritime rules)*

Name & Address of Owner

.....  
.....  
.....

Name / Type/ Description of Ship

.....  
.....

Area of Operation

.....  
.....

This is to certify that the above ship's design has been approved and a survey of the ship and its equipment indicates that the ship and its equipment comply with all provisions of the proposed/approved\* safety case and are fit for their intended operation. (\*Delete as appropriate)

Issued at..... on .....

Expiry date .....

Name ..... Signature .....

Annual surveys:

Date..... Name ..... Signature .....

## Maritime Rules

### Part 40G: Design, Construction and Equipment – Novel Ships

#### CONSULTATION DETAILS

*(This text does not form part of the rules contained in Part 40G. It provides details of the consultation undertaken in making the rules.)*

#### Summary of Consultation

An invitation to comment on draft Part 40G “Design, Construction and Equipment – Novel Ships” was issued on 28 July 2005 with a closing date for submissions of 28 September 2005.

As a result of the formal consultation process, three organisations, Plunket & Falconer Ltd, Survey Nelson Ltd and Department of Labour, and one individual, Mr J F Smallridge, provided written submissions.

#### General

**Mr J F Smallridge** opposed the draft Part 40G maintaining, “[t]o allow an owner to judge whether his vessel is safe, and to prove it, is a mistake”, and “[t]he correct way to proceed is for the owner and the ship’s designer to be in communication with the Authority during the design stage prior to building.” Mr Smallridge further asserted “[t]he owner, of the vessel to be built, pays his designer to achieve his ends, he is not in the business of safety and should not be put in a position where his decisions to achieve a safe vessel could be taken apart at a later date if ever an accident”.

*Maritime NZ’s response: Under the proposed Part 40G, a safety case would be required and a vessel could not operate commercially until the Director has approved the safety case. In order to gain approval, the Director would need to be satisfied that the design, construction, equipment and operation of the vessel is safe. It is envisaged that owners and designers will be in discussion with Maritime NZ, prior to construction commencing, to minimise the time taken to obtain approval.*

**Plunket & Falconer** questioned why the certificate of fitness had an expiry date and why the vessel was subject to an annual survey, both of which are significantly different to the safe ship management systems under maritime rule part 21.

*Maritime NZ’s response: Vessels to which Part 40G will apply will generally have new untried designs. Few, if any, national or international standards will exist for the ship’s design, construction or operation. These vessels are seen as higher risks than conventional vessels. The additional requirements will ensure more stringent control.*

*Maritime NZ accepts, however, that, in some circumstances, it will not be appropriate for a ship to comply with both Parts 21 and 40G. As a result, a footnote has been inserted in rule 40G.2 to indicate that it may be necessary to exempt a Part 40G ship from the provisions of Part 21.*

#### Rule 40G.2 Definitions

**Plunket & Falconer** queried whether an owner could use consultants to prepare a safety case.

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*Maritime NZ's response: The definition of safety case does not preclude the owner from contracting the preparation of the safety case to a third party. However, the onus is on the owner to ensure that the safety case is prepared.*

### **Rule 40G.5(3)(a) Safety Case**

**Plunket & Falconer** suggested that there could be possible logistical problems with the requirement to audit an approved safety case at fixed 12 month intervals. Plunket & Falconer suggested that a window, of  $\pm 3$  months, be considered.

*Maritime NZ's response: It is intended that safety cases be audited at least once per year and not at fixed intervals of 12 months. To clarify this, Maritime NZ has replaced the word "annually" with the words "per calendar year".*

### **Rule 40G.6(2) Certificate of Fitness**

**Survey Nelson** suggested that the rule be re-drafted to allow more than one certificate of fitness to be issued, thus enabling experts in different systems (e.g. high pressure air system, pressure hulls, emergency dive systems etc.) to sign off on each specialist area.

*Maritime NZ's response: Maritime NZ recognises that a surveyor will need to utilise the skills and support of appropriate experts when determining whether a vessel is fit for its intended operation. Maritime NZ believes Survey Nelson's proposal would be complex and difficult to track. In order to enable surveyors to delegate tasks to appropriate experts, Maritime NZ has amended the definition of 'survey' to allow a survey to "performed by, in the presence of or under the direct control of a surveyor".*

## **Appendix 1**

**Department of Labour** suggested that clause 1(11)(a)(iv) of the proposed Appendix 1 be amended to include the design, maintenance and safe operation of under-water hatches, where passengers enter the water beneath the surface.

*Maritime NZ's response: Clause 1(11)(a)(iv) concerns the entry of passengers into the water whether from a ship on the surface or from a ship submerged. The owner would need to address the design, maintenance and operation of under-water hatches under both clause 1(11)(a)(iv) and clause 1(1).*