

COMMISSION DIRECTIVE 98/85/EC
of 11 November 1998
amending Council Directive 96/98/EC on marine equipment
 (Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,
 Having regard to the Treaty establishing the European Community,

Having regard to Council Directive 96/98/EC of 20 December 1996 on marine equipment⁽¹⁾, and in particular the first and second indents thereof,

- (1) Whereas, for the purposes of Council Directive 96/98/EC, the international conventions, including the 1974 SOLAS Convention, and testing standards are those, together with their amendments, in force on the date of the adoption of that Directive;
- (2) Whereas amendments to the SOLAS Convention and to other international conventions and new testing standards have entered into force since the adoption of that Directive or will enter into force shortly;
- (3) Whereas new rules regarding the equipment to be placed on board ships have been laid down by those instruments;
- (4) Whereas Directive 96/98/EC should be amended accordingly;
- (5) Whereas the measures provided for in this Directive are in accordance with the opinion of the Committee set up by Article 12 of Council Directive 93/75/EEC⁽²⁾, as last amended by Commission Directive 98/74/EC⁽³⁾,

HAS ADOPTED THIS DIRECTIVE:

Article 1

Directive 96/98/EC is hereby amended as follows:

1. Article 2 is amended as follows:
 - (a) Point (c) is replaced by the following:

‘(c) “radiocommunications equipment” shall mean equipment required by Chapter IV of the 1974 SOLAS Convention, in the version in force on 1 January 1999, and survival craft two-way

VHF radiotelephone apparatus required by Regulation III/6.2.1 of the same Convention;’

- (b) In points (d) and (n), the words ‘the date of the adoption of this Directive’ are replaced by ‘1 January 1999’.
2. Annex A is replaced by the text in the Annex to this Directive.

Article 2

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 30 April 1999 at the latest. They shall forthwith notify the Commission thereof.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the provisions of national law which they adopt in the field covered by this Directive.

Article 3

This Directive shall enter into force on the third day following that of its publication in the *Official Journal of the European Communities*.

Article 4

This Directive is addressed to the Member States.

Done at Brussels, 11 November 1998.

For the Commission
 Neil KINNOCK
 Member of the Commission

⁽¹⁾ OJ L 46, 17. 2. 1997, p. 25.
⁽²⁾ OJ L 247, 5. 10. 1993, p. 19.
⁽³⁾ OJ L 276, 13. 10. 1998, p. 7.

ANNEX

ANNEX A

Annex A.1: Equipment for which detailed testing standards already exist in international instruments (*)

IN ADDITION TO THE TESTING STANDARDS SPECIFICALLY MENTIONED, A NUMBER OF PROVISIONS, WHICH MUST BE CHECKED DURING TYPE-EXAMINATION (TYPE APPROVAL) AS REFERRED TO IN THE MODULES FOR CONFORMITY ASSESSMENT IN ANNEX B, ARE TO BE FOUND IN THE APPLICABLE REQUIREMENTS OF THE INTERNATIONAL CONVENTIONS AND THE RELEVANT RESOLUTIONS AND CIRCULARS OF THE IMO

1. Life-saving appliances

Item No	Item designation	Regulation SOLAS 74, as amended, where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (*)	Testing standards (*)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/1.1	Lifebuoys	Regulation III/4	Regulation III/7.1 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		
A.1/1.2	Position-indicating lights for life-saving appliances	Regulation III/4	Regulation III/7.1.3, III/22.3.1, III/32.2.2 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		
A.1/1.3	Life-buoys self-activating smoke signals	Regulation III/4	Regulation III/7.1 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		
A.1/1.4	Life jackets	Regulation III/4	Regulation III/7.2 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66), EN 394, EN 396 + A1, EN 399 + A1		×	×	×		
A.1/1.5	Immersion suits and anti-exposure suits	Regulation III/4	Regulation III/7.3 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		
A.1/1.6	Immersion suits and anti-exposure suits classified as life jackets	Regulation III/4	Regulation III/7.3 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		
A.1/1.7	Thermal protective aids	Regulation III/4	Regulation III/22.4, III/32.3 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		

(*) Where module H appears in column six, module H plus design-examination certificate is to be understood.

Item No	Item designation	Regulation SOLAS 74, as amended, where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (1)	Testing standards (2)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/1.8	Rocket parachute flares (pyrotechnics)	Regulation III/4	Regulation III/6.3 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×		×		
A.1/1.9	Hand flares (pyrotechnics)	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×		×		
A.1/1.10	Buoyant smoke signals (pyrotechnics)	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×		×		
A.1/1.11	Line-throwing appliances (pyrotechnics)	Regulation III/4	Regulation III/18 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×		×		
A.1/1.12	Inflatable life-rafts	Regulation III/4	Regulation III/21, III/31 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×				
A.1/1.13	Rigid life-rafts	Regulation III/4	Regulation III/21, III/31 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×				
A.1/1.14	Automatically self-righting life-rafts	Regulation III/4 & III/26.2.4	Regulation III/26.2 & III/34, IMO Resolution MSC 48(66), IMO MSC Circular/809	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66) and modified by the Appendix to MSC Circular/809 (3)		×				
A.1/1.15	Canopied reversible life-rafts	Regulation III/4 & III/26.2.4	Regulation III/26.2 & III/34, IMO Resolution MSC 48(66), IMO MSC Circular/809	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66) and modified by the Appendix to MSC Circular/809 (3)		×				
A.1/1.16	Float-free arrangements for life-rafts (hydrostatic release units)	Regulation III/4	Regulation III/13.4 & III/34, IMO Resolution MSC 48(66), IMO MSC Circular/811	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		

Item No	Item designation	Regulation SOLAS 74, as amended, where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (1)	Testing standards (2)	Modules for conformity assessment						
					B+C	B+D	B+E	B+F	G	H	
A.1/1.17	Lifeboats	Regulation III/4	Regulation III/21, III/31 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×				×	
A.1/1.18	Rigid rescue boats	Regulation III/4	Regulation III/21, III/31 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×				×	
A.1/1.19	Inflated rescue boats	Regulation III/4	Regulation III/21, III/31 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×				×	
A.1/1.20	Fast rescue boats	Regulation III/4 & III/26.3.1	Regulation III/26.3 & III/34, IMO Resolution MSC 48(66), IMO MSC Circular/809	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66) and modified by the Appendix to MSC Circular/809 (3)		×				×	
A.1/1.21	Launching appliances using fall and winch (davits)	Regulation III/4	Regulation III/23, III/33 & III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×	×	×	
A.1/1.22	Float-free launching appliances for survival craft	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×			
A.1/1.23	Launching appliances for free-fall lifeboats	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)						×	
A.1/1.24	Life-raft launching appliances	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×	×	×	
A.1/1.25	Fast rescue boat launching appliances	Regulation III/4 & III/26.3.2	Regulation III/26.3 & III/34, IMO Resolution MSC 48(66), IMO MSC Circular/809	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66) and modified by the Appendix to MSC Circular/809 (3)		×	×	×			

Item No	Item designation	Regulation SOLAS 74, as amended, where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (1)	Testing standards (2)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/1.26	Release mechanism for life-boats, rescue boats and life-rafts launched by a fall or falls	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		
A.1/1.27	Marine evacuation systems	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×			×	
A.1/1.28	Means of rescue	Regulation III/4	Regulation III/26.4 & III/34, IMO Resolution MSC 48(66), IMO MSC Circular/810	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66), MSC Circular/810 (section 3)		×				
A.1/1.29	Embarkation ladders	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		
A.1/1.30	Retro-reflective materials	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.658 (16) Annex 2		×	×	×		
A.1/1.31	Survival craft two-way VHF radio telephone apparatus	Regulation III/4	Regulation III/6.2.1, IMO Resolution A.694 (17), IMO Resolution A.809 (19), IMO Resolution A.813 (19)	ETS 300 162, ETS 300 225, EN 300 828, EN 60945; IEC 61097-12, IEC 60945		×	×	×	×	
A.1/1.32	9GHz SAR transponder (SART)	Regulation III/4, IV/14 & X/3	Regulation III/6.2.2, IV/7.1.3, X/3, IMO Resolution A.530 (13), IMO Resolution A.694 (17), IMO Resolution A.802 (19), IMO Resolution A.813 (19), ITU-R M.628-2	EN 61097-1, EN 60945-3; IEC 61 097-1, IEC 60945		×	×	×	×	
A.1/1.33	Radar reflector for lifeboats and rescue boats	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.384(X), EN 8729; ISO 8729		×	×	×	×	
A.1/1.34	Compass for lifeboats and rescue boats	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	ISO 613, ISO 10316		×	×	×	×	

Item No	Item designation	Regulation SOLAS 74, as amended, where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (1)	Testing standards (2)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/1.35	Portable fire-extinguishing equipment for lifeboats and rescue boats	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66), IMO Resolution A.602(15)	EN 3-1/A1, 3-2, 3-3, 3-4, 3-5, 3-6		×	×	×		
A.1/1.36	Lifeboat propulsion engine	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		
A.1/1.37	Rescue boat propulsion engine	Regulation III/4	Regulation III/34, IMO Resolution MSC 48(66)	IMO Resolution A.689 (17) as amended by IMO Resolution MSC.54(66)		×	×	×		

(1) ITU Recommendations cited are those referred to in the international conventions and the relevant resolutions and circulars of the IMO.

(2) Where IMO Resolutions are cited, only the testing standards contained in relevant parts of the Annexes to the Resolutions are applicable and exclude the provisions of the Resolutions themselves.

(3) The modification by the Appendix to MSC Circ./809 is only applicable if the equipment is to be fitted on ro-ro passenger ships.

2. Marine-pollution prevention

Item No	Item designation	Regulation Marpol 73/78 as amended where "type-approval" is required	Applicable regulation Marpol 73/78, as amended, and the relevant resolutions and circulars of the IMO	Testing standards (1)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/2.1	Oil-filtering equipment (for an oil content of the effluent not exceeding 15 p.p.m.)	Annex I, Regulation 16 (4), (5) & (7)	Annex I, Regulation 16 (1) & (2)	MEPC 60 (33)		×	×	×		
A.1/2.2	Oil/water interface detectors	Annex I, Regulation 15 (3) (b)	Annex I, Regulation 15 (3) (b)	MEPC 5 (XIII)		×	×	×		
A.1/2.3	Oil-content meters	Annex I, Regulation 16 (5)	Annex I, Regulation 16 (2)	MEPC 60 (33)		×	×	×		
A.1/2.4	Process units intended for attachment to existing oily water separating equipment (for an oil content of the effluent not exceeding 15 p.p.m.)	Annex I, Regulation 16 (5)	Annex I, Regulation 16 (5)	IMO Resolution A.444 (XI) MEPC 60 (33)		×	×	×		
A.1/2.5	Oil discharge monitoring and control system for an oil tanker	Annex I, Regulation 15 (3)	Annex I, Regulation 15 (3)	IMO Resolution A.586 (14)		×	×	×		

Item No	Item designation	Regulation Marpol 73/78 as amended where "type-approval" is required	Applicable regulation Marpol 73/78, as amended, and the relevant resolutions and circulars of the IMO	Testing standards (1)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/2.6	Sewage treatment plants	Annex IV, Regulation 8 (b)	Annex IV, Regulation 8 (b)	MEPC 2 (VI)		×	×	×	×	
A.1/2.7	Shipboard incinerators	Annex VI, Regulation 16 (2)	Annex VI, Regulation 16 (2)	MEPC 76(40)		×	×	×	×	

(1) Where IMO Resolutions are cited, only the testing standards contained in relevant parts of the Annexes to the Resolutions are applicable and exclude the provisions of the Resolutions themselves.

3. Fire protection

Item No	Item designation	Regulation SOLAS 74, as amended, where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO	Testing standards (1)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/3.1	Primary deck coverings	Regulation II-2/34.8, II-2/49.3	Regulation II-2/34.8, II-2/49.3	IMO Resolution A.687 (17), IMO MSC/Circular 549, IMO Resolution MSC 61(67) Annex 1, Parts 2 & 6 and Annex 2		×				
A.1/3.2	Portable fire extinguishers	Regulation II-2/6.1	Regulation II-2/6, IMO Resolution A.602 (15)	EN 3-1/A1, 3-2, 3-3, 3-4, 3-5, 3-6		×	×	×		
A.1/3.3	Fireman's outfit: protective clothing	Regulation II-2/17.1.1.1	Regulation II-2/17.1.1.1	EN 366, EN 469 or EN 531, EN 532, EN 20811		×				
A.1/3.4	Fireman's outfit: boots	Regulation II-2/17.1.1.2	Regulation II-2/17.1.1.2	EN 344, EN 344-2, EN 345, EN 345-2		×				
A.1/3.5	Fireman's outfit: gloves	Regulation II-2/17.1.1.2	Regulation II-2/17.1.1.2	EN 659		×				
A.1/3.6	Fireman's outfit: helmet	Regulation II-2/17.1.1.3	Regulation II-2/17.1.1.3	EN 443		×				
A.1/3.7	Self-contained compressed-air-operated breathing apparatus	Regulation II-2/17.1.2	Regulation II-2/17.1.2.2	EN 137		×				
A.1/3.8	Air-supplied breathing apparatus for use with a smoke helmet or smoke mask	Regulation II-2/17.1.2	Regulation II-2/17.1.2.1	EN 138, EN 139		×				
A.1/3.9	Sprinkler systems equivalent to that referred to in SOLAS Regulation II-2/12	Regulation II-2/36.1.2, II-2/36.2, II-2/41-2.5	Regulation II-2/12, II-2/36.1.2, II-2/36.2, II-2/41-2.5	IMO Resolution A.800 (19)		×			×	
A.1/3.10	Nozzles for fixed pressure water-spraying fire-extinguishing systems for machinery spaces	Regulation II-2/10.1	Regulation II-2/10.1	IMO MSC Circular/668 as amended by IMO MSC Circular/728		×	×	×		

Item No	Item designation	Regulation SOLAS 74, as amended, where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO	Testing standards (1)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/3.11	"A" and "B", Class divisions, fire integrity	Regulation II-2/3.3.5, II-2/3.4.4	Regulation II-2/3.3.5, II-2/16.11, II-2/3.4.4	IMO Resolution A 754 (18), IMO Resolution MSC.61(67) Annex 1, Part 3 and Annex 2		×	×	×		
A.1/3.12	Devices to prevent the passage of flame into the cargo tanks in oil tankers	Regulation II-2/59.1.5, II-2/59.1.4, II-2/59.2	Regulation II-2/59.1.5, II-2/59.1.4, II-2/59.2	IMO MSC/Circular 450/Rev.1 IMO MSC/Circular 677		×	×	×		
A.1/3.13	Non-combustible materials used in "A", "B" and "C" class divisions	Regulation II-2/3.1, II-2/3.3.4, II-2/3.4.3, II-2/3.5	Regulation II-2/3.1, II-2/3.3.4, II-2/3.4.3, II-2/3.5	IMO Resolution A 799 (19), IMO Resolution MSC.61(67) Annex 1, Part 1 and Annex 2		×	×	×		
A.1/3.14	Materials other than steel for pipes penetrating "A" or "B" class divisions	Regulation II-2/3.3.5, II-2/3.4.4, II-2/18.2.1	Regulation II-2/18.2.1	IMO Resolution A 753 (18), IMO Resolution A 754 (18), IMO Resolution MSC.61(67) Annex 1, Part 3		×	×	×		
A.1/3.15	Materials other than steel for pipes conveying oil or fuel oil	Regulation II-2/3.3.5, II-2/18.2.2	Regulation II-2/18.2.2	IMO Resolution A 753 (18)		×	×	×		
A.1/3.16	Fire doors	Regulation II-2/3.3.5, II-2/3.4.4, II-2/30.2, II-2/31.1, II-2/47	Regulation II-2/30.2, II-2/31.1, II-2/47	IMO Resolution A 754 (18), IMO Resolution MSC.61(67) Annex 1, Part 3		×	×	×		
A.1/3.17	Fire door control systems	Regulation II-2/30.4.15	Regulation II-2/30.4.15	IMO Resolution A 754 (18), IMO Resolution MSC.61(67) Annex 1, Part 4		×	×	×		
A.1/3.18	Surface materials and floor coverings with low flame-spread characteristics	Regulation II-2/3.8, II-2/34.7, II-2/49.2	Regulation II-2/3.8, II-2/3.23.4, II-2/3.23.5, II-2/16.1.1, II-2/32.1.4.3.1, II-2/34.2, II-2/34.3, II-2/49.1, II-2/50.3.1	IMO Resolution A 653 (16), IMO Resolution MSC.61(67) Annex 1, Parts 2 & 5 and Annex 2 ISO 1716 (2)		×	×	×		

Item No	Item designation	Regulation SOLAS 74, as amended, where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO	Testing standards ⁽¹⁾	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/3.19	Draperies, curtains and other suspended textile materials and films	Regulation II-2/3.23.3	Regulation II-2/3.23.3	IMO Resolution MSC.61(67) Annex 1, Part 7		×	×	×		
A.1/3.20	Upholstered furniture	Regulation II-2/3.23.6	Regulation II-2/3.23.6, II-2/34	IMO Resolution A 652 (16), IMO Resolution MSC.61(67) Annex 1, Part 8		×	×	×		
A.1/3.21	Bedding components	Regulation II-2/3.23.7	Regulation II-2/3.23.7, II-2/34	IMO Resolution A 688 (17), IMO Resolution MSC.61(67) Annex 1, Part 9		×	×	×		
A.1/3.22	Fire dampers	Regulation II-2/3.3.5, II-2/16.11	Regulation II-2/16, II-2/32, II-2/48	IMO Resolution A.754 (18), IMO Resolution MSC.61(67) Annex 1, Part 3 and Annex 2		×	×	×		
A.1/3.23	Non-combustible duct penetrations through "A" class divisions	Regulation II-2/3.3.5, II-2/16.11, II-2/18.1.1	Regulation II-2/16, II-2/32, II-2/48	IMO Resolution A.754 (18), IMO Resolution MSC.61(67) Annex 1, Part 3 and Annex 2		×	×	×		
A.1/3.24	Electric cable transits through "A" class divisions	Regulation II-2/3.3.5, II-2/18.1.1, II-2/18.1.2	Regulation II-2/18.1.1, II-2/18.1.2	IMO Resolution A.754 (18), IMO Resolution MSC.61(67) Annex 1, Part 3 and Annex 2		×	×	×		
A.1/3.25	Windows and side scuttles	Regulation II-2/3.3.5, II-2/33	Regulation II-2/33	IMO Resolution A.754 (18), IMO Resolution MSC.61(67) Annex 1, Part 3 and Annex 2, MSC Circular/727		×	×	×		

⁽¹⁾ Where IMO Resolutions are cited, only the testing standards contained in relevant parts of the Annexes to the Resolutions are applicable and exclude the provisions of the Resolutions themselves.

⁽²⁾ Where the surface material is required to have a certain maximum calorific value, this shall be measured in accordance with ISO 1716.

4. Navigation equipment

Item No	Item designation	Regulation SOLAS 74 as amended where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (1)	Testing standards (2)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/4.1	Magnetic compass	Regulation V/12 (r), Regulation X/3	Regulation V/12 (b), Regulation X/3, IMO Resolution A.382 (X), IMO Resolution A.694 (17)	EN 61162-1, EN 60945, ISO 449, ISO 613, ISO 694, ISO 1069, ISO 2269, ISO 10316		×	×	×	×	
A.1/4.2	Electromagnetic compass	Regulation V/12 (r), Regulation X/3	Regulation V/12 (b), Regulation X/3, IMO Resolution A.694 (17), IMO Resolution A.813 (19)	EN 61162-1, EN 60945 ISO 11606, IEC 60945		×	×	×	×	
A.1/4.3	Gyro compass	Regulation V/12 (r)	Regulation V/12 (d), IMO Resolution A.424 (XI), IMO Resolution A.694 (17), IMO Resolution A.813 (19)	EN 61162-1, EN 60945, EN 8728; IEC 61162-1, IEC 60945, ISO 8728		×	×	×	×	
A.1/4.4	Radar Equipment	Regulation V/12 (r)	Regulation V/12 (g), Regulation V/12 (h), IMO Resolution A.477 (XII), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC64(67) Annex 4	EN 60936, EN 60945, EN 61162-1; IEC 60936, IEC 60945, IEC 61162-1		×	×	×	×	
A.1/4.5	Automatic radar plotting aid (ARPA)	Regulation V/12 (r)	Regulation V/12 (j), IMO Resolution A.422 (XI), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution A.823 (19)	EN 60872, EN 60945, EN 61162-1; IEC 60872, IEC 60945, IEC 61162-1		×	×	×	×	
A.1/4.6	Echosounding equipment	Regulation V/12 (r), Regulation X/3	Regulation V/12 (k), Regulation X/3, IMO Resolution A.224 (VII), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC74(69) Annex 4	EN 9875, EN 61162-1, EN 60945; ISO 9875, IEC 61162-1, IEC 60945		×	×	×	×	

Item No	Item designation	Regulation SOLAS 74 as amended where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (1)	Testing standards (2)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/4.7	Device to indicate speed and distance	Regulation V/12 (r), Regulation X/3	Regulation V/12 (1), Regulation X/3, IMO Resolution A.478 (XII), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution A.824 (19)	EN 61023, EN 61162-1, EN 60945; IEC 61023, IEC 61162-1, IEC 60945		×	×	×	×	
A.1/4.8	Rudder angle, rpm, pitch indicator	Regulation V/12 (r),	Regulation V/12 (m), IMO Resolution A.694 (17), IMO Resolution A.813 (19)	EN 60945; IEC 60945		×	×	×	×	
A.1/4.9	Rate-of-turn indicator	Regulation V/12 (r), Regulation X/3	Regulation V/12 (n), Regulation X/3, IMO Resolution A.526 (13), IMO Resolution A.694 (17), IMO Resolution A.813 (19)	EN 61162-1, EN 60945; IEC 61162-1, IEC 60945		×	×	×	×	
A.1/4.10	Direction finder	Regulation V/12 (r), Regulation X/3	Regulation V/12 (p), Regulation X/3, IMO Resolution A.529 (13), IMO Resolution A.665 (16), IMO Resolution A.694 (17), IMO Resolution A.813 (19)	EN 60945; IEC 60945		×	×	×	×	
A.1/4.11	Loran-C equipment	Regulation V/12 (r), Regulation X/3	Regulation V/12 (p), Regulation X/3, IMO Resolution A.529 (13), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution A.818 (19)	EN 61075, EN 61162-1, EN 60945; IEC 61075, IEC 61162-1, IEC 60945		×	×	×	×	
A.1/4.12	Chayka equipment	Regulation V/12 (r), Regulation X/3	Regulation V/12 (p), Regulation X/3, IMO Resolution A.529 (13), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution A.818 (19)	EN 61075, EN 61162-1, EN 60945; IEC 61075, IEC 61162-1, IEC 60945		×	×	×	×	

Item No	Item designation	Regulation SOLAS 74 as amended where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (1)	Testing standards (2)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/4.13	Decca navigator equipment	Regulation V/12 (r), Regulation X/3	Regulation V/12 (p), Regulation X/3, IMO Resolution A.529 (13), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution A.816 (19)	EN 61135, EN 61162-1, EN 60945; IEC 61135, IEC 61162-1, IEC 60945		×	×	×	×	
A.1/4.14	GPS equipment	Regulation V/12 (r), Regulation X/3	Regulation V/12 (p), Regulation X/3, IMO Resolution A.529 (13), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution A.819 (19)	EN 61108-1, EN 61162-1, EN 60945; IEC 61108-1, IEC 61162-1, IEC 60945		×	×	×	×	
A.1/4.15	GLONASS equipment	Regulation V/12 (r), Regulation X/3	Regulation V/12 (p), Regulation X/3, IMO Resolution A.529 (13), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC.53(66)	EN 61108-2, EN 61162-1, EN 60945; IEC 61108-2, IEC 61162-1, IEC 60945		×	×	×	×	
A.1/4.16	Auto-pilot (heading control system)	Regulation V/19	Regulation V/19, IMO Resolution A.342(IX), as amended by IMO Resolution MSC 64(67) Annex 3, IMO Resolution A.694 (17), IMO Resolution A.813 (19)	ISO/TR 11674, EN 61162-1, EN 60945; ISO/TR 11674, IEC 61162-1, IEC 60945		×	×	×	×	
A.1/4.17	Mechanical pilot hoist	Regulation V/17 (b),	Regulation V/17 (b), IMO Resolution A.426(XI), IMO MSC/Circular 568/Rev.1	IMO Resolution A.667(16), ISO 799						

(1) ITU Recommendations cited are those referred to in the international conventions and the relevant resolutions and circulars of the IMO.

(2) Where IMO Resolutions are cited, only the testing standards contained in relevant parts of the Annexes to the Resolutions are applicable and exclude the provisions of the Resolutions themselves.

5. Radio-communication equipment

Item No	Item designation	Regulation SOLAS 74 as amended where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (!)	Testing standards (?)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/5.1	VHF radio installation capable of transmitting and receiving DSC and radiotelephony	Regulation IV/14, Regulation X/3	Regulation IV/7.1.1, Regulation X/3, IMO Resolution A.524 (13), IMO Resolution A.694 (17), IMO Resolution A.803 (19), IMO Resolution A.813 (19), IMO Resolution MSC 68(68) Annex 1, ITU-R 493, ITU-R 541	ETS 300 162-2, ETS 300 338, EN 300 828, EN 60945; IEC 61097-3, IEC 61097-7, IEC 60945		×	×	×	×	
A.1/5.2	VHF DCS watchkeeping receiver	Regulation IV/14, Regulation X/3	Regulation IV/7.1.2, Regulation X/3, IMO Resolution A.609 (15), IMO Resolution A.694 (17), IMO Resolution A.803 (19), IMO Resolution A.813 (19), IMO Resolution MSC 68(68) Annex 1, ITU-R 493, ITU-R 541	ETS 300 162-2, ETS 300, 338, ETS 300 828, EN 301 033, EN 60945; IEC 61097-3, IEC 61097-8, IEC 60945		×	×	×	×	
A.1/5.3	NAVTEX receiver	Regulation IV/14, Regulation X/3	Regulation IV/7.1.4, Regulation X/3, IMO Resolution A.525 (13), IMO Resolution A.694 (17), IMO Resolution A.813 (19), ITU-R 540, ITU-R 625	ETS 300 065 + A1, EN 301 011, EN 60945; IEC 61097-6, IEC 60945		×	×	×	×	
A.1/5.4	EGC receiver	Regulation IV/14, Regulation X/3	Regulation IV/7.1.5, Regulation X/3, IMO Resolution A.570 (14), IMO Resolution A.664 (16), IMO Resolution A.694 (17), IMO Resolution A.813 (19)	ETS 300 460 + A1, EN 300 829, EN 60945; IEC 61097-4, IEC 60945		×	×	×	×	

Item No	Item designation	Regulation SOLAS 74 as amended where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (1)	Testing standards (2)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/5.5	HF marine safety information (MSI) equipment (HF NBDP receiver)	Regulation IV/14, Regulation X/3	Regulation IV/7.1.5, Regulation X/3, IMO Resolution A.694 (17), IMO Resolution A.700 (17), IMO Resolution A.806 (19), IMO Resolution A.813 (19), ITU-R 491, ITU-R 492, ITU-R 625, ITU-R 688	ETS 300 067 & A1, EN 60945; IEC 61097-11, IEC 60945		×	×	×	×	
A.1/5.6	406 MHz EPIRB (COSPAS-SARSAT)	Regulation IV/14, Regulation X/3	Regulation IV/7.1.6, Regulation X/3, IMO Resolution MSC56 (66), IMO Resolution A.662 (16), IMO Resolution A.694 (17), IMO Resolution A.696 (17), IMO Resolution A.763 (18), IMO Resolution A.810 (19), IMO Resolution A.813 (19), ITU-R 633	ETS 300 066-2, EN 60945; IEC 61097-2, IEC 60945		×	×	×	×	
A.1/5.7	L-band EPIRB (INMARSAT)	Regulation IV/14, Regulation X/3	Regulation IV/7.1.6, Regulation X/3, IMO Resolution A.661 (16), IMO Resolution A.662 (16), IMO Resolution A.694 (17), IMO Resolution A.812 (19), IMO Resolution A.813 (19), ITU-R 632-3	ETS 300 372, EN 60945; IEC 61097-5, IEC 60945		×	×	×	×	
A.1/5.8	2182 kHz watch receiver	Regulation IV/14, Regulation X/3	Regulation IV/7.2, Regulation X/3, IMO Resolution A.383 (X), IMO Resolution A.694 (17), IMO Resolution A.813 (19), ITU-R M 219, ITU-R 693	ETS 300 441, EN 301090, EN 60945; IEC 61097-15, IEC 60945		×	×	×	×	

Item No	Item designation	Regulation SOLAS 74 as amended where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (*)	Testing standards (?)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/5.9	Two-tone alarm signal generator	Regulation IV/14, Regulation X/3	Regulation IV/7.3, Regulation X/3, IMO Resolution A.421 (XI), IMO Resolution A.571 (14), IMO Resolution A.694 (17), IMO Resolution A.813 (19), ITU-R M 219	ETS 300 373 + A1, EN 60945; IEC 61097-9, IEC 60945		×	×	×	×	
A.1/5.10	MF radio installation capable of transmitting and receiving DSC and radiotelephony	Regulation IV/14, Regulation X/3	Regulation IV/9.1.1, Regulation IV/10.1.2, Regulation X/3, IMO Resolution A.334 (IX), IMO Resolution A.610 (15), IMO Resolution A.694 (17), IMO Resolution A.804 (19), IMO Resolution A.813 (19), IMO Resolution MSC 68 (68) Annex 2, ITU-R M 219, ITU-R M 493, ITU-R M 541	ETS 300 338, ETS 300 373 + A1, EN 60945; IEC 61097-3, IEC 61097-9, IEC 60945		×	×	×	×	
A.1/5.11	MF radiotelephone DSC watchkeeping receiver	Regulation IV/14, Regulation X/3	Regulation IV/9.1.2, Regulation IV/10.1.3, Regulation X/3, IMO Resolution A. 610 (15), IMO Resolution A.694 (17), IMO Resolution A.804 (19), IMO Resolution A.806 (19), IMO Resolution A.813 (19), IMO Resolution MSC 68(68) Annex 2, ITU-R 493, ITU-R 541	ETS 300 338, ETS 300373, EN 301 033, EN 60945; IEC 61097-3, IEC 61097-8, IEC 60945		×	×	×	×	
A.1/5.12	Inmarsat-B SES	Regulation IV/14, Regulation X/3	Regulation IV/10.1.1, Regulation X/3, IMO Resolution A.570 (14), IMO Resolution A.694 (17), IMO Resolution A.698 (17), IMO Resolution A.808 (19), IMO Resolution A.813 (19)	IEC 61097-10, IEC 60945		×	×	×	×	

Item No	Item designation	Regulation SOLAS 74 as amended where "type-approval" is required	Applicable regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO (1)	Testing standards (2)	Modules for conformity assessment					
					B+C	B+D	B+E	B+F	G	H
A.1/5.13	Inmarsat-C SES	Regulation IV/14, Regulation X/3	Regulation IV/10.1.1, Regulation X/3, IMO Resolution A.570 (14), IMO Resolution A.663 (16), IMO Resolution A.664 (16), IMO Resolution A.694 (17), IMO Resolution A.807 (19), IMO Resolution A.813 (19), IMO Resolution MSC 68(68) Annex 4	ETS 300 460 + A1, EN 300 829, EN 60945; IEC 61097-4, IEC 60945		×	×	×	×	
A.1/5.14	MF/HF radio installation capable of transmitting and receiving DSC, NBDP and radiotelephony	Regulation IV/14, Regulation X/3	Regulation IV/10.2.1, Regulation X/3, IMO Resolution A.613 (15), IMO Resolution A.694 (17), IMO Resolution A.806 (19), IMO Resolution A.813 (19), IMO Resolution MSC 68(68) Annex 3, ITU-R 476, ITU-R 492, ITU-R 493, ITU-R 541, ITU-R 625	ETS 300 338, ETS 300 373 + A.1, ETS 300 067 + A1, EN 60945; IEC 61097-3, IEC 61097-9, IEC 61097-11, IEC 60945		×	×	×	×	
A.1/5.15	Radiotelephone MF/HF DSC watchkeeping receiver	Regulation IV/14, Regulation X/3	Regulation IV/10.2.2, Regulation X/3, IMO Resolution A.613 (15), IMO Resolution A.694 (17), IMO Resolution A.806 (19), IMO Resolution A.813 (19), IMO Resolution MSC 68(68) Annex 3, ITU-R 493	ETS 300 338, ETS 300 373, EN 301 033, EN 60945, IEC 61097-3, IEC 61097-8, IEC 60945		×	×	×	×	
A.1/5.16	Aeronautical two way VHF radio telephone apparatus	Regulation IV/14, Regulation X/3	Regulation IV/7.5, Regulation X/3, IMO Resolution A.694 (17), IMO Resolution A.813 (19), ICAO Convention, Annex 10 Radio Regulations	TS 101 089, EN 60945; IEC 60945		×	×	×	×	

(1) ITU Recommendations cited are those referred to in the international conventions and the relevant resolutions and circulars of the IMO.

(2) Where IMO Resolutions are cited, only the testing standards contained in relevant parts of the Annexes to the Resolutions are applicable and exclude the provisions of the Resolutions themselves.

Annex A.2: Equipment for which no detailed testing standards exist in international instruments

1. Life-saving appliances

Item No	Item designation	Regulation SOLAS 74 as amended where "type-approval" is required	Testing standards
A.2/1.1	Radar reflector for life-rafts	Regulation III/4, III/34, IMO Resolution MSC.48(66)	
A.2/1.2	Searchlight for use in lifeboats and rescue boats	Regulation III/4, III/34, IMO Resolution MSC.48(66)	
A.2/1.3	Immersion suit materials	Regulation III/4, III/34, IMO Resolution MSC.48(66)	

2. Marine-pollution prevention

P.M.

3. Fire protection

Item No	Item designation	Regulation SOLAS 74 as amended where "type approval" is required	Testing standards
A.2/3.1	Non-portable and transportable extinguishers	Regulation II-2/6, II-2/7.1.3, II-2/7.2.3, II-2/7.3.1	
A.2/3.2	Sprinkler systems (limited to sprinkler heads and to the method of automatic sprinkling and signalling)	Regulation II-2/12.3, II-2/36.1.2, II-2/36.2, II-2/41-2.5, II-2/52.2	ISO 6182
A.2/3.3	Nozzles for fixed pressure water-spraying fire-extinguishing systems for special category spaces	Regulation II-2/37.1.3	IMO Resolution A 123(V)
A.2/3.4	Cold-weather starting of generator sets (starting devices)	Regulation II-1/44.2	
A.2/3.5	Fire hoses	Regulation II-2/4.7.1	EN 1924-4 (draft)
A.2/3.6	Dual purpose type nozzles (spray/jet type)	Regulation II-2/4.8.4 Regulation II-2/41-2.1.5	
A.2/3.7	Fixed fire detection and fire alarm systems for periodically unattended machinery spaces	Regulation II-2/14.1	EN 54-2
A.2/3.8	Smoke detectors	Regulation II-2/13.3.2	EN 54-7
A.2/3.9	Heat detectors	Regulation II-2/13.3.3	EN 54-5

Item No	Item designation	Regulation SOLAS 74 as amended where "type approval" is required	Testing standards
A.2/3.10	Electric safety lamp	Regulation II-2/17.1.1.4	
A.2/3.11	Protective clothing resistant to chemical attack	Regulation II-2/54.2.6.1	EN 368, EN 369
A.2/3.12	Oxygen analysis and gas detection equipment	Regulation VI/3.1	
A.2/3.13	Low-locating lighting systems	Regulation II-2/28.1.10, II-2/28.1.11, II-2/41-2.4.7	IMO Resolution A.752 (18), ISO/CD 15370

4. Navigation equipment

Item No	Item designation	Regulation SOLAS 74 as amended where "type approval" is required	Testing standards
A.2/4.1	Gyro compass for high speed craft	Regulation X/3, IMO Resolution MSC.36(63)	IMO Resolution A.694(17) IMO Resolution A.813(19) IMO Resolution A.821(19) EN 60945, EN 61162-1; IEC 60945, IEC 61162-1
A.2/4.2	Radar equipment for high speed craft	Regulation X/3, IMO Resolution MSC.36(63)	IMO Resolution A.694(17) IMO Resolution A.813(19) IMO Resolution A.820(19) EN 60945, EN 61162-1; IEC 60945, IEC 61162-1, future IEC 60936-2
A.2/4.3	Auto-pilot (heading control system) for high speed craft	Regulation X/3, IMO Resolution MSC.36(63)	IMO Resolution A.694(17) IMO Resolution A.813(19) IMO Resolution A.822(19) EN 60945, EN 61162-1; IEC 60945, IEC 61162-1
A.2/4.4	Electromagnetic compass for high speed craft	Regulation V/12 (r) Regulation X/3	IMO Resolution A.694(17) IMO Resolution A.813(19) EN 60945, EN 61162-1; IEC 60945, IEC 61162-1, future ISO 11606
A.2/4.5	Daylight signalling lamp for high speed craft	Regulation X/3, IMO Resolution MSC.36(63)	IMO Resolution A.694(17) IMO Resolution A.813(19) EN 60945; IEC 60945
A.2/4.6	Searchlight for high speed craft	Regulation X/3, IMO Resolution MSC.36(63)	IMO Resolution A.694(17) IMO Resolution A.813(19) EN 60945, EN 61162-1; IEC 60945, IEC 61162-1

Item No	Item designation	Regulation SOLAS 74 as amended where "type approval" is required	Testing standards
A.2/4.7	Night vision equipment for high speed craft	Regulation X/3, IMO Resolution MSC.36(63)	IMO Resolution A.694(17) IMO Resolution A.813(19) EN 60945, EN 61162-1; IEC 60945, IEC 61162-1
A.2/4.8	Track control system	draft Regulation V/19.1	IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC74(69) Annex 2, EN 61162-1, future EN 62065, EN 60945 IEC 61162-1, future IEC 62065, IEC 60945
A.2/4.9	Automatic tracking aid (ATA)	draft Regulation V/19.1	IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC 64(67) Annexe 4, EN 61162-1, future EN 60872-2, EN 60945; IEC 61162-1, future IEC 60872-2, IEC 60945
A.2/4.10	Electronic plotting aid (EPA)	draft Regulation V/19.1	IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC64(67) Annex 4, EN 61162-1, future EN 60872-3, EN 60945; IEC 61162-1, future IEC 60872-3, IEC 60945
A.2/4.11	Electronic chart display and information system (ECDIS)	draft Regulation V/19.1	IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution A.817 (19), IMO Resolution MSC64(67) Annex 5, EN 61174, EN 61162-1, EN 60945; IEC 61174, IEC 61162-1, IEC 60945
A.2/4.12	Chart radar — Electronic chart display and information system (ECDIS) backup	draft Regulation V/19.1	IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC64(67) Annex 5, EN 61162-1, future EN 60936-4, EN 60945; IEC 61162-1, future IEC 60936-4, IEC 60945
A.2/4.13	Raster chart display system (RCDS)	draft Regulation V/19.1	IMO Resolution A.694 (17) IMO Resolution A.813 (19) EN 61162-1, EN 60945; IEC 61162-1, IEC 60945

Item No	Item designation	Regulation SOLAS 74 as amended where "type approval" is required	Testing standards
A.2/4.14	Combined GPS/GLONASS equipment	draft Regulation V/19.1	IMO Resolution A.529 (13), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC74(69) Annex 1, EN 61162-1, future EN 61108-3, EN 60945; IEC 61162-1, future IEC 61108-3, IEC 60945
A.2/4.15	DGPS, DGLONASS-equipment	draft Regulation V/19.1	IMO Resolution A.529 (13), IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC64(67) Annex 2, EN 61162-1, future EN 61108-4, EN 60945; IEC 61162-1, future IEC 61108-4, IEC 60945
A.2/4.16	Universal AIS equipment	draft Regulation V/19.1	IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC74(69) Annex 3, EN 61162-1, future EN 61993-2, EN 60945; IEC 61162-1, future IEC 61993-2, IEC 60945
A.2/4.17	Voyage data recorder	draft Regulation V/19.1, V/22	IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution A.861 (20), EN 61162-1, future EN 61996, EN 60945; IEC 61162-1, future IEC 61996, IEC 60945
A.2/4.18	Integrated navigation system	draft Regulation V/19.1	IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution A... (...) under preparation by NAV, EN 61162-1, EN 61924, EN 60945; IEC 61162-1, IEC 61924, IEC 60945
A.2/4.19	Integrated bridge system	draft Regulation V/19.1	IMO Resolution A.694 (17), IMO Resolution A.813 (19), IMO Resolution MSC64(67) Annex 1 EN 61162-, EN 61209, EN 60945; IEC 61162-1, IEC 61209, IEC 60945
A.2/4.20	Radar target enhancer	draft Regulation V/19.1	IMO Resolution A.615 (15), IMO Resolution A.694 (17), IMO Resolution A.813 (19), ITU-R 1176 EN 60945; IEC 60945

5. Radio-communication equipment

Item No	Item designation	Regulation SOLAS 74 as amended where "type approval" is required	Testing standards
A.2/5.1	VHF EPIRB	Regulation IV/14 Regulation X/3	IMO Resolution A.612 (15), IMO Resolution A.662 (16), IMO Resolution A.694 (17), IMO Resolution A.805 (19), IMO Resolution A.813 (19), ITU-R 693 EN 60945; IEC 60945
A.2/5.2	Radio reserve source of energy	Regulation IV/14	Future EN 61097-14, EN 60945; Future IEC 61097-14, IEC 60945

6. Equipment required under COLREG 72

Item No	Item designation	Regulation COLREG 72 as amended where "type approval" is required	Testing standards
A.2/6.1	Navigation lights	Annex I/14	IMO Resolution A.694 (17), IMO Resolution A.813 (19), EN 60945; IEC 60945
A.2/6.2	Sound signal appliances	Annex III/3	

7. Bulk carrier safety equipment

Item No	Item designation	Regulation SOLAS 74 as amended where "type approval" is required	Testing standards
A.2/7.1	Loading instrument	Regulation XII/11, 1997 SOLAS Conference Resolution 5	IACS Recommendation No 48 on loading instruments (SOLAS/CONF.4/7)