

1975/184

THE SHIPPING (ECHO SOUNDERS) RULES 1975

DENIS BLUNDELL, Governor-General

ORDER IN COUNCIL

At the Government House at Wellington this 7th day of July 1975

Present:

HIS EXCELLENCY THE GOVERNOR-GENERAL IN COUNCIL

PURSUANT to the Shipping and Seamen Act 1952, His Excellency the Governor-General, acting by and with the advice and consent of the Executive Council, hereby makes the following rules.

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R U L E S

1. Title and commencement—(1) These rules may be cited as the Shipping (Echo Sounders) Rules 1975.

(2) These rules shall come into force on the 31st day of December 1975.

2. Interpretation—In these rules, unless the context otherwise requires,—

“Chief Surveyor” means the officer of the Ministry of Transport for the time being holding the position of Chief Surveyor of Ships; and includes the officer of the Ministry of Transport for the time being holding the position as Assistant Chief Surveyor of Ships:

“Echo sounder” means a device for measuring the depth of water beneath a ship by the time difference between the emission of sound waves downwards and the return of their echoes from the sea bottom; and includes all units and parts of an echo sounder making up a complete installation:

“Existing installation” means—

(a) An echo sounder wholly installed before the commencement of these rules; or

(b) An echo sounder part of which was installed before the commencement of these rules and the remainder of which consists of—

(i) Parts installed after the commencement of these rules that are identical with parts installed before the commencement of these rules; or

(ii) Parts which comply with the requirements of these rules:

“High frequency voltages” means any voltages having a frequency between 3 and 30 MHz:

“Surveyor” means a Surveyor of Ships appointed under section 13 of the Shipping and Seamen Act 1952:

“Tons” means gross tons:

Expressions defined in the Shipping and Seamen Act 1952 have the meanings so defined.

3. Application—These rules shall apply to—

(a) New Zealand ships of 300 tons or upwards:

(b) Other ships of 500 tons or upwards while they are within a New Zealand port on or after a date specified by the Minister by notice in the *Gazette*:

Provided that these rules shall not apply to—

(i) Ships not propelled by mechanical power:

(ii) Pleasure yachts:

(iii) Restricted-limit ships.

4. Provision of echo sounders—Every ship to which these rules apply shall be provided with an echo sounder complying with the requirements of these rules, which shall—

(a) In the case of an echo sounder manufactured or assembled in New Zealand, be of a make, type, and performance specification approved by the Chief Surveyor:

(b) In the case of an echo sounder manufactured or assembled outside New Zealand, be of a make, type, and performance specification approved by an authority or organisation outside New Zealand which is acceptable to the Chief Surveyor:

Provided that every existing installation shall be deemed to comply with these rules so long as it continues to function to the satisfaction of a Surveyor.

5. Components—The components of the echo sounder shall be suitable for continuous operation under conditions of trim, list, sea state, vibration, temperature change, and humidity likely to be experienced by the ship during her normal operation.

6. High voltage parts—(1) All parts and wiring of the echo sounder specified in these rules in which the direct and alternating voltages (other than high frequency voltages) combine at any time to give an instantaneous voltage greater than 50 volts shall be protected from accidental access.

(2) All parts and wiring of the echo sounder specified in these rules in which the direct and alternating voltages (other than high frequency voltages) combine at any time to give an instantaneous voltage greater than 250 volts shall be isolated automatically from all sources of electrical energy when the means of protection are removed.

(3) Nothing in subclause (2) of this rule shall require any parts of wiring in an existing installation to be isolated automatically from all sources of electrical energy when the means of protection are removed.

7. Supply of electrical energy—(1) There shall at all times be available in every ship to which these rules apply a supply of electrical energy sufficient for the operation of an echo sounder while the vessel is under way. When the ship is in port and alongside a dock or wharf, that supply shall also be available for testing purposes at all reasonable times.

(2) If provision is made for operating the echo sounder from more than one source of electrical energy, arrangements for rapidly changing from one source of supply to the other shall be made.

(3) The echo sounder shall be capable of operating in the presence of such variations of the power supply as are normally expected in a ship.

(4) The echo sounder shall be protected from excessive current, voltage, and transients and accidental reversal of power-supply polarity.

8. Interference—The echo sounder provided in accordance with these rules shall comply with the following requirements:

- (a) All reasonable and practicable steps shall be taken to eliminate the cause of and to suppress, electrical or other interference to other equipment on board:
- (b) At no time shall interference by other equipment in the ship be sufficient to prevent the efficient use of the echo sounder:
- (c) Mechanical noise from the echo sounder shall be so limited as not to prejudice the hearing of sounds on which the safety of the ship might depend:
- (d) Each unit of the echo sounder shall be marked with the minimum safe distances at which it may be mounted from a standard or a steering magnetic compass.

9. Position of transducers—(1) Transducers shall be fitted in such a position that they will not be in the path of undue turbulence or air bubbles during the normal ahead operation of the ship.

(2) Every ship which has an echo sounder fitted in accordance with these rules shall be provided with information indicating the position of the transducers with respect to surrounding members sufficient to allow the transducers to be readily and accurately located both from the exterior and interior of the ship.

10. Recordings of soundings—(1) In every ship which has an echo sounder fitted in accordance with these rules, the primary form of presentation of the depth of water under the ship shall be by means

of a graphical display which indicates the immediate depth and provides a record of past depths.

(2) The depth that is being recorded shall be clearly visible to the operator in such a manner that it can be easily related to the number of units of measurement indicated.

(3) Other forms of display may be added, but these shall not affect the normal operation of the primary display.

(4) The design of the display shall be such that at least 15 minutes of soundings are visible when the equipment is operating on the deepest range.

(5) There shall be a clear indication when the length of recording material remaining is approximately 10 percent of the original length.

11. Manual markings on record—An echo sounder fitted in accordance with these rules shall have a means whereby the operator can note remarks against the soundings.

12. Controls—An echo sounder fitted in accordance with these rules shall have the following controls:

- (a) An on-off switch; and
- (b) A sensitivity or gain adjustment; and
- (c) A range selector; and
- (d) Such other controls as the manufacturer of the echo sounder considers necessary for its efficient operation.

13. Illumination—An echo sounder fitted in accordance with these rules shall be provided with sufficient illumination to enable identification of controls and to facilitate the reading of the record and scales at all times. Facilities for dimming shall be provided where the echo sounder is mounted in such a position that it may interfere with the keeping of a proper lookout.

14. Indication of scale and unit—An echo sounder fitted in accordance with these rules shall be provided with a method of clearly indicating the units of measurement and the scales upon which it is operating.

15. Range of depths—An echo sounder fitted in accordance with these rules shall be capable under normal propagation conditions of measuring any clearance under the transducer between 2 metres and at least 400 metres.

16. Range of scales—(1) An echo sounder fitted in accordance with these rules shall provide a minimum of 2 range scales, one of which shall cover the range of depth from 0–400 metres, and another of which shall cover the range of depth from 0–40 metres.

(2) The scale of display shall not be smaller than 0.25 millimetres per metre depth (1:4,000) on the 0–400 metres scale and 2.5 millimetres per metre depth (1:400) on the 0–40 metres range scale.

17. Pulse repetition rate—The pulse repetition rate shall not be slower than 12 pulses per minute.

18. Accuracy of measurement—Based on a speed of sound in water of 1500 metres per second, the allowable tolerance on the indicated depth shall be—

- (a) \pm 1 metre on the 0–40 m range scale; and
 \pm 5 metres on the 0–400 m range scale; or
- (b) \pm 5 percent of the indicated depth, whichever is the greater.
- (2) The performance of the echo sounder shall be such that it will meet the requirements of this rule when the ship is rolling 10° from the vertical or pitching 5° from a normal seagoing trim, or both.

19. General requirements—(1) An echo sounder fitted in accordance with these rules shall be clearly marked with the name of the manufacturer and its type and number.

(2) The echo sounder shall be so constructed and installed that it is readily accessible for maintenance purposes.

(3) Information shall be provided to enable ship's personnel to operate and maintain the echo sounder efficiently.

20. Testing of echo sounder—(1) The master of every ship which is fitted with an echo sounder in accordance with these rules shall be responsible for ensuring that it is operating efficiently, and he shall cause such tests to be made as are necessary to convince him that the echo sounder is functioning correctly.

(2) In the event of a malfunction of an echo sounder, the master shall take all reasonable steps to ensure that it is repaired as soon as is practicable.

(3) At each annual survey, a Surveyor shall ensure that the echo sounder is functioning efficiently.

A. C. McLEOD,

Acting for the Clerk of the Executive Council.

EXPLANATORY NOTE

This note is not part of the rules, but is intended to indicate their general effect.

These rules require New Zealand ships of 300 gross tons or upwards to be provided with an echo sounder that complies with the requirements of the rules.

Provision is also included to enable the rules to be applied to other ships of 500 gross tons or upwards while within a New Zealand port.

The rules do not apply to ships not propelled by mechanical power, pleasure yachts or restricted-limit ships.

Issued under the authority of the Regulations Act 1936.

Date of notification in *Gazette*: 10 July 1975.

These rules are administered in the Ministry of Transport.