

AMENDMENTS TO THE UNIFORM SHIPPING LAWS CODE

Amendment List 2 — March 1996.

This list contains amendments adopted by the Australian Transport Council, as at 16 March 1996, to the various Sections of the *Uniform Shipping Laws Code*, together with corrigenda issued in October 1993, and corrigenda subsequently identified. The amendments are with respect to the clauses or part of clauses specified under the various Sections of the Code listed below. Clauses or parts of clauses not shown as amended, or not referred to as deleted, are unchanged. The date at which each of the amendments was adopted is specified after the amendment. **TEXT IN BOLD ITALIC CAPITALS CONTAINS INSTRUCTIONS WHICH ARE TO BE APPLIED TO THE REFERENCED TEXT.**

SUMMARY OF AMENDMENTS

SSAC 15 (6 & 7 Dec 1993)

Amendment to Section 8A, Appendix A, 1.6
(Witnessing of inclining experiments)

MPG adopted the above amendment on 16 Jun 1994.

SSAC 16 (30 & 31 Aug 1994) & 17 (1 & 2 Jun 1995)

Amendments to Sections 1, 2, 3, 14, 15, 16 & 17
(Grandfathering of existing vessels)

Amendments to Section 1 and 14
(General and Vessel Specific Exemptions)

Amendments to Section 1
(Implementation of the High Speed Craft Code)

Amendments to Sections 2 & 3
(Certificates of Competency as Coxswain)

Amendments to Section 7
(Application to vessels under 24 m in length)

Amendments to Section 10
(Major update and Open Reversible Liferafts)

Amendments to Section 11
(Design of Fixed Fire Extinguishing Systems)

MPG adopted the above amendments on 15 August 1995.

SSAC 18 (20 & 21 November 1995)

Amendment to Sections 2 and 3
(Syllabus for Skipper 2 and Master 4)

Amendment to Section 5C, C73, Table 3
(Young's Modulus for Glass)

Amendment to Section 9
(Stern Glands/shaft seals)

Amendment to Section 11
(Breathing apparatus)

Amendment to Section 11 - Appendix G
(Deletion of references to BCF Fire Extinguishers)

Amendment to Section 13 - Appendix H
(Height of screens and bulwarks)

MPG adopted the above amendments on 15 March 1996.

SECTION 1**CLAUSES 2 AND 8.5 ARE AMENDED AND NEW CLAUSE 8.6 INSERTED, TO READ**

2. Unless expressly provided otherwise, the provisions of this Code apply to new vessels. For vessels the keels of which were laid or reached a similar stage of construction on or before 31 December 1991, the Authority may determine the extent to which the Code provisions in force on that date are required to be met.
- 8.5 Any departure from the requirements of this Code, whether by granting exemption or legislative variation of Code requirements, shall be described on or in a supplement to the vessel's Certificate of Survey. The Authority will, upon request, provide another Authority with any test results and/or other supporting information relating to acceptance of the departure."
- 8.6 Where the Authority certifies that a high speed craft, as defined in IMO resolution MSC.36(63), the "*International Code of Safety for High Speed Craft*" (HSC Code), complies with the requirements of that Code or would comply if the route on which it is engaged were an international voyage;
- 8.6.1 the craft shall be deemed to have complied with the requirements of Sections 5 to 14 inclusive of this Code provided the craft is constructed and maintained in accordance with the requirements of either Section 5 or a classification society approved by the Authority; and
- 8.6.2 the certificates and permits issued under the HSC Code shall have the same force and the same recognition as certificates issued under Section 14.

(Amendment dated 15 August 1995)

SECTION 2

CLAUSE 2 IS AMENDED TO READ

2. This Section applies to persons serving or intending to serve on board trading vessels, both new and existing, engaged in seagoing or sheltered waters operations.

(Amendment dated 15 August 1995)

NEW SUB-PARAGRAPHS ARE INSERTED AT THE END OF CLAUSE 16.1:

- (e) Have satisfactorily attended a short course in or hold a valid certificate for 'Elements of Shipboard Safety' (Schedule Three).
- (f) Hold a Restricted Operators Certificate of Proficiency in Radio Telephone (Schedule Five).

(Amendment dated 15 August 1995)

IN CLAUSE 19.2, FOR THE SECTION 'NAVIGATION AND POSITION DETERMINATION', DELETE THE EXISTING TEXT AND SUBSTITUTE NEW TEXT AS FOLLOWS:

NAVIGATION AND POSITION DETERMINATION

- (a) 2½ hour written examination in coastal navigation—pass mark 70%; and
- (b) 2½ hour written examination in the remaining parts of this syllabus—pass mark 70%.

In seagoing operations which may demand a knowledge of Celestial Navigation, the Marine Authority may require an endorsement on the Certificate of Competency that the holder has passed an examination in accordance with Section 2—Navigation of the syllabus for Navigation and Position Determination for Master 3.

Candidates will be required to have a more detailed and higher standard of knowledge including calculations of the subjects specified in the Coastal Navigation syllabus for Master Class 5 and, in addition;

Section 1—Voyage planning

Knowledge of and a practical understanding of the following:

- (a) Using rhumb line navigation:
 - (i) voyage planning between departure and arrival position by plane sailing;
 - (ii) determining a dead reckoning position or estimated position;
 - (iii) allowances to be made in waters affected by tidal streams, currents, restricted visibility, restricted waters;
- (b) Differences between rhumb line and great circle sailings;
- (c) Determining the times and heights of tides at standard and secondary ports for any state of the tide.

Section 2—Position Determination

Knowledge and practical understanding of the following:

- (a) Using terrestrial observations determine a vessel's position using individually or in combination with other methods
 - rising and dipping distances of lights
 - ranges and/or bearings from radar;
- (b) Using modern electronic navigational aids to determine a vessel's position including:
 - use of typical modern equipment using satellite technology
 - use of hyperbolic systems
 - use of differential GPS
 - coverage areas
 - use of plotters
 - use of electronic charts
 - sources and causes of errors
 - determination of accuracy of a fix
 - use and care of equipment;
- (c) Error of a compass using amplitudes or azimuths of the Sun.

Section 3—Wheelhouse equipment

Practical ability to safely and efficiently use and care for instruments including but not limited to:

- Alarm devices including off-course and watch alarms
- Bottom Logs
- Automatic Pilot
- Echo Sounder
- Magnetic and gyro compasses
- Azimuth mirror.

(Amendment dated 15 March 1996)

SECTION 3

CLAUSE 2 IS AMENDED TO READ

2. This Section applies to persons serving or intending to serve on board fishing vessels, both new and existing, engaged in seagoing or sheltered waters operations.

(Amendment dated 15 August 1995)

NEW SUB-PARAGRAPHS ARE INSERTED AT THE END OF CLAUSE 13.1:

- (e) Have satisfactorily attended a short course in or hold a valid certificate for 'Elements of Shipboard Safety' (Schedule Three).
- (f) Hold a Restricted Operators Certificate of Proficiency in Radio Telephone (Schedule Five).

(Amendment dated 15 August 1995)

IN CLAUSE 15.2, FOR THE SECTION 'NAVIGATION AND POSITION DETERMINATION', DELETE THE EXISTING TEXT AND SUBSTITUTE NEW TEXT AS FOLLOWS:

NAVIGATION AND POSITION DETERMINATION

- (a) 2½ hour written examination in coastal navigation—pass mark 70%; and
- (b) 2½ hour written examination in the remaining parts of this syllabus—pass mark 70%.

In seagoing operations which may demand a knowledge of Celestial Navigation, the Marine Authority may require an endorsement on the Certificate of Competency that the holder has passed an examination in accordance with Section 2—Navigation of the syllabus for Navigation and Position Determination for Skipper 1.

Candidates will be required to have a more detailed and higher standard of knowledge including calculations of the subjects specified in the Coastal Navigation syllabus for Skipper 3 and, in addition;

Section 1—Voyage planning

Knowledge of and a practical understanding of the following:

- (a) Using rhumb line navigation:
 - (i) voyage planning between departure and arrival position by plane sailing;
 - (ii) determining a dead reckoning position or estimated position;
 - (iii) allowances to be made in waters affected by tidal streams, currents, restricted visibility, restricted waters;
- (b) Differences between rhumb line and great circle sailings;
- (c) Determining the times and heights of tides at standard and secondary ports for any state of the tide.

Section 2—Position Determination

Knowledge and practical understanding of the following:

- (a) Using terrestrial observations determine a vessel's position using individually or in combination with other methods
 - rising and dipping distances of lights
 - ranges and/or bearings from radar;
- (b) Using modern electronic navigational aids to determine a vessel's position including:
 - use of typical modern equipment using satellite technology
 - use of hyperbolic systems
 - use of differential GPS
 - coverage areas
 - use of plotters
 - use of electronic charts
 - sources and causes of errors
 - determination of accuracy of a fix
 - use and care of equipment;
- (c) Error of a compass using amplitudes or azimuths of the Sun.

Section 3—Wheelhouse equipment

Practical ability to safely and efficiently use and care for instruments including but not limited to:

- Alarm devices including off-course and watch alarms
- Bottom Logs
- Automatic Pilot
- Echo Sounder
- Magnetic and gyro compasses
- Azimuth mirror.

(Amendment dated 15 March 1996)

SECTION 5C

IN CLAUSE C.73.8, DELETE THE EXISTING TABLE 3 AND SUBSTITUTE THE FOLLOWING:

TABLE 3

Allowable working Stress (σ) and Youngs Modulus (E)

<i>Material</i>	σ (kPa)	E (kPa)
Laminated float glass	27.6×10^3	69×10^6
Toughened glass	58×10^3	69×10^6

(Amendment dated 15 March 1996)

SECTION 7

CLAUSE 1, CONTENTS, IS AMENDED TO READ

Part 11 Modifications applicable to vessels operating within smooth and partially smooth waters. (Clauses 69-71)

(Amendment dated 15 August 1995.

This amendment is consequential on changes to the content of Part 11.)

CLAUSES 3.15, 9.1, 40.2 ARE AMENDED TO READ

3.15

(a) a vessel of less than 24 metres length as defined in 3.16;

9.1

(b) the appropriate assumed load for a hatchway in position 1 in a vessel 24 metres in length is 1.0 tonnes per square metre and for a hatchway in position 2 in such a vessel is 0.75 tonnes per square metre; and

40.2 Where the total of the effective lengths of superstructures and trunks of the vessel is equal to the length of the vessel, the deduction shall be:

(a) 265 mm in the case of a vessel the length of which is 16 metres;

(b) 350 mm in the case of a vessel the length of which is 24 metres;

(c) 860 mm in the case of a vessel the length of which is 85 metres;

(d) 1070 mm in the case of a vessel the length of which is 122 metres or over; and

(e) in the case of a vessel the length of which is an intermediate length, such distance as is ascertained by linear interpolation.

(Amendment dated 15 August 1995

This amendment to 40.2 is consequential on the removal of references to vessels under 24 metres from Part 11 of this Section.)

HEADING OF PART 11 OF SECTION 7 AND CLAUSES 69 AND 70 ARE AMENDED IN PART TO READ:

PART 11—MODIFICATIONS APPLICABLE TO VESSELS OPERATING WITHIN SMOOTH AND PARTIALLY SMOOTH WATERS

69. Modifications of this Section in its Application to Vessels Operating within Smooth and Partially Smooth Waters

69.1 In its application to and in relation to a vessel operating within smooth and partially smooth waters, this Section applies to such a vessel subject to such modifications as the Authority having regard to the strength and stability of the vessel determines.

69.2

(a) The height above the deck of sills in doorways of deckhouses or superstructures on the weather deck from inside which there is direct access to spaces below the weather deck shall be not less than 300 mm;

(b) The height above the deck of sills in doorways of deckhouses or superstructures or companionways on the weather deck which are shielded from the full force of the sea, except those giving direct access to machinery spaces shall be not less than 150 mm;

69.3 The coamings of hatchways in position (1) and (2) shall be of substantial construction. The height above deck of coamings in positions (1) and (2) shall be 300 mm.

69.7 The height of solid bulwark and rail shall be not less than 0.9 metres.

69.8 AND 69.9 *DELETE ORIGINAL 69.8, AMEND 69.9 TO READ:*

69.8 Stability information to be carried on board as prescribed by sub-clause 4.2 and clause 25 shall take the form of guidance notes for the Master, as prescribed in paragraph A.4.1.23 of the Stability Section.

Original 69.9 has been renumbered as 69.8. Note: relevant text of original 69.10 is transferred to 40.2 as a result of removing references to vessels under 24 m from Part 11.

70.1 *DELETE FIRST THREE LINES OF TABULAR FREEBOARD TABLE AND REPLACE WITH ONE LINE CONTAINING THE FOLLOWING VALUES IN THE RESPECTIVE COLUMNS:*

24	94	121	1.108	0.554	1.50
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(Amendment dated 15 August 1995)

Appendix B, C & D

Appendix B — *DELETE FIRST THREE LINES CORRESPONDING TO LENGTHS OF LESS THAN 24 METRES.*

Appendix C — *DELETE FIRST THREE LINES CORRESPONDING TO LENGTHS OF LESS THAN 24 METRES.*

**Appendix D — Seasonal Tropical Zone
Area 1 - South Indian Ocean Seasonal Tropical Area**

IN ACCORDANCE WITH IMO RES. A.411(XI), REPLACE 120° 00' WITH 114° 00'

Area 3 - South Pacific Ocean Seasonal Tropical Area

IN ACCORDANCE WITH IMO CIRC. LL.3/CIRC.90, AMEND LINE 4 TO READ:

30' S) to longitude 154° 00'E, then southward to 24° 00'S, thence westward to the east coast of Australia, thence northward along the east coast of Australia, to

AMEND CHART OF ZONES, AREAS AND SEASONAL PERIODS ACCORDINGLY.

(Amendment dated 15 August 1995)

SECTION 8A**Appendix A — *CLAUSE 1.6 IS AMENDED TO READ:***

- 1.6 Approval may not be given to stability data based on any Experiment or Measurement which was not witnessed by a Surveyor.

(Amendment dated 16 June 1994)

SECTION 9**AMEND 14.18 TO READ:**

14.18 Stern gland or Seal

- 14.18.1 The sealing gland at the forward end of the sterntube is to be readily and easily accessible for examination and adjustment. The adjustment and securing of the sealing gland is to be made by studs and nuts.
- 14.18.2 In the case of a vessel in which the tailshaft diameter is not greater than 102 mm, a mechanical seal may be fitted.
- 14.18.3 In the case of a Class 1 vessel less than 10m in length, and any Class 2 or Class 3 vessel in which the screw or tube shaft is not greater than 64 mm in diameter, a flexible stern gland may be fitted. The gland shall be connected to the sterntube by steel reinforced synthetic rubber hose. The hose shall be secured by two corrosion resistant clips at each end. Circular movement of the gland shall be limited by stops to no more than 5 degrees either side of the mean position.

(Amendment dated 15 March 1996)

SECTION 10
PART 2—GENERAL PROVISIONS

CLAUSES 6, 8 AND THE HEADING TO 10.2 ARE AMENDED IN PART, AND NEW CLAUSES 6.8, 7.8, 9.3 AND 11 ARE INSERTED, TO READ

- 6.1.3 The name and port of registry of the vessel shall be clearly painted on each side of the bow of each lifeboat.
- 6.6 Lifejackets shall be marked as prescribed in Appendix R of this Section.
- 6.8 SOLAS life-saving appliances shall be marked in accordance with Marine Orders Part 25 Issue 3.
- 7.8 Marine Evacuation Systems and their associated liferafts shall be stowed in accordance with the requirements of the authority. In prescribing requirements, the authority may use for guidance the *International Code of Safety for High Speed Craft*.
- 8. Servicing of Inflatable Liferafts and Open Reversible Liferafts**
- 8.1 The servicing of an inflatable liferaft and an open reversible liferaft shall be carried out at the place in which it was manufactured or at an approved place and performed by a duly certificated person.
- 8.2 Servicing of inflatable liferafts and open reversible liferafts shall be carried out at intervals of not more than twelve months provided that, where such an arrangement is impracticable, the interval may be extended by a period not exceeding five months subject to the approval of the Authority concerned.
- 9.3 Notwithstanding 9.2, where at a survey a pyrotechnic or smoke signal has not less than 6 months validity, and is in apparent good condition, an authority may allow the item to continue in service in a liferaft for a further period of 12 months.
- 10.2 Discharges from the vessel
(The above replaces the heading 'Engineroom discharges'. Sub-paragraph 10.2.1 remains unchanged.)

11. Equivalent

- 11.1 Buoyant Appliances may be replaced by Open Reversible Liferafts of equal aggregate capacity.
- 11.2 Coastal Liferafts may be replaced by Open Reversible Liferafts on specified voyages where the Authority considers that, in view of proximity to rescue facilities and suitable prevailing weather conditions, the safety of survivors will not be adversely affected by the substitution.
- 11.3 Fast Rescue Boats may be used in lieu of Rescue Boats.
- 11.4 In approving Open Reversible Liferafts as an equivalent to Buoyant Appliances or Coastal Liferafts under 11.1 or 11.2, an Authority may allow a capacity for Open Reversible Liferafts for specific open sea voyages, for partially smooth water, or smooth water operations, of not more than 30%

greater than that specified in 2.10 of Annex 10 of the *International Code of Safety for High Speed Craft*.

(Amendment dated 15 August 1995)

REPLACE TEXT AND TABLE ON PAGE 6 BY NEW TEXT AND TABLE:

PART 3 — SCALES OF LIFESAVING APPLIANCES

CLASS 1A

PASSENGER VESSELS — UNLIMITED SEAGOING

Reference should be made to Part 2 for marking, stowage, etc., and Part 4 for specifications of equipment

<i>Measured Length</i>	<i>L.S.A. Requirements</i>
All lengths	The requirements for provision of LIFEBOATS, RESCUE BOATS, FAST RESCUE BOATS, LIFERAFTS, MARINE EVACUATION SYSTEMS, LAUNCHING AND RECOVERY APPLIANCES, BUOYANT APPARATUS, TWO WAY VHF RADIO EQUIPMENT, RADAR TRANSPONDERS, DISTRESS SIGNALS, LIFEBOUYS, LIFEJACKETS, LINE THROWING APPLIANCES, IMMERSION SUITS, THERMAL PROTECTIVE AIDS, GENERAL EMERGENCY ALARM SYSTEMS, and EMERGENCY COMMUNICATIONS SYSTEMS are contained in Marine Orders Part 25. The requirements for EMERGENCY ELECTRICAL INSTALLATIONS are contained in Marine Orders Part 20. The requirements for MUSTER STATIONS are contained in Marine Orders Parts 25 and 29.

(Amendment dated 15 August 1995)

PAGE 11 – REPLACE EXISTING TABLE FOR CLASS 1E BY NEW TABLE

<i>Measured Length</i>	<i>L.S.A. Requirements</i>
All lengths	BUOYANT APPLIANCES, LIFEBOUYS AND LIFEJACKETS Sufficient buoyant appliances, lifebuoys and coastal lifejackets to provide for 115% of complement. It is assumed a lifebuoy will support two persons. A dinghy may be included in the above appliances.
60 ≤ L 45 ≤ L < 60 m 10 ≤ L < 45 m L < 10 m	LIFEBOUYS 6 lifebuoys, one with light and one with line 4 lifebuoys, one with light and one with line 2 lifebuoys, one with light and one with line 1 lifebuoy, with light.
All lengths	LIFEJACKETS A coastal lifejacket for each person the vessel is certified to carry
All lengths	DISTRESS SIGNALS Distress signals as determined by the Authority

All lengths	EMERGENCY ELECTRICAL EQUIPMENT Electric torches or hand lamps – number to be determined by the Authority.
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(Amendment dated 15 August 1995)

PAGE 16 – REPLACE EXISTING TABLE FOR CLASS 2E BY NEW TABLE

<i>Measured Length</i>	<i>L.S.A. Requirements</i>
15 ≤ L L < 15 m	<p>BUOYANT APPLIANCES AND/OR LIFEBUOYS Sufficient buoyant appliances and/or lifebuoys to provide for 100% of complement. It is assumed a lifebuoy will support two persons. A dinghy may be included in the above appliances.</p> <p>Either buoyant appliances and/or lifebuoys as for 15 metres and over, or the vessel is to be fitted with internal buoyancy as prescribed by Appendix N.</p>
15 ≤ L L < 15 m	<p>LIFEBUOYS 2 lifebuoys, one with light 1 lifebuoy, with light.</p>
All lengths	<p>LIFEJACKETS A coastal lifejacket for each person the vessel is certified to carry</p>
All lengths	<p>DISTRESS SIGNALS Distress signals as determined by the Authority</p>
All lengths	<p>EMERGENCY ELECTRICAL EQUIPMENT Electric torches or hand lamps – number to be determined by the Authority.</p>

*(Amendment dated 15 August 1995)***PAGE 20 – REPLACE EXISTING TABLE FOR CLASS 3E BY NEW TABLE**

<i>Measured Length</i>	<i>L.S.A. Requirements</i>
15 ≤ L L < 15 m	<p>BUOYANT APPLIANCES AND/OR LIFEBUOYS Sufficient buoyant appliances and/or lifebuoys to provide for 100% of complement. It is assumed a lifebuoy will support two persons. A dinghy may be included in the above appliances.</p> <p>Either buoyant appliances and/or lifebuoys as for 15 metres and over, or the vessel is to be fitted with internal buoyancy as prescribed by Appendix N.</p>
15 ≤ L L < 15 m	<p>LIFEBUOYS 2 lifebuoys, one with light 1 lifebuoy, with light.</p>
All lengths	<p>LIFEJACKETS A coastal lifejacket for each person the vessel is certified to carry</p>
All lengths	<p>DISTRESS SIGNALS Distress signals as determined by the Authority</p>
All lengths	<p>EMERGENCY ELECTRICAL EQUIPMENT Electric torches or hand lamps – number to be determined by the Authority.</p>

(Amendment dated 15 August 1995)

PART 4—TYPES OF LIFESAVING APPLIANCES

THE EXISTING LIST OF APPENDICES ON PAGE 21 IS REPLACED BY A NEW TABLE

<i>Appendix</i>	<i>Title</i>	<i>Page</i>
A	Construction, Production and Performance Requirements for certain Life-Saving Appliances	
B	Coastal lifeboats	
C	Davits and Launching Arrangements for Coastal Lifeboats	
E	Non-SOLAS Rescue Boats	
G	Dinghies	
J	Coastal Liferrafts (Inflatable)	
K	Coastal Liferrafts (Rigid)	
L	Open Reversible Liferrafts	
M	Buoyant Appliances	
N	Internal Buoyancy in Small Vessels	
O	Testing of Foam Buoyancy Materials for Life-Saving Appliances	
R	Coastal Lifejackets, Lifejacket Lights and Whistles	
V	Pyrotechnic Distress Signals	

(Amendment dated 15 August 1995

*Note that the relevant page numbers will be inserted
in the table when Section 10 is reprinted)*

**THE NOTE ON PAGE 21 AND THE FOLLOWING EXISTING APPENDICES ARE
DELETED IN THEIR ENTIRETY:**

D, F, H, L, P, Q, S, T, U, W, X, Y, Z, ZA.

(Amendment dated 15 August 1995)

Appendix A**DELETE ENTIRE TEXT AND INSERT NEW APPENDIX A****APPENDIX A**

Quality control, examination and general requirements for the following life-saving appliances are given in 5 of Marine Orders Part 25, Issue 3. Detailed requirements for the construction, production or performance tests are given in Appendices of Marine Orders Parts 25, Issue 3, or 27 Issue 1 as specified in Table A.

TABLE A

ITEM	Marine Orders Part 25 Issue 3	
	Appendix	Provision
Buoyant Smoke Signal	2	3
Embarkation Ladder	6	7
EPIRB, 121.5/243 MHz	15	1 to 8
Evacuation Slide	6	5
Fast Rescue Boat	5	5 to 7
Food Ration	14	1 to 7
General Emergency Alarm System	7	2
Hand Flare	2	2
Immersion Suit	1	3.1
Lifebuoy	1	1.1
Lifebuoy Buoyant Line	1	1.4
Lifebuoy Light	1	1.2
Lifebuoy Smoke Signal	1	1.3
Line-throwing Apparatus	7	1
Radar Transponder	-	MO 27 Issue 1, Appendix 2
Retroreflective Tape (Fitting)	13	1 to 7
Rocket Parachute Flare	2	1
SOLAS First Aid outfit	11	1 to 4
SOLAS Launching Appliance	6	1 to 4 and 6
SOLAS Lifeboat	4	1 to 6
SOLAS Lifejacket	1	2
SOLAS Lifejacket Light	1	2.3
SOLAS Liferaft	3	1 to 3
SOLAS Lifeboat/Rescue Boat Recovery Arrangement	5	2.5
SOLAS Rescue Boat	5	1 to 4
Thermal Protective Aid	1	3.2
Two-way VHF Radiotelephone Apparatus	-	MO 27 Issue 1, Appendix 2

(Amendment dated 15 August 1995)

Appendix C**DELETE 'PART I' FROM HEADING, DELETE ENTIRE TEXT OF PART II***(Amendment dated 15 August 1995)***Appendix J****AMEND CLAUSES 1.9, 2.2 AND 3.13 TO READ**

- 1.9 The total mass of the liferaft and its equipment, contained in a valise or other container, shall not exceed 185 kg, unless the liferaft is designed to be launched by a launching appliance, or a marine evacuation system, or is so stowed that it can be launched by one person in adverse conditions
- 2.2 The carrying capacity of an inflatable coastal liferaft shall not be less than 4 persons.
- 3.13 500 grams of barley sugar per person, providing at least 1500 kilojoules in each 100 grams, being barley sugar that has been in the liferaft for a period not exceeding four years, or an approved food ration providing at least 10 000 kilojoules per person, being a food ration that has not passed the manufacturer's replacement date or the approved storage life.

*(Amendment dated 15 August 1995)***Appendix K****AMEND CLAUSES 2 & 3 TO READ****2. Capacity**

- 2.1 The carrying capacity of a rigid coastal liferaft shall be the largest whole number obtained from:

(a) $\left(\frac{V - W}{96} \right)$;

(b) $\left(\frac{A}{0.372} \right)$; or

- (c) the number of persons averaging 75 kg, wearing lifejackets, who can be seated in the raft without interfering with the operation of the raft's equipment;

whichever is the less, where V is the volume in litres, W is the mass of the buoyant material in kg, and A is the surface area of the liferaft in m².

- 3.12 500 grams of barley sugar per person, providing at least 1500 kilojoules in each 100 grams, being barley sugar that has been in the liferaft for a period not exceeding four years, or an approved food ration providing at least 10 000 kilojoules per person, being a food ration that has not passed the manufacturer's replacement date or the approved storage life.

(Amendment dated 15 August 1995)

Appendix L
INSERT NEW APPENDIX L

APPENDIX L
OPEN REVERSIBLE LIFERAFTS

1. General

1.1 All open reversible liferafts should be:

- .1 constructed with proper workmanship and materials,
- .2 not damaged in stowage throughout the air temperature range of -18°C to +65°C;
- .3 capable of operating throughout an air temperature range of -18°C to +65°C, and a seawater temperature range of -1°C to +30°C;
- .4 rot-proof, corrosion-resistant, and not be unduly affected by seawater, oil or fungal attack;
- .5 stable and maintain their shape when inflated and fully laden: and
- .6 fitted with retro-reflective tape around both buoyancy chambers of the liferaft to assist in detection. Each piece of retro-reflective tape or other material should be:
 - (a) not less than 300 mm long and 50 mm wide;
 - (b) spaced so that the distance from the centre of one tape to the centre of the next in line does not exceed 800 mm;
 - (c) fitted so as to be visible both from the air and from a ship.

Alternatively, some pieces may be fitted so as to be visible from the air and the remainder so as to be visible from a ship, in which case the distance from the centre of one tape to the centre of the next in line should not exceed 1000 mm (see diagram).

2 Construction

- 2.1 The open reversible liferaft should be so constructed that when it is dropped into the water in its container from a height of 10 m, the liferaft and its equipment will operate satisfactorily. If the open reversible liferaft is to be stowed at a height of more than 10 m above the waterline in the lightest seagoing condition, it should be of a type which has been satisfactorily drop-tested from at least that height.
- 2.2 The open reversible floating liferaft should be capable of withstanding repeated jumps on to it from a height of at least 4.5 m.
- 2.3 The open reversible liferaft and its fittings should be so constructed as to enable it to be towed at a speed of 3 knots in calm water when loaded with its full complement of persons and equipment, with the sea anchor deployed.
- 2.4 The open reversible liferaft when fully inflated should be capable of being boarded from the water whichever way up it inflates.

- 2.5 The main buoyancy chamber should be divided into:
 - .1 not less than two separate compartments, each inflated through a non-return inflation valve on each compartment; and
 - .2 the buoyancy chambers should be so arranged that in the event of one of the compartments being damaged or failing to inflate, the intact compartment should be able to support, with positive freeboard over the open reversible liferaft's entire periphery, the number of persons which the liferaft is permitted to accommodate, each having a mass of 75 kg, and seated in their normal positions.
- 2.6 The floor of the open reversible liferaft should be waterproof.
- 2.7 The open reversible liferaft should be inflated with a non-toxic gas by an inflation system complying with the following requirements:
 - .1 The open reversible liferaft shall be capable of being inflated by one person.
 - .2 Inflation should be completed within the period of one minute at an ambient temperature of between 18°C and 20°C and within a period of three minutes at an ambient temperature of -18°C.
 - .3 After inflation the open reversible liferaft should maintain its form when loaded with its full complement of persons and equipment.
- 2.8 Each inflatable compartment should be capable of withstanding a pressure equal to at least three times the working pressure and should be prevented from reaching a pressure exceeding twice the working pressure either by means of relief valves or by a limited gas supply. Means should be provided for fitting the topping-up pump or bellows.
- 2.9 The surface of the buoyancy tubes should be of non-slip material. At least 25% of these tubes should be of a highly visible colour.
- 2.10 The number of persons which an open reversible liferaft should be permitted to accommodate should be equal to the lesser of:
 - .1 the greatest whole number obtained by dividing by 0.096 the volume, measured in cubic metres of the main buoyancy tubes (which for this purpose should not include the thwarts if fitted) when inflated; or
 - .2 the greatest whole number obtained by dividing by 0.372 the inner horizontal cross-sectional area of the open reversible liferaft measured in square metres (which for this purpose may include the thwart or thwarts, if fitted) measured to the innermost edge of the buoyancy tubes; or
 - .3 the number of persons having an average mass of 75 kg, all wearing lifejackets, that can be seated inboard of the buoyancy tubes without interfering with the operation of any of the liferaft's equipment.

3 Open reversible liferaft fittings

- 3.1 Lifelines should be securely becketed around the inside and outside of the open reversible liferaft.
- 3.2 The open reversible liferaft should be fitted with an efficient painter of a length suitable for automatic inflation on reaching the water. For open reversible liferafts accommodating more than 30 persons an additional bowing-in line should be fitted.
- 3.3 The breaking strength of the painter system including its means of attachment to the open reversible liferaft, except the weak link, should be not less than:
- .1 7.5 kN for open reversible liferafts accommodating up to 8 persons;
 - .2 10.0 kN for open reversible liferafts accommodating 9 to 30 persons; and
 - .3 15.0 kN for open reversible liferafts accommodating more than 30 persons.
- The weak link shall not be broken by the force required to pull the painter from the life-raft container, shall be of sufficient strength to permit the inflation of the liferaft, and shall break under a strain of 2.2 ± 0.4 kN.
- 3.4 The open reversible liferaft should be fitted with at least the following number of inflated ramps to assist boarding from the sea whichever way up the raft inflates:
- .1 one boarding ramp for open reversible liferafts accommodating up to 30 persons; or
 - .2 two boarding ramps for open reversible liferafts accommodating more than 30 persons, such boarding ramps should be 180° apart.
- 3.5 The open reversible liferaft should be fitted with water pockets complying with the following requirements:
- .1 the cross-sectional area of the pockets should be in the shape of an isosceles triangle with the base of the triangle attached to the buoyancy tubes of the open reversible liferaft;
 - .2 the design should be such that the pockets fill to approximately 60% of capacity within 15 s to 25 s of deployment;
 - .3 the pockets attached to each buoyancy tube should normally have aggregate capacity of between 125 litres and 150 litres for inflatable open reversible liferafts up to and including the 10 person size;
 - .4 the pockets to be fitted to each buoyancy tube on liferafts certified to carry more than 10 persons should have as far as practicable an aggregate capacity of $(12 \times N)$ litres, where N is the number of persons carried;
 - .5 each pocket on a buoyancy tube should be attached so that when the pocket is in the deployed position it is attached along the full length of its upper edges to, or close to, the lowest part of the lower buoyancy tube; and

- .6 the pockets should be distributed symmetrically round the circumference of the liferaft with sufficient separation between each pocket to enable air to escape readily.
- 3.6 At least one manually controlled lamp complying with the requirements should be fitted on the upper and lower surfaces of the buoyancy tubes.
- 3.7 Suitable automatic drain arrangements should be provided on each side of the floor of the liferaft in the following manner:
 - .1 one for open reversible liferafts accommodating up to 30 persons; or
 - .2 two for open reversible liferafts accommodating more than 30 persons.
- 3.8 The equipment, designated as an HSC pack, of an open reversible liferaft, which is not provided in lieu of a buoyant appliance or coastal liferaft, should consist of:
 - .1 one buoyant rescue quoit, attached to not less than 30 m of buoyant line with a breaking strength of at least 1 kN;
 - .2 two safety knives of the non-folding type having a buoyant handle, which should be fitted attached to open reversible liferaft by light lines. They should be stowed in pockets so that, irrespective of the way in which the open reversible liferaft inflates, one will be readily available on the top surface of the upper buoyancy tube in a suitable position to enable the painter to be readily cut;
 - .3 one buoyant bailer;
 - .4 two sponges;
 - .5 one sea anchor permanently attached to the open reversible liferaft in such a way as to be readily deployable when the open reversible liferaft inflates. The position of the sea anchor should be clearly marked on both buoyancy tubes;
 - .6 two buoyant paddles;
 - .7 one first-aid outfit in a waterproof case capable of being closed tightly after use;
 - .8 one whistle or equivalent sound signal;
 - .9 two hand flares;
 - .10 one waterproof electric torch suitable for Morse signalling together with one spare set of batteries and one spare bulb in a waterproof container;
 - .11 one repair outfit for repairing punctures in buoyancy compartments; and
 - .12 one topping-up pump or bellows.
- 3.9 The equipment of an open reversible liferaft, which is provided in lieu of a coastal liferaft or a buoyant appliance, is as follows:
 - .1 for an open reversible liferaft which is provided in lieu of a coastal liferaft, that listed in 3.1 to 3.9 and 3.11 to 3.18 of Appendix J, except that there shall be in addition:

- .1 one buoyant rescue quoit, attached to not less than 30 m of buoyant line with a breaking strength of at least 1 kN;
 - .2 two red hand held flares and two hand held orange smoke signals complying with Appendix V; and
- the first aid outfit and the sea-sickness tablets shall be enclosed in waterproof cases capable of being tightly closed after use.
- .2 for an open reversible liferaft which is provided in lieu of a buoyant appliance:
 - .1 one repair outfit for repairing punctures in buoyancy compartments;
 - .2 one topping-up pump or bellows
 - .3 two safety knives of the non-folding type having a buoyant handle, which should be fitted attached to open reversible liferaft by light lines. They should be stowed in pockets so that, irrespective of the way in which the open reversible liferaft inflates, one will be readily available on the top surface of the upper buoyancy tube in a suitable position to enable the painter to be readily cut; and
 - .4 one buoyant rescue quoit, attached to not less than 30 m of buoyant line with a breaking strength of at least 1 kN.
- 3.10 Where appropriate the equipment should be stowed in a container which, if it is not an integral part of, or permanently attached to, the open reversible liferaft, should be stowed and secured to the open reversible liferaft and be capable of floating in water for at least 30 min without damage to its contents. Irrespective of whether the equipment container is an integral part of, or is permanently attached to, the open reversible liferaft, the equipment should be readily accessible irrespective of which way up the open reversible liferaft inflates. The line which secures the equipment container to the open reversible liferaft should have a breaking strength of 2 kN or a breaking strain of 3:1 based on the mass of the complete equipment pack, whichever is the greater.

4 Containers for open reversible inflatable liferafts

- 4.1 The open reversible liferafts should be packed in a container that is:
 - .1 so constructed as to withstand conditions encountered at sea;
 - .2 of sufficient inherent buoyancy, when packed with the liferaft and its equipment, to pull the painter from within and to operate the inflation mechanism should the craft sink; and
 - .3 as far as practicable watertight, except for drain holes in the container bottom.
- 4.2 The container should be marked with:
 - .1 maker's name or trademark;
 - .2 serial number;
 - .3 number of persons it is permitted to carry;
 - .4 the words "non-SOLAS reversible";
 - .5 type of emergency pack enclosed;

- .6 date when last serviced;
- .7 length of painter;
- .8 maximum permitted height of stowage above waterline (depending on drop-test height); and
- .9 launching instructions.

5 Markings on open reversible inflatable liferafts

Open reversible liferafts should be marked with:

- .1 maker's name or trademark;
- .2 serial number;
- .3 date of manufacture (month and year);
- .4 name and place of service station where it was last serviced; and
- .5 number of persons it is permitted to accommodate on the top of each buoyancy tube in characters not less than 100 mm in height and of a colour contrasting with that of the tube.

6 Instructions and Information

Instructions and information required for inclusion in the craft's training manual and in the instructions for on-board maintenance should be in a form suitable for inclusion in such training manual and instructions for on-board maintenance. Instructions and information should be in English in a clear and concise form and should include, as appropriate, the following:

- .1 general description of the open reversible liferaft and its equipment;
- .2 installation arrangements;
- .3 operational instructions including use of associated survival equipment; and
- .4 servicing requirements.

(Amendment dated 15 August 1995)

Appendix O

AMEND 1.1.1 TO READ:

- 1.1.1 The tests need not be carried out on foam buoyancy materials intended for use in SOLAS lifeboats, rescue boats, liferafts, lifejackets or lifebuoys where the prototype articles have satisfactorily completed the tests required by Marine Orders Part 25.

(Amendment dated 15 August 1995)

DELETE PROVISION 4 RELATING TO LIFEBOUYS.

(Amendment dated 15 August 1995)

Appendix R
Heading for Section B, and Section B,

AMEND B.LIFEJACKET **TO READ** B. LIFEJACKET

AMEND B. 1.1(d)(ii), TO READ

- (ii) be fitted with some alternative means of attachment acceptable to the Authority.

(Amendment dated 15 August 1995)

Annex 1 to Appendix R
AMEND FIRST LINE OF 3.2.1 TO READ:

- 3.2.1 At least 6 subjects are required. Both male and female of high
(Amendment dated 15 August 1995)
-

Appendix V
DELETE EXISTING TEXT AND SUBSTITUTE NEW TEXT.

APPENDIX V

PYROTECHNIC DISTRESS SIGNALS

Pyrotechnic Distress Signals other than Hand Held Red Distress Flares and Hand Held Orange Smoke Signals are to be in accordance with the requirements of Marine Orders Part 25 (see Appendix A).

Hand Held Red Distress Flares and Hand Held Orange Smoke Signals are to be in accordance with the following requirements.

1 Hand held Red Distress Flare Signal

- 1.1 A hand held red distress flare signal shall be designed so that it can be operated at sea from a small boat or liferaft, under adverse conditions in darkness with wet, cold or gloved hands and without causing discomfort to the uncovered hands of the operator. The method of operation shall be self evident. Protective caps shall be securely fitted and tear off tapes, where used, shall protrude sufficiently to facilitate removal. Sealing shall not depend on adhesive tapes.
- 1.2 A hand held red distress flare signal shall be so constructed that the end from which the light is emitted can be positively identified by day or night.
- 1.3 A hand held red distress flare signal shall be provided with an integral or permanently attached means of ignition designed to be operated from a hand held position without external aid and without injury to the operator or any person nearby.
- 1.4 A hand held red distress flare signal shall be capable of functioning and meeting the performance criteria detailed in paragraph 1.5 and 1.6 after:
- (i) immersion, with all packaging intact, under a head of water of 1 metre for 24 hours;

- (ii) immersion, with the outer packaging and tapes (if any) removed, but with the protective caps on, under a head of water of 1 metre for 2 hours;
 - (iii) immersion, in the ready to fire condition, under a head of water of 100 mm for 60 seconds; and
 - (iv) immersion, after ignition, under a head of water of 100 mm for 10 seconds.
- 1.5 A hand held red distress flare signal shall be capable of emitting a red light with a minimum intensity of 15 000 candela for not less than 60 seconds.
- 1.6 A hand held red distress flare signal shall be so constructed that, when fired, no burning composition will fall from the signal which might cause damage to an inflated liferaft.
- 1.7 A hand held red distress flare signal shall be so constructed that all metal components shall be corrosion resistant and all components, compositions and ingredients shall be of a character and quality so that the signal shall remain serviceable:
- (i) under magazine storage condition for at least 4 years, and
 - (ii) under reasonable conditions in a marine environment for at least 3 years.
- 1.8 A hand held red distress flare signal shall be so constructed that neither the composition nor the decomposition products of a signal shall include highly toxic products.
- 1.9 A hand held red distress flare signal shall be legibly and permanently marked with
- (i) the identification of the type of signal;
 - (ii) the name of the manufacturer;
 - (iii) the manufacturer's date of issue;
 - (iv) the date of expiry of the signal;
 - (v) the manufacturer's lot or batch number,
- 1.10 A hand held red distress flare signal shall be marked with clear and concise directions for use in the English language and shall include illustrations as to use.

2 Hand held Orange Smoke Signal

- 2.1 A hand held orange smoke signal shall be designed so that it can be operated at sea from a small boat or liferaft, under adverse conditions in darkness with wet, cold or gloved hands and without causing discomfort to the uncovered hands of the operator. The method of operation shall be self evident. Protective caps shall be securely fitted and tear off tapes, where used, shall protrude sufficiently to facilitate removal. Sealing shall not depend on adhesive tapes.
- 2.2 A hand held orange smoke signal shall be so constructed that the end from which the smoke is emitted can be positively identified by day or night.
- 2.3 A hand held orange smoke signal shall be provided with an integral or permanently attached means of ignition designed to be operated from a hand

held position without external aid and without injury to the operator or any person nearby.

- 2.4 A hand held red orange smoke signal shall be capable of functioning and meeting the performance criteria detailed in paragraph 2.5 and 2.6 after:
- (i) immersion, with all packaging intact, under a head of water of 1 metre for 24 hours.
 - (ii) immersion, with the outer packaging and tapes (if any) removed but with the protective caps on under a head of water of 1 metre for 2 hours;
 - (iii) immersion, in the ready to fire condition, under a head of water of 100 mm for 60 seconds; and
 - (iv) immersion, after ignition, under a head of water of 100 mm for 10 seconds.
- 2.5 A hand held orange smoke signal shall emit a vivid and expanding cloud of dense, orange coloured smoke which shall be clearly visible for a distance of at least 4 km for at least 60 seconds under conditions of good visibility and wind speed of 5 to 10 km/hour.
- 2.6 A hand held orange smoke signal shall be so constructed that when fired, no burning composition will fall from the signal which might cause damage to an inflated liferaft.
- 2.7 A hand held orange smoke signal shall be so constructed that all metal components shall be corrosion resistant and all components, compositions and ingredients shall be of a character and quality so that the signal shall remain serviceable:
- (i) under magazine storage condition for at least 4 years, and
 - (ii) under reasonable conditions in a marine environment for at least 3 years.
- 2.8 A hand held orange smoke signal shall be so constructed that neither the composition nor the decomposition products of a signal shall include highly toxic products.
- 2.9 A hand held orange smoke signal shall be legibly and permanently marked with
- (i) the identification of the type of signal;
 - (ii) the name of the manufacturer;
 - (iii) the manufacturer's date of issue;
 - (iv) the date of expiry of the signal; and
 - (v) the manufacturer's lot or batch number.
- 2.10 A hand held orange smoke signal shall be marked with clear and concise directions for use in the English language and shall include illustrations as to use.

(Amendment dated 15 August 1995)

SECTION 11
Part 2

VESSELS OF CLASS 1A – PAGE 6.

REPLACE THE TEXT FOR ‘FIREMEN’S OUTFITS’ BY THE FOLLOWING:

Firemen’s Outfits

Firemen’s Outfits shall comply with Appendix H and be provided as follows:

25 metres and over Two together with an additional outfit for each 30 metres in length of vessel or part thereof in excess of 60 metres. If in any vessel which carries firemen’s outfits containing only breathing apparatus of the air hose type, an air hose exceeding 36 metres in length would be necessary to reach from the open deck well clear of any hatch or doorway to any part of the accommodation, service, cargo or machinery spaces, at least two sets of breathing apparatus of the self contained type shall be provided.

(Amendment dated 15 March 1996)

VESSELS OF CLASS 1B – PAGE 10, AND VESSELS OF CLASS 1C – PAGE 13:
REPLACE THE TEXT FOR ‘FIREMEN’S OUTFITS’ BY THE FOLLOWING:

Firemen’s Outfits

Firemen’s Outfits shall comply with Appendix H and be provided as follows:

50 metres and over Two together with an additional outfit for each 30 metres in length of vessel or part thereof in excess of 60 metres. If in any vessel which carries firemen’s outfits containing only breathing apparatus of the air hose type, an air hose exceeding 36 metres in length would be necessary to reach from the open deck well clear of any hatch or doorway to any part of the accommodation, service, cargo or machinery spaces, at least two sets of breathing apparatus of the self contained type shall be provided.

(Amendment dated 15 March 1996)

VESSELS OF CLASS 2A – PAGE 24, VESSELS OF CLASS 2B – PAGE 29, AND VESSELS OF CLASS 2C – PAGE 33:

REPLACE THE TEXT FOR ‘FIREMEN’S OUTFITS’ BY THE FOLLOWING:

Firemen’s Outfits

Firemen’s Outfits shall comply with Appendix H and be provided as follows:

- 4000 tons and over 3 outfits
- 2500 tons and over but 2 outfits
- less than 4000 tons
- 500 tons and over but 1 outfit
- less than 2500 tons

If in any vessel which carries firemen’s outfits containing only breathing apparatus of the air hose type, an air hose exceeding 36 metres in length would be necessary to reach from the open deck well clear of any hatch or doorway to any part of the accommodation, service, cargo or machinery spaces, at least two sets of breathing apparatus of the self contained type shall be provided.

(Amendment dated 15 March 1996)

**Part 3
Appendix E, page 64**

AMEND THE PARAGRAPH FOLLOWING THE TITLE TO READ:

This Appendix applies to every fixed fire extinguishing installation fitted in compliance with this Section. An Authority may accept the design of a fixed fire extinguishing system which has been approved by a classification society or a government authority as a system complying with this Appendix.

(Amendment dated 15 August 1995)

Appendix F, page 68

INSERT A PARAGRAPH FOLLOWING THE TITLE TO READ:

An Authority may accept the design of a fixed fire extinguishing system which has been approved by a classification society or a government authority, as a system complying with this Appendix.

(Amendment dated 15 August 1995)

Appendix G, pages 69 & 70

DELETE ALL TEXT ON PAGES 69 AND 70 AND REPLACE BY NEW TEXT:

APPENDIX G

FIRE EXTINGUISHERS

1. General provisions.

1.1 Fire extinguishers containing an extinguishing medium which, in the opinion of the Authority, either by itself or under expected conditions of use gives off toxic gases in such quantities as to endanger persons shall not be permitted.

1.2 For the purpose of this Section the capacity of any fire extinguisher other than a carbon dioxide fire extinguisher shall be taken to be the greatest volume or weight of extinguishing medium which it can contain when sufficient space is left to ensure the proper operation of the extinguisher.

1.3 For the purpose of this Section the capacity of a carbon dioxide fire extinguisher shall be taken to be the greatest weight of carbon dioxide which it can safely contain in a tropical climate.

1.4 Every fire extinguisher provided in compliance with this Section shall be kept fully charged at all times.

1.5 Fire extinguishers provided in compliance with this Section, other than a carbon dioxide fire extinguisher, shall be tested by hydraulic pressure to within 345 kilopascals of the pressure to which it was tested at the time of its manufacture, and recharged at intervals not exceeding the intervals specified in the following table:

<i>Type of extinguisher</i>	<i>Recharge interval in years</i>	<i>Test interval in years</i>
Water		
Soda acid	1	5
Gas container	5	5
Stored pressure	5	5
Foam		
Chemical	1	5
Gas container:		
Premixed foam liquid type	5	5
Sealed foam liquid container type	5	5
Dry Chemical		
Stored pressure	5	5
Halogenated hydrocarbon		
Stored pressure	5	5

1.6 Every portable and non-portable carbon dioxide fire extinguisher provided in compliance with this Section shall be tested in accordance with the requirements of AS 2030, SAA Gas Cylinders Code, except that the interval between tests shall not exceed 10 years for the first and second tests and the interval between all subsequent tests shall not exceed 5 years. If the extinguisher has been discharged at a time exceeding 2 years after its previous test, it shall be pressure tested prior to recharging and the interval between subsequent tests shall not exceed 5 years.

2. Portable fire extinguishers

2.1 Reference to a portable fire extinguisher in this Section means a fire extinguisher which does not exceed 25 kilograms in weight in the fully charged condition and that:

2.1.1 in the case of a fire extinguisher in which the fire extinguishing medium is liquid, has a capacity of not more than 13 ½ litres and not less than 9 litres of liquid;

2.1.2 in the case of a fire extinguisher in which the fire extinguishing medium is carbon dioxide, has a capacity of not less than 3 kilograms of carbon dioxide, provided that, in the case of a vessel less than 5 metres in length, the Authority may allow a capacity of not less than one kilogram of carbon dioxide; or

2.1.3 in the case of a fire extinguisher in which the fire extinguishing medium is dry powder, has a capacity of not less than 4.5 kilograms of dry powder, provided that in the case of a vessel less than 5 metres in length, the Authority may allow a capacity of not less than 0.9 kilograms of dry powder.

2.2 Portable fire extinguishers provided in compliance with this Section for use in accommodation or service spaces of any vessel shall so far as practicable have a uniform method of operation.

2.3 Portable fire extinguishers provided in compliance with this Section shall, subject to the limitation of sub-item 2.2 be constructed in accordance with the following specification of the Standards Association of Australia:

<i>Type of Extinguisher</i>	<i>Specification number</i>
Water (Splash-proof type)	AS 1840 to 1842
Foam (Splash-proof type)	AS 1843 to 1845
Dry Chemical	AS 1846
Carbon Dioxide	AS 1847

and shall bear the Standards Association of Australia mark together with their licence number.

2.4 Where portable dry powder fire extinguishers are provided in compliance with this Section, in either accommodation and service spaces or in machinery spaces, their number shall not exceed one half of the total number of extinguishers provided in either of those spaces. Where only one extinguisher is required in a space, it may be of the dry powder type.

2.5 In the case of vessels of Classes 1A, 2A, and 3A which have a length of 25 metres or over, a spare charge shall be provided for every portable fire extinguisher provided in compliance with this Section, except that for each such fire extinguisher which is of a type that cannot readily be recharged while the vessel is at sea, an additional portable fire extinguisher of the same type, or its equivalent, shall be provided in lieu of a spare charge.

3. Non-portable foam fire extinguishers.

3.1 In this item 'foam fire extinguisher' does not include a portable fire extinguisher.

3.2 An extinguisher shall be of the antisplash type and so designed and constructed that the interior of the extinguisher can be examined.

3.3 The body of an extinguisher shall be cylindrical with ends dished outwards, without reverse flanging, to a radius not exceeding the diameter of the body.

3.4 The body and ends of an extinguisher shall be tinned or lead-coated internally and every part of the extinguisher shall, where necessary, be protected against corrosion.

3.5 The body of an extinguisher shall be welded or riveted and all riveted joints shall be soldered.

3.6 The body of an extinguisher shall be provided with an opening for the introduction of an inner container.

(Amendment dated 15 March 1996)

SECTION 13
Appendix H, page 15

IN SUB-CLAUSE 1.2, AMEND THE DEFINITION OF A TO READ:

A = the profile area in square metres of the hull and those superstructures and houses where breadth is greater than $B/4$. Screens and bulwarks more than 1.5 metres in height are to be regarded as part of this area.

(Amendment dated 15 March 1996

*Note: This clause had been affected by an incorrect
corrigendum in the October 1993 Corrigenda List)*

SECTION 14**AMEND CLAUSE 24 TO READ:**

24. The Certificate of Survey shall contain the following items:

Name of Vessel;

Identifying number of Vessel;

Date of Keel-Laying or Similar Stage of Construction;

Official Number (if registered vessel);

Number of Passengers;

Number of Crew;

Class of Vessel;

Limits of Operation(s);

Measured Length and/or Gross Tonnage;

Title of Issuing Authority;

Signature of authorised officer(s);

Period of validity from to

Statement that vessel complies with the survey requirements of the Authority and summary of departures from Code requirements accepted by the Authority.

(Amendment dated 15 August 1995)

AMEND CLAUSE 26.2 TO READ:

26.2 The evidence, if not the original or a copy of the Certificate of Survey, shall contain the following details:

Name of Vessel;

Identifying number of Vessel;

Date of Keel-Laying or Similar Stage of Construction;

Class of Vessel;

Measured Length and/or Gross Tonnage;

Maximum No. of persons carried;

Limits of operation(s);

Issuing Authority and signature of issuing officer(s); and

Date of expiry.

(Amendment dated 15 August 1995)

SECTION 15

AMEND CLAUSE 2.1 TO READ:

- 2.1 This Part shall apply to all vessels, both new and existing, other than Class 1A and 2A vessels which shall comply with the requirements of the Commonwealth Marine Orders Part 29 (Emergency Procedures and Drills).

(Amendment dated 15 August 1995)

SECTION 16**AMEND CLAUSE 2 TO READ:**

2. This Section should be read in conjunction with the Introduction, Definitions and General Requirements Section, and shall apply to all vessels, both new and existing.

(Amendment dated 15 August 1995)

SECTION 17

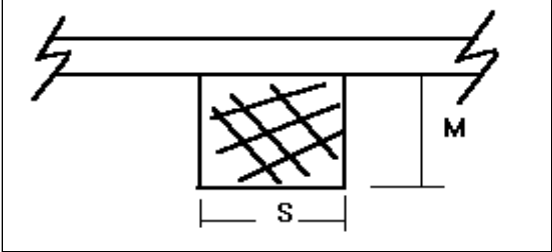
AMEND CLAUSE 2 TO READ:

2. This Section should be read in conjunction with the Introduction, Definitions and General Requirements Section, and shall apply to all vessels, both new and existing.

(Amendment dated 15 August 1995)

		13	"kPa" to "kPa"
5E	Contents	21	Delete "E.12 Guards in Hazardous Places"
5F	2.3.2	5	"involved" to "evolved"
	3.5	2	"area area" to "area"
	5.3.4	1	"Desks..." to "Decks..."
5G	10	4	"aCG" to "a _{CG} "
		10	"ph" to "P _h "
		13	"σ _y " to "σ _y "
		14	"W _m " to "w _m "
	11.1	2	"=Po" to "Po" (<i>delete initial = sign</i>), and "aCG" to "a _{CG} "
	11.2	2	"=p _o " to "p _o " (<i>delete initial = sign</i>), and add "g" between "3" and "Po"
*	11.3	2	"= p ₁ = p _o x" to "p ₁ = p _o ×"
	11.4	2	"=p" to "p" (<i>delete initial = sign</i>), and "ph" to "P _h "
	11.5(a)	1	"σ _y " to "σ _y "
	11.5(b)	2	" W _m " to " w _m "
	11.5(c)	1	" W _m " to " w _m ", and "σ _y " to "σ _y "
	11.5(d)	1	"σ _y " to "σ _y "
*	11.5(e)	1	"σ _y ² " to "σ _y ² "
	11.6(c)	1	"σ _y " to "σ _y "
		2	Indent line to line up with text above
	11.6(d)	2	"p x spacing" to "p × spacing. Then"
		3	Move "for a" to the start of the next line
		5	"and the section" to "for the section"
	11.9	3	"P _L " to "p _L ", and "ph" to "P _h "
	11.12	2	After "Bending moment" add the words " kilogram metres"
5G	11.12	3	"aCG" to " a _{CG} "
	11.13	5	"P ₂ = $\frac{P_0}{G}$ " to "P ₂ = $\frac{P_0 g}{G}$ "
		6	"= p =" to "p =", and "ph" to "P _h "
		8	Add "(" before "at ends..." and add ")" after "...length f"
	11.14	2	"P ₂ = $\frac{P_0}{G}$ " to "P ₂ = $\frac{P_0 g}{G}$ "
		3	"ph" to "P _h "
	11.14	4	"σ ₃ " to "σ ₃ "
*	11.15	2	"σ ₁ + σ ₂ + σ ₃ < σ _y " to "σ ₁ + σ ₂ + σ ₃ < σ _y "
	14	1	Delete " G.14 WORKED EXAMPLE "
	Fig. 1		"factor F _I " to "factor F _I "
	Fig. 2		"factor F _T " to "factor F _T "

*	Fig. 3		" pE/σ_y^2 " to " pE/σ_y^2 ", " w_m/b " to " w_m/b ", " Σ/σ_y " to " E/σ_y ", " σ_y/E " to " σ_y/E ", and add caption on diagram "For definition of coefficients see Clauses 10 and 11.5"
*5L	5.1	7	Amend formula to read $Z = 1.35 \times 1 \times \sqrt{L} \text{ cm}^3$
*		16	Amend formula to read $Z = 1.3 \times 1 \times \sqrt{L} \text{ cm}^3$
	10.1.3.2	1	"hf" to " h_f "
		3	"hf" to " h_f ", and "10 m; and" to "10 m"
		4	"hf" to " h_f "
	12.1.2(c)	2	"kgs/m ² " to "kg/m ² "
	12.2.2(a)	4	"kgs/m ² " to "kg/m ² "
	12.2.3	3	"wa" to " w_a "
		5	"wa" to " w_a "
	15.2.2(a)	4	"+" to "+"
	15.2.2(b)	2	"+" to "+"
	15.2.2(c)	7	Add ", in m" after "...freeboard deck at side"
	15.2.3	5	"3/340" to "s/340"
	15.3.1(a)	3	"+" to "+"
	15.3.1(b)	7	Add ", in m" after "...freeboard deck at side"
	15.3.3	1	Indent whole heading one further level
	16	1	"L. 16 Decks" (italics) to " L.16 Decks " (bold roman)
	16.3.3	4	"L" to lower case "l" and number "1 <" to lower case "l <"
*		5	"L" to lower case "l" and number "1 ≥" to lower case "l ≥"
	17.1.1	1	"Thickness" to "The thickness"
	17.1.3	1	"superstructures" to "superstructure"
*	17.1.3(a)	2	Delete "(a)"
*	17.1.3(b)	1	"(b)" to "L.17.1.4 Stiffeners" and remove one level of indent
*	17.1.4	1	renumber as L.17.1.5
5M	3.1(e)	1	"give" to "given"
	19.2	1	Delete "(a)"
		3	"wa" to " w_a "
	19.2	5	"wa" to " w_a "
	41.2	3	"permissable" to "permissible"
	41.2	8	"permissable" to "permissible"
*	42.3.3	3	Insert a space between " $\frac{S}{100}$ " and "mm"
	42.4.1.1(b)	4	Indent line to line up with text above
	42.7.2	9	"15 or less" to "15 or less"
	53.3	3	"wa" to " w_a "
		5	"wa" to " w_a "
	55.1	2	"S." to "S"
	Table M.6	5	[Note (b)] "= 65 mm" to "= 64 mm"

*	Table M.12	4	[Note (e)] Add " $Z = S \times M^2/6$ " after "Note: section modulus", and add the following diagram 
7	3.25.2	1	"supersture" to "superstructure"
	40.4(c)	2	"Type V" to "Type B"
	41.3	5	Delete both tables for "Percentage of Deductions..."
	69.6(a)	1	Add "," after "greater"
	69.6(b)	1	Add ", obtained" after "metres"
		12	Add a new last line to the table of lengths and freeing port areas: "20.0 1.40"
	69.6	last 2	Remove indent [this paragraph refers to both (a) and (b) of 69.6]
	70.2	3	"(L x h)" to "(l x h)"
8C.*	C.1	1	" Class I Vessels " to " Class 1 Vessels "
*	1.1.3	3	Amend Formula to: $M = 1.02 \times 10^{-4} P_{ah}$ tonne metres
*	1.1.4	3	Amend Formula to: Heeling moment = $\frac{5.3 \times V^2 \Delta d}{1000L}$ tonne metres
*	1.3.2.2	3	"GZ max" to "GZ _{max} "
	1.3.3.3	1	" N6" to " Nb"
*	1.3.4.1(a)	2	"tonnes metres" to "tonne metres"
*	1.3.4.1(b)	2	"tonnes metres" to "tonne metres"
	1.5.2	3	"Sction" to "Section"
	2(c)	1	"level" to "lever"
*	5.2.1.1	1	"is" to "are"
*	Fig. 2, p 12	..	In last line of legend, "bouyancy" to "buoyancy"
*	6.2.4	tables 2 & 3	"Fig 12" to "Fig 1" 4 instances, two in each table at lines 4 & 6
*	7.7(a)	2	"KG" to "CG"
*	7, Fig 9		"KG" to "CG"
*	7, Fig. 10	4	"Ten minimum capsizing moment $\Delta = BC$ " to "The minimum capsizing moment = $\Delta \times BC$ "
	8.4.2.1(b)	6	"Vo" to "V _o "
	8.4.2.1(c)	3, 6	"Mc" to "M _c "
*	8.4.2.1(d)	1	"The heeling moment M _v is a product of wind pressure P _v , the windage area A _v and" to "The heeling moment M _v is a product of wind pressure P _v , the windage area A _v and"
*		3	Replace by " $M_v = 1.02 \times 10^{-4} P_v A_v Z$ tonne metres"

*		6	"Av" to A _v " (also line 5 on p 22)
		9 on p 22	"Beafort" to "Beaufort"
*	8.4.2.1(e)	heading	"Mc" to "M _c "
*	8.4.2.1(e)(i)	1, 6, 7	"Mc" to "M _c "
*	8.4.2.1(e)(ii)	last	"Mc= Δ BE (tonnes metres)" to "M _c = Δ × BE (tonne metres)"
	8.5.5(a)	1&2	"+ 0.1L, or 3 metres + 0.03L, or 11" to "0.1L, or (3 + 0.03L), or 11"
*	9.2(a)	7	"(30°θ _{max})" to "(30° - θ _{max})"
*	9.2	4 on p 28	"θ,°" to "θ°"
*	12.8.3, 3(b)	1	"cos ² θ" to "cos ² θ"
	12.8.3, 3(b)1	2	"HZ ⁰ " to "HZ ₀ " and "Cos ² θ" to "cos ² θ"
*	12.8.3, 3(b)3	8	Amend right hand side of equation to: $\frac{I}{\frac{\theta}{2} + 14.3 \sin 2\theta}$
		10	"1 equals" to "I equals"
	12.8.3,3(c)	2	"(H)" to "(h)"
	14.4	5	"Δ" to "1000 g Δ"
	Appendix A, p.37	6	"Figure A1" to "Figure 1"
*		17	Amend equation to read: $M_{wi} = \frac{0.5\rho K_i^2}{1000} \sum_{n=1}^{n=N} C_D V_n^2 A_n Z_n \text{ for } i = 1 \text{ and } 2$
*	Appendix A, p.38	1	"K ₁ " by "K _i "
*		1	"K ₁ " by "K ₂ "
		11	"area gf" to "area of"
*		16	Before line 16, insert heading: "In figure 1:"
	Appendix B	6	"the less" to "less"
*9	14.6(d) & (e)	1	"mms" to "mm"
*	14.15.1	3	"di ³ " to "d _i ³ "
*	14.16.1	3	"di ³ " to "d _i ³ "
*	14.18	1, 2	delete quotation marks
*	17.7.1	(a), (b)	Formulae are to read: (a) $d_m = 25 + 1.68\sqrt{L(B+D)}$, and (b) $d_m = 25 + 2.16\sqrt{C(B+D)}$
*	26.3.1	7	"permissable" to "permissible"
*10	Appendix R, B1.1(d)(ii)	1	"with(some" to "with some"
*13	Appendix H, 1.2	4	"Δ ^{2/3} " to "Δ ^{2/3} "

*13	Appendix H, 1.3	4	" $\Delta^{2/3}$ " to " $\Delta^{2/3}$ "
*13	Appendix H, 1.4.1	5	" $\Delta^{2/3}$ " to " $\Delta^{2/3}$ "
18	5.1.2.1(c)	3	"600 between" to "650 between" (to agree with 5E.4.2(i))
*	5.1.2.2	1	Delete "(a)", and remove one level of indent
*	5.1.2.4	1	Delete "(a)", and remove one level of indent
	5.1.2.4	5	Change "250" to "230"
	5.1.2.5	1	Delete "(a)", and remove one level of indent
	5.6.1(a)	6	"load" to "mass"
		13	"load" to "mass"
	5.7.1.3	6	"slide" to "side"
	Fig. A	1	"0.75 mm" to "75 mm"