

## ANNEX

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|------------|--------------------------------------|---|--|
| ANNEX<br>A | General<br>note<br>for<br>Annex<br>A | : | SOLAS Regulations refer to SOLAS consolidated version 2009.  |
|            | General<br>note<br>for<br>Annex<br>A | : | Within certain item designations, column 5 shows some possible product variants under the same item designation. Product variants are independently provisioned and separated by a dotted lined from each other. For certification purpose only the relevant product variant shall be chosen, as appropriate (Example: A.1/3.3). |

*List of acronyms used*

A.1, Amendment 1 concerning Standard Documents other than IMO.  
A.2, Amendment 2 concerning Standard Documents other than IMO.  
AC, Amending Corrigendum concerning Standard Documents other than IMO.  
CAT, Category for radar equipment as defined in section 1.3 of IEC 62388 (2007)  
Circ., Circular.  
COLREG, International Regulations for Preventing Collisions at Sea.  
COMSAR, IMO's Sub-Committee on Radiocommunications and Search and Rescue.  
EN, European Standard.  
ETSI, European Telecommunication Standardisation Institute.  
FSS, International Code for Fire Safety Systems.  
FTP, International Code for Application of Fire Test Procedures.  
HSC, High Speed Craft Code.  
IBC, International Bulk Chemical Code.  
ICAO, International Civil Aviation Organization.  
IEC, International Electro-technical Commission.  
IGC, International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk.  
IMO, International Maritime Organization.  
ISO, International Standardisation Organisation.  
ITU, International Telecommunication Union.  
LSA, Lifesaving appliance.  
MARPOL, International Convention for the Prevention of Pollution from Ships.  
MEPC, Marine Environment Protection Committee  
MSC, Maritime Safety Committee.  
NOx, Nitrogen Oxides.  
O<sub>2</sub>/HC systems: Oxygen Hydro Carbon systems.  
SOLAS, International Convention for the Safety of Life at Sea.  
SOx, Sulphur Oxides.  
Reg., Regulation.  
Res., Resolution.

## ANNEX A.1

**EQUIPMENT FOR WHICH DETAILED TESTING STANDARDS  
ALREADY EXIST IN INTERNATIONAL INSTRUMENTS****Notes applicable to the whole of Annex A.1**

- a) General: 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.
- b) Column 1: Article 2 of Commission Directive 2012/32/EU<sup>(1)</sup> may apply. (8th Amendment of MED Annex A).
- c) Column 1: Article 2 of Commission Directive 2013/52/EU<sup>(2)</sup> may apply. (9th Amendment of MED Annex A).
- d) Column 5: 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.
- e) Column 5: International conventions and testing standards apply in their up-to-date version. For the purpose of identifying correctly the relevant standards, test reports, certificates of conformity and declarations of conformity shall identify the specific testing standard applied and its version.
- f) Column 5: Where two sets of identifying standards are separated by “or”, each set fulfils all the testing requirements to meet IMO Performance Standards; thus testing to one of these sets is sufficient to demonstrate compliance with the requirements of the relevant International Instruments. Conversely, when other separators (comma) are used all the listed references apply.
- g) The requirements laid down in this annex shall be without prejudice to carriage requirements in the international conventions

**1. Life-saving appliances**

Column 4: IMO MSC/Circular 980 shall apply except when superseded by the specific instruments referred to in Column 4.

| <b>No.</b> | <b>Item designation</b> | <b>Regulation SOLAS 74, as amended, where “type approval” is required</b> | <b>Regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO, as applicable</b> | <b>Testing standards</b> | <b>Modules for conformity assessment</b> |
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| 1          | 2                       | 3   | 4  | 5                        | 6  |

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| A.1/1.1 | Lifebuoys  | — | Reg. III/4,<br>Reg. X/3. | — | Reg. III/7,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code) 8,<br>IMO Res. MSC.48(66)-<br>(LSA Code) I, II,<br>IMO Res. MSC.97(73)-<br>(2000 HSC Code) 8.                                     | — | IMO Res. MSC | B + D<br>B + E<br><del>81</del> (70). |
| A.1/1.2 | Position-indicating lights for life-saving appliances:<br>(a) for survival craft and rescue boats,<br>(b) for lifebuoys,<br>(c) for lifejackets. | — | Reg. III/4,<br>Reg. X/3. | — | Reg. III/7,<br>Reg. III/22,<br>Reg. III/26,<br>Reg. III/32,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code) 8,<br>IMO Res. MSC.48(66)-<br>(LSA Code) II, IV,<br>IMO Res. MSC.97(73)-<br>(2000 | — | IMO Res. MSC | B + D<br>B + E<br><del>81</del> (70). |





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|         | b) immersion suit with inherent insulation |   |                       | — | Code) 8, IMO Res. MSC 48(66)-(LSA Code)                                    |   |                      |
|         | c) anti exposure suits                     |   |                       | — | I, II, IMO Res. MSC 97(73)-(2000 HSC Code)                                 |   |                      |
|         |  |   |                       | — | 8, IMO MSC/Circ.1046.  |   |                      |
| A.1/1.7 | Thermal protective aids                    | — | Reg. III/4, Reg. X/3  | — | Reg. III/22, Reg. III/32, Reg. III/34, IMO Res. MSC 36(63)-(1994 HSC Code) | — | IMO Res. MSC 81(70). |
|         |  |   |                       | — | 8, IMO Res. MSC 48(66)-(LSA Code)  |   |                      |
|         |  |   |                       | — | I, II, IMO Res. MSC 97(73)-(2000 HSC Code)                                 |   |                      |
|         |  |   |                       | — | 8, IMO MSC/Circ.1046.  |   |                      |
| A.1/1.8 | Rocket parachute flares (pyrotechnics)     | — | Reg. III/4, Reg. X/3. | — | Reg. III/6, Reg. III/34,   | — | IMO Res. MSC 81(70). |

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|          |                                      |   |                       | — | IMO Res. MSC.36(63)-(1994 HSC Code) 8,  |   |  |
|          |                                      |   |                       | — | IMO Res. MSC.48(66)-(LSA Code) I, III,  |   |  |
|          |                                      |   |                       | — | IMO Res. MSC.97(73)-(2000 HSC Code) 8.  |   |  |
| A.1/1.9  | Hand flares (pyrotechnics)           | — | Reg. III/4, Reg. X/3. | — | Reg. III/34, IMO Res. MSC.36(63)-(1994 HSC Code) 8, IMO Res. MSC.48(66)-(LSA Code) I, III, IMO Res. MSC.97(73)-(2000 HSC Code) 8. | — | IMO Res. B + D B + E MSC <del>81</del> (70). |
| A.1/1.10 | Buoyant smoke signals (pyrotechnics) | — | Reg. III/4, Reg. X/3. | — | Reg. III/34, IMO Res. MSC.48(66)-(LSA Code)   | — | IMO Res. B + D B + E MSC <del>81</del> (70). |





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|          |                                       |   |             | — | IMO Res. MSC.97(73)-(2000 HSC Code) 8, |   |                |
|          |                                       |   |             | — | IMO MSC/Circ.811.                      |   |                |
| A.1/1.13 | Rigid liferafts                       | — | Reg. III/4, | — | Reg. III/21,                           | — | IMO B + D      |
|          |                                       | — | Reg. X/3.   | — | Reg. III/26,                           | — | Res. B + E     |
|          |                                       |   |             | — | Reg. III/31,                           | — | MSC.81 (#70),  |
|          |                                       |   |             | — | Reg. III/34,                           | — | IMO            |
|          |                                       |   |             | — | IMO Res. MSC.36(63)-(1994 HSC Code) 8, | — | MSC/Circ.1006. |
|          |                                       |   |             | — | IMO Res. MSC.48(66)-(LSA Code) I, IV,  |   |                |
|          |                                       |   |             | — | IMO Res. MSC.97(73)-(2000 HSC Code) 8, |   |                |
|          |                                       |   |             | — | IMO MSC/Circ.811.                      |   |                |
| A.1/1.14 | Automatically self-righting liferafts | — | Reg. III/4, | — | Reg. III/26,                           | — | IMO B + D      |
|          |                                       | — | Reg. X/3.   | — | Reg. III/34,                           | — | Res. B + E     |
|          |                                       |   |             | — | IMO Res. MSC.36(63)-(1994 HSC          | — | MSC.81 (#70).  |

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|          |                                     |        |                                  | Code)<br>8,<br>— IMO<br>Res.<br>MSC<br>48(66)-<br>(LSA<br>Code)<br>I,<br>— IV,<br>IMO<br>Res.<br>MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>8,<br>— IMO<br>MSC/<br>Circ.809,<br>— IMO<br>MSC/<br>Circ.811.   |  |
| A.1/1.15 | Canopied<br>reversible<br>liferafts | —<br>— | Reg.<br>III/4,<br>— Reg.<br>X/3. | — Reg. — IMO<br>III/26, Res. B + D<br>— Reg. B + E<br>III/34, MSC <del>81</del> (70).<br>— IMO<br>Res.<br>MSC 36(63)-<br>(1994<br>HSC<br>Code)<br>8,<br>— IMO<br>Res.<br>MSC 48(66)-<br>(LSA<br>Code)<br>I,<br>— IV,<br>IMO<br>Res.<br>MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>8,<br>— IMO<br>MSC/<br>Circ.809, |  |

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|          |   |             |  | —                               | IMO<br>MSC/<br>Circ.811.   |   |  |
| A.1/1.16 | Float-free arrangements for liferafts (hydrostatic release units)                 | —<br>—      | Reg. III/4,<br>Reg. X/3.   | —<br>—<br>—<br>—<br>—<br>—<br>— | Reg. III/13,<br>Reg. III/26,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-(1994 HSC Code) 8,<br>IMO Res. MSC.48(66)-(LSA Code) I, IV,<br>IMO Res. MSC.97(73)-(2000 HSC Code) 8,<br>IMO MSC/<br>Circ.811. | — | IMO Res. MSC.81(70),<br>IMO MSC/<br>Circ.1006. |
| A.1/1.17 | Lifeboats:<br>(a) Davit-launched lifeboats:<br>—<br>—<br>(b) Free-fall lifeboats. | —<br>—<br>— | Reg. III/4,<br>Reg. X/3.<br>partially enclosed,<br>totally enclosed. | —<br>—<br>—<br>—<br>—<br>—<br>— | Reg. III/21,<br>Reg. III/31,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-(1994 HSC Code) 8,<br>IMO Res. MSC.48(66)-(LSA Code)   | — | IMO Res. MSC.81(70),<br>IMO MSC/<br>Circ.1006. |

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|          |                       |        |                          | I,<br>IV,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>8,<br>IMO<br>MSC.1/<br>Circ.1423. |  |             |  |                         |
| A.1/1.18 | Rigid rescue boats    | —<br>— | Reg. III/4,<br>Reg. X/3. | —<br>—<br>—<br>—<br>—<br>—<br>—<br>—  | Reg. III/21,<br>Reg. III/31,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>8,<br>IMO Res. MSC.48(66)-<br>(LSA<br>Code)<br>I, V,<br>IMO Res. MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>8. | —<br>—<br>— | IMO Res. MSC.81(70),<br>IMO MSC/<br>Circ.1006. | B + D<br>B + F<br>B + F |
| A.1/1.19 | Inflated rescue boats | —<br>— | Reg. III/4,<br>Reg. X/3. | —<br>—<br>—<br>—  | Reg. III/21,<br>Reg. III/31,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>8,  | —<br>—<br>— | IMO Res. MSC.81(70),<br>ISO 15372<br>(2000).   | B + D<br>B + F<br>B + F |

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|          |   |   |                          | — | IMO Res. MSC 48(66)-(LSA Code) I, V,  |   |   |
|          |   |   |                          | — | IMO Res. MSC 97(73)-(2000 HSC Code) 8.  |   |   |
| A.1/1.20 | Fast rescue boats:<br>(a) inflated<br>(b) rigid<br>(c) rigid-inflated | — | Reg. III/4.              | — | Reg. III/26,<br>Reg. III/34,<br>IMO Res. MSC 48(66)-(LSA Code) I, V,<br>IMO MSC/<br>Circ.1016,<br>IMO MSC/<br>Circ.1094.                                | — | IMO Res. B + D<br>B + F<br>MSC 81(70),<br>IMO MSC/<br>Circ.1006,<br>ISO 15372 (2000). |
| A.1/1.21 | Launching appliances using falls (davits)                             | — | Reg. III/4,<br>Reg. X/3. | — | Reg. III/23,<br>Reg. III/33,<br>Reg. III/34,<br>IMO Res. MSC 36(63)-(1994 HSC Code) 8,<br>IMO Res. MSC 48(66)-(LSA Code) I, VI,<br>IMO Res. MSC 97(73)- | — | IMO Res. B + D<br>B + E<br>MSC 81(70).<br>G   |

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|          |  |                  |                          |   | (2000<br>HSC<br>Code)<br>8.  |   |   |
| A.1/1.22 | Float free launching appliances for survival craft | Moved to A.2/1.3 |                          |   |  |   |   |
| A.1/1.23 | Launching appliances for free-fall lifeboats       | —                | Reg. III/4,<br>Reg. X/3. | — | Reg. III/16,<br>Reg. III/23,<br>Reg. III/33,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code) 8,<br>IMO Res. MSC.48(66)-<br>(LSA Code) I,<br>VI,<br>IMO Res. MSC.97(73)-<br>(2000 HSC Code) 8. | — | IMO Res. MSC.81(70).<br>B + D<br>B + E<br>G |
| A.1/1.24 | Liferaft launching appliances (Davits)             | —                | Reg. III/4,<br>Reg. X/3. | — | Reg. III/12,<br>Reg. III/16,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code) 8,   | — | IMO Res. MSC.81(70).<br>B + D<br>B + E<br>G |

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|          |   |   |                       | — | IMO Res. MSC 48(66)-(LSA Code) I, VI,   |   |                                    |
|          |   |   |                       | — | IMO Res. MSC 97(73)-(2000 HSC Code) 8.  |   |                                    |
| A.1/1.25 | Fast rescue boat launching appliances (Davits)  | — | Reg. III/4.           | — | Reg. III/26, Reg. III/34, IMO Res. MSC 48(66)-(LSA Code) I, VI.   | — | IMO Res. MSC 81(70). B + D B + E G |
| A.1/1.26 | Release mechanism for (a) Lifeboats and rescue boats (launched by a fall or falls) (b) Liferrafts (launched by a fall or falls) | — | Reg. III/4, Reg. X/3. | — | Reg. III/16, Reg. III/34, IMO Res. MSC 36(63)-(1994 HSC Code) 8, IMO Res. MSC 48(66)-(LSA Code) I, IV, VI, IMO Res. MSC 97(73)-(2000 HSC Code) 8, | — | IMO Res. MSC 81(70). B + D B + E   |

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|          |                           |             |  | —                     | IMO<br>MSC.1/<br>Circ.1419.   |   |   |
| A.1/1.27 | Marine evacuation systems | —           | Reg. III/4,<br>Reg. X/3.                 | —<br>—<br>—<br>—<br>— | Reg. III/15,<br>Reg. III/26,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code) 8,<br>IMO Res. MSC.48(66)-<br>(LSA Code) I, VI,<br>IMO Res. MSC.97(73)-<br>(2000 HSC Code) 8. | — | IMO Res. MSC.81(70).<br>B + D<br>B + F                      |
| A.1/1.28 | Means of rescue           | —           | Reg. III/4.                              | —<br>—<br>—           | Reg. III/26,<br>Reg. III/34,<br>IMO Res. MSC.48(66)-<br>(LSA Code) I, VI.   | — | IMO Res. MSC.81(70),<br>IMO MSC/Circ.810.<br>B + D<br>B + F |
| A.1/1.29 | Embarkation ladders       | —<br>—<br>— | Reg. III/4,<br>Reg. III/11,<br>Reg. X/3. | —<br>—<br>—           | Reg. III/11,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code),  | — | IMO Res. MSC.81(70),<br>ISO 5489 (2008).<br>B + D<br>B + F  |



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|          |  |                                |                       | — | IMO Res. MSC 48(66)-(LSA Code),  |   |  |
|          |  |                                |                       | — | IMO Res. MSC 97(73)-(2000 HSC Code),   |   |  |
|          |  |                                |                       | — | IMO MSC.1/Circ.1285.   |   |  |
| A.1/1.30 | Retro-reflective materials                               | —                              | Reg. III/4, Reg. X/3. | — | Reg. III/34, IMO Res. MSC 36(63)-(1994 HSC Code) 8, IMO Res. MSC 48(66)-(LSA Code) I, IMO Res. MSC 97(73)-(2000 HSC Code) 8. | — | IMO Res. A.658(B6)F<br>B + D<br>B + E                          |
| A.1/1.31 | Survival craft two-way VHF radio telephone apparatus     | Moved to A.1/5.17 and A.1/5.18 |                       |   |  |   |  |
| A.1/1.32 | 9 GHz SAR transponder (SART)                             | Moved to A.1/4.18              |                       |   |  |   |  |
| A.1/1.33 | Radar reflector for lifeboats and rescue boats (passive) | —                              | Reg. III/4, Reg. X/3. | — | Reg. III/34, IMO Res. A.384(X), IMO Res.   | — | EN ISO 8729 (1998), EN 60945 (2002)<br>B + D<br>B + E<br>B + F |

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|          |  |                   | <p>MSC 36(63)- including<br/>(1994 IEC<br/>HSC 60945<br/>Code) Corrigendum<br/>8, 1<br/>IMO (2008).<br/>Res. Or,<br/>MSC 48(66)- EN<br/>(LSA ISO<br/>Code) 8729<br/>I, (1998),<br/>IV, — IEC<br/>V, 60945<br/>IMO (2002)<br/>Res. including<br/>MSC 97(73)- IEC<br/>(2000 60945<br/>HSC Corrigendum<br/>Code) 1<br/>8, (2008).<br/>IMO Or,<br/>Res. — ISO<br/>MSC 164(78). 8729-1<br/>(2010),<br/>— EN<br/>60945<br/>(2002)<br/>including<br/>IEC<br/>60945<br/>Corrigendum<br/>1<br/>(2008).<br/>Or,<br/>— ISO<br/>8729-1<br/>(2010),<br/>— IEC<br/>60945<br/>(2002)<br/>including<br/>IEC<br/>60945<br/>Corrigendum<br/>1<br/>(2008).</p> |
| A.1/1.34 | Compass for lifeboats and rescue boats | Moved to A.1/4.23 |   |
| A.1/1.35 | Portable fire — extinguishing          | Moved to A.1/3.38 |   |

|          | equipment for<br>lifeboats and<br>rescue boats              |        |                                |             |   |   |   |  |
|----------|---|--------|--------------------------------|-------------|---|---|---|--|
| A.1/1.36 | Lifeboat/<br>rescue boat<br>propulsion<br>engine            | —<br>— | Reg.<br>III/4,<br>Reg.<br>X/3. | —<br>—      | Reg.<br>III/34,<br>IMO<br>Res.<br>MSC.48(66)-<br>(LSA<br>Code)<br>IV,<br>V.   | — | IMO<br>Res.<br>MSC                                  | B + D<br>B + E<br><del>B1</del> (#70).                 |
| A.1/1.37 | Rescue boat<br>propulsion<br>engine-<br>outboard<br>motor   | —<br>— | Reg.<br>III/4,<br>Reg.<br>X/3. | —<br>—      | Reg.<br>III/34,<br>IMO<br>Res.<br>MSC.48(66)-<br>(LSA<br>Code)<br>V.  | — | IMO<br>Res.<br>MSC                                  | B + D<br>B + E<br><del>B1</del> (#70).                 |
| A.1/1.38 | Searchlights<br>for use in<br>lifeboats and<br>rescue boats | —<br>— | Reg.<br>III/4,<br>Reg.<br>X/3. | —<br>—<br>— | Reg.<br>III/34,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>8,<br>IMO<br>Res.<br>MSC.48(66)-<br>(LSA<br>Code)<br>I,<br>IV,<br>V,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>8. | — | IMO<br>Res.<br>MSC                                  | B + D<br>B + E<br><del>B1</del> (#70).                 |
| A.1/1.39 | Open<br>reversible<br>liferafts                             | —<br>— | Reg.<br>III/4,<br>Reg.<br>X/3. | —           | IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>8,   | — | IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code) | B + D<br>B + F<br>MSC.36(63)-<br>(1994<br>HSC<br>Code) |

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|          |  |                   |                                |   | Annex<br>10,<br>IMO<br>Res.<br>MSC 48(66)-<br>(LSA<br>Code)<br>I,<br>IMO<br>Res.<br>MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>8,<br>Annex<br>11.  | Annex<br>10,<br>IMO<br>Res.<br>MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>Annex<br>11. |                                     |
| A.1/1.40 | Mechanical<br>pilot hoist  | Moved to A.1/4.48 |                                |   |   |   |                                     |
| A.1/1.41 | Winches for<br>survival craft<br>and rescue<br>boats<br>(a) davit<br>launched<br>lifeboats,<br>(b) free-<br>fall<br>lifeboats,<br>(c) liferafts,<br>(d) rescue<br>boats,<br>(e) fast<br>rescue<br>boats. | —                 | Reg.<br>III/4,<br>Reg.<br>X/3. | — | Reg.<br>III/16,<br>Reg.<br>III/17,<br>Reg.<br>III/23,<br>Reg.<br>III/24,<br>Reg.<br>III/34,<br>IMO<br>Res.<br>MSC 36(63)-<br>(1994<br>HSC<br>Code)<br>8,<br>IMO<br>Res.<br>MSC 48(66)-<br>(LSA<br>Code)<br>I,<br>VI,<br>IMO<br>Res.<br>MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>8. | —   | IMO<br>Res.<br>MSC 81<br>(70).<br>G |
| A.1/1.42 | Pilot ladder   | Moved to A.1/4.49 |                                |   |   |   |                                     |

|          |                             |   |                          |   |  |   |   |                |
|----------|-----------------------------|---|--------------------------|---|--|---|---|----------------|
| A.1/1.43 | Rigid/inflated rescue boats | — | Reg. III/4,<br>Reg. X/3. | — | Reg. III/21,<br>Reg. III/31,<br>Reg. III/34,<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code) 8,<br>IMO Res. MSC.48(66)-<br>(LSA Code) I, V,<br>IMO Res. MSC.97(73)-<br>(2000 HSC Code) 8. | — | IMO Res. MSC.81(70),<br>IMO MSC/Circ.1006,<br>ISO 15372 (2000). | B + D<br>B + F |
|----------|-----------------------------|---|--------------------------|---|--|---|---|----------------|

## 2. Marine pollution prevention

| No.     | Item designation   | Regulation MARPOL 73/78, as amended, where “type approval” is required | Regulations of MARPOL 73/78, as amended, and the relevant resolutions and circulars of the IMO, as applicable | Testing standards                             | Modules for conformity assessment |  |                |
|---------|--|--|---|---|-----------------------------------|--|----------------|
| 1       | 2  | 3  | 4   | 5   | 6                                 |  |                |
| A.1/2.1 | Oil-filtering equipment (for an oil content of the effluent not exceeding 15 p.p.m.) | —  | Annex I, Reg. 14.   | Annex I, Reg. 14,<br>IMO MEPC.1/<br>Circ.643. | —                                 | IMO Res. MEPC.107(49),<br>IMO MEPC.1/<br>Circ.643. | B + D<br>B + E |

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|---------|--|-------------------------|--|-------------------|--|--|--|-------------------------|
| A.1/2.2 | Oil/water interface detectors  | —                       | Annex I, Reg. 32.                            | —                 | Annex I, Reg. 32.                      | —  | IMO Res. MEPC.35(XIII).                          | B + D<br>B + E          |
| A.1/2.3 | Oil-content meters   | —                       | Annex I, Reg. 14.                            | Annex I, Reg. 14, | —                                      | IMO MEPC.1/Circ.643.                                   | IMO Res. MEPC.107(49),<br>IMO MEPC.1/Circ.643.   | B + D<br>B + E          |
| 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.) | Deliberately left blank |  |                   |  |  |  |                         |
| A.1/2.5 | Oil discharge monitoring and control system for oil tankers  | —                       | Annex I, Reg. 31, IMO MEPC.1/Circ.761 Rev.1. | —                 | Annex I, Reg. 31.                      | —  | IMO Res. MEPC.108(49).                           | B + D<br>B + E          |
| A.1/2.6 | Sewage systems   | —                       | Annex IV, Reg. 9.                            | —                 | Annex IV, Reg. 9.                      | Until 31 December 2015: —<br>As from 1 January 2016: — | IMO Res. MEPC.159(55).<br>IMO Res. MEPC.227(64). | B + D<br>B + E<br>B + F |
| A.1/2.7 | Shipboard incinerators   | —                       | Annex VI, Reg. 16.                           | —                 | Annex VI, Reg. 16, IMO MEPC.1/Circ.793 | —  | IMO Res. MEPC.376(40).<br>G                      | B + D<br>B + E          |
| A.1/2.8 | NOx analyser of  | —                       | IMO Res.                                     | —                 | IMO Res.                               | —  | IMO Res.   | B + D<br>B + E          |

|          |  |                  |  |   |  |   |  |                |
|----------|--|------------------|--|---|--|---|--|----------------|
|          | Chemiluminescent detector (CLD) or heated Chemiluminescent detector (HCLD) type for use in on board direct measurement |                  | MEPC.176(58)<br>-<br>(Revised MARPOL Annex VI, Reg. 13)<br>—<br>—                          |   | MEPC.176(58)<br>-<br>(Revised MARPOL Annex VI, Reg. 13);<br>IMO Res. MEPC.177(58)<br>-<br>(NOx Technical code 2008),<br>IMO Res. MEPC.198(62),<br>IMO MEPC.1/Circ.638. |   | MEPC.176(58)<br>-<br>(NOx Technical code),<br>IEC 60092-504:2001 incl. IEC 60092-504<br>Corr. 1: 2011. |                |
| A.1/2.9  | Equipment using other technological methods to limit SOx emissions   | Moved to A.2/2.4 |  |   |  |   |  |                |
| A.1/2.10 | On board exhaust gas cleaning systems  | —                | IMO Res. MEPC.176(58)<br>-<br>(Revised MARPOL Annex VI, Reg. 4),<br>IMO Res. MEPC.184(59). | — | IMO Res. MEPC.176(58)<br>-<br>(Revised MARPOL Annex VI, Reg. 4).   | — | IMO Res. MEPC.184(59).<br>G  | B + D<br>B + E |

3. Fire protection equipment

| No. | Item designation | Regulation SOLAS 74, as amended, where “type | Regulations of SOLAS 74, as amended, and the relevant resolutions | Testing standards | Modules for conformity assessment |
|-----|------------------|--|---|-------------------|-----------------------------------|
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| 1       | 2                              | 3 | approval”<br>is required  | 4 | and<br>circulars<br>of the<br>IMO, as<br>applicable  | 5 | 6   |
|---------|--------------------------------|---|---|---|--|---|---|
| A.1/3.1 | Primary<br>decks<br>covering   | — | Reg.<br>II-2/4,<br>Reg.<br>II-2/6,<br>Reg.<br>X/3.                                    | — | Reg.<br>II-2/4,<br>Reg.<br>II-2/6,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>7,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>7.   | — | IMO B + D<br>Res. B + E<br>MSC.307(88)-<br>(2010<br>FTP<br>Code).   |
| A.1/3.2 | Portable fire<br>extinguishers | — | Reg.<br>II-2/10,<br>Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.98(73)-<br>(FSS<br>Code)<br>4. | — | Reg.<br>II-2/4,<br>Reg.<br>II-2/10,<br>Reg.<br>II-2/18,<br>Reg.<br>II-2/19,<br>Reg.<br>II-2/20,<br>IMO<br>Res.<br>A.951(23),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>7,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>7, | — | EN B + D<br>3-7 B + E<br>(2004) B + F<br>including<br>A.1<br>(2007),<br>EN<br>3-8<br>(2006)<br>including<br>AC<br>(2007),<br>EN<br>3-9<br>(2006)<br>including<br>AC<br>(2007),<br>EN<br>3-10<br>(2009). |



|         |   |   |                                   |   |  |  |                         |
|---------|---|---|-----------------------------------|---|--|--|-------------------------|
|         |   |   |                                   | — | IMO Res. MSC 98(73)-(FSS Code) 4,      |  |                         |
|         |   |   |                                   | — | IMO MSC/Circ. 1239,                    |  |                         |
|         |   |   |                                   | — | IMO MSC/Circ. 1275.                    |  |                         |
| A.1/3.3 | Fire-fighter's outfit: protective clothing (close proximity clothing) | — | Reg. II-2/10,                     | — | Reg. II-2/10,                          | Protective clothing for fire fighting: — EN 36(63)-469 (2005) including A1 (2006) and AC (2006).                         | B + D<br>B + E<br>B + F |
|         |   | — | Reg. X/3,                         | — | IMO Res. MSC 98(73)-(FSS Code) 3.      | —  |                         |
|         |   | — | IMO Res. MSC 98(73)-(FSS Code) 3. | — | IMO Res. MSC 97(73)-(2000 HSC Code) 7, | Protective clothing for fire fighting – Reflective clothing for specialised fire-fighting: — EN 1486 (2007).             |                         |
|         |   |   |                                   | — | IMO Res. MSC 98(73)-(FSS Code) 3.      | Protective clothing for fire fighting – Protective clothing with a reflective outer surface: — ISO 15538 (2001) Level 2. |                         |
| A.1/3.4 | Fire-fighter's outfit: boots  | — | Reg. II-2/10,                     | — | Reg. II-2/10,                          | —  | B + D                   |
|         |   | — | Reg. X/3,                         | — | IMO Res. MSC 36(63)-                   | EN 15090 (2012)  | B + E<br>B + F          |

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|         |                               | —           | IMO Res. MSC.98(73)-(FSS Code) 3.                    | —           | (1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7, IMO Res. MSC.98(73)-(FSS Code) 3.                                   |   |  |
| A.1/3.5 | Fire-fighter's outfit: gloves | —<br>—<br>— | Reg. II-2/10, X/3, IMO Res. MSC.98(73)-(FSS Code) 3. | —<br>—<br>— | Reg. II-2/10, IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7, IMO Res. MSC.98(73)-(FSS Code) 3. | — | EN 659 (2003) including A1 and AC (2009).<br>B + D<br>B + E<br>B + F |
| A.1/3.6 | Fire-fighter's outfit: helmet | —<br>—<br>— | Reg. II-2/10, X/3, IMO Res. MSC.98(73)-(FSS Code) 3. | —<br>—<br>— | Reg. II-2/10, IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7, IMO Res. MSC.98(73)-(FSS Code) 3. | — | EN 443 (2008) B + D<br>B + E<br>B + F                                |

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|---------|--|---|--|---|---|---|--|
|         |  |   |  |   | HSC<br>Code)<br>7,<br>IMO<br>Res.<br>MSC 98(73)-<br>(FSS<br>Code)<br>3. |   |  |
| A.1/3.7 | Self-contained compressed-air-operated breathing apparatus<br><i>Note:</i> For use in accidents involving dangerous goods a positive pressure type mask is required. | — | Reg. II-2/10,                            | — | Reg. II-2/10,   | — | EN B + D<br>136 B + E<br>(1998) B + F<br>including AC<br>(2003),<br>EN<br>137 (2006).<br>And where the apparatus use in accidents with cargo: ISO 23269-3(2011). |
|         |  | — | Reg. X/3,                                | — | IMO Res. MSC 36(63)-<br>(1994   |   |  |
|         |  | — | IMO Res. MSC 98(73)-<br>(FSS Code)<br>3. | — | HSC Code)<br>7,<br>IMO Res. MSC 97(73)-<br>(2000                        |   |  |
|         |  |   |  | — | HSC Code)<br>7,<br>IMO Res. MSC 98(73)-<br>(FSS Code)<br>3.             |   |  |
|         |  |   |  | — | And where the apparatus is for use in accidents with cargo:             |   |  |
|         |  |   |  | — | IMO Res. MSC 4(48)-<br>(IBC Code)<br>14,                                |   |  |
|         |  |   |  | — | IMO Res. MSC 5(48)-<br>(IGC   |   |  |

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|         |   |   |  | Code)<br>14.  |   |  |                         |
|---------|---|---|--|---|---|--|-------------------------|
| A.1/3.8 | Compressed air line breathing apparatus   | — | Reg. X/3,<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code) 7.<br><i>Note:</i> This equipment is only for high speed craft built under provisions of the 1994 HSC Code. | IMO Res. MSC.36(63)-<br>(1994 HSC Code) 7.  | — | EN 14593<br>(2005),<br>EN 14594<br>(2005) including AC (2005). | B + D<br>B + E<br>B + F |
| A.1/3.9 | Sprinkler systems components for accommodation spaces, service spaces and control stations equivalent to that referred to in SOLAS 74 Reg. II-2/12 (limited to nozzles and their performance). (Nozzles for fixed sprinkler systems, for high speed craft (HSC) | — | Reg. II-2/7,<br>Reg. II-2/10,<br>Reg. X/3,<br>IMO Res. MSC.98(73)-<br>(FSS Code) 8.  | Reg. II-2/7,<br>Reg. II-2/9,<br>Reg. II-2/10,<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code) 7,<br>IMO Res. MSC.44(65),<br>IMO Res. MSC.97(73)-<br>(2000 HSC Code) 7, | — | IMO Res. A.800<br>(1999)                                       | B + D<br>B + E<br>B + F |

|          |  |                                    |   |                                   |  |   |  |
|----------|--|------------------------------------|---|-----------------------------------|--|---|--|
|          | are included under this item)  |                                    | —   | IMO Res. MSC.98(73)-(FSS Code) 8. |  |   |  |
|          |  |                                    | —   | IMO MSC/Circ.912.                 |  |   |  |
| A.1/3.10 | Nozzles for fixed pressure water spraying fire extinguishing systems for machinery spaces and cargo pump-rooms | —<br>—<br>—                        | Reg. II-2/10,<br>Reg. X/3,<br>IMO Res. MSC.98(73)-(FSS Code) 7. | —<br>—<br>—                       | Reg. II-2/10,<br>IMO Res. MSC.36(63)-(1994 HSC Code) 7,<br>IMO Res. MSC.97(73)-(2000 HSC Code) 7,<br>IMO Res. MSC.98(73)-(FSS Code) 7,<br>IMO MSC.1/Circ.1313. | — | IMO B + D<br>MSC/B + E<br>Circ.165,F<br>Appendix A.                            |
| A.1/3.11 | “A” & “B” Class divisions fire integrity<br>(a) “A” class divisions,<br>(b) “B” class divisions.               | “A” Class:<br>—<br>“B” Class:<br>— | Reg. II-2/3.2A<br>Reg. II-2/3.4                                 | —<br>—<br>—                       | Reg. II-2/9, and,<br>Reg. II-2/3.2.<br>IMO MSC/Circ.1120<br>IMO MSC.1/Circ.1434<br>“B” Class:<br>Reg. II-2/3.4.  | — | IMO B + D<br>Res. B + E<br>MSC.307(88)-(2010 FTP Code).<br>IMO MSC.1/Circ.1435 |
| A.1/3.12 | Devices to prevent the passage of  | —                                  | Reg. II-2/4,  | —                                 | Reg. II-2/4,   | — | EN ISO For equipment   |

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|          |   |  |                        |   |  |  |
|----------|---|--|------------------------|---|--|--|
|          | flame into the cargo tanks in tankers   | —                                      | Reg. II-2/16.          | — | Reg. II-2/16   | 16852 other than (2010) valves: ISO B + D 15364 B + E (2007) B + F IMO For valves: MSC/B + F Circ.677.                   |
| A.1/3.13 | Non-combustible materials   | —                                      | Reg. II-2/3, Reg. X/3. | — | Reg. II-2/3, Reg. II-2/5, Reg. II-2/9, IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7. | IMO B + D Res. B + E MSC.307(88)-(2010 FTP Code).  |
| A.1/3.14 | Materials other than steel for pipes penetrating "A" or "B" Class division  | Item included in A.1/3.26 and A.1/3.27 |                        |   |  |  |
| A.1/3.15 | Materials other than steel for pipes conveying oil or fuel oil<br>(a) plastic pipes and fittings,<br>(b) valves,<br>(c) flexible pipe assemblies and<br>(d) compensators, metallic pipe | —                                      | Reg. II-2/4, Reg. X/3. | — | Reg. II-2/4, IMO Res. MSC.36(63)-(1994 HSC Code) 7, 10, IMO Res. MSC.97(73)-(2000 HSC Code)                          | Pipes and fittings: IMO Res. A.753(18).<br>Valves: EN ISO 10497 (2010).<br>Flexible pipe assemblies: EN ISO 15540 (2001) |

|          |  |   |                           |                           |   |  |  |                |
|----------|--|---|---------------------------|---------------------------|---|--|--|----------------|
|          | components with resilient and elastomeric seals.   | — | —                         | 7, 10. IMO MSC/Circ.1120. | —   | EN ISO 15541 (2001).<br>Metallic pipe components with resilient and elastomeric seals.<br>— ISO 19921 (2005),<br>— ISO 19922 (2005). |  |                |
| A.1/3.16 | Fire Doors   | — | Reg. II-2/9.              | —                         | Reg. II-2/9.  | —  | IMO Res. MSC.307(88)- (2010 FTP Code).<br>— IMO MSC.1/Circ.1319. | B + D<br>B + E |
| A.1/3.17 | Fire door control systems components.<br><i>Note:</i> When the term “system components” is used in column 2 it may be that a single component, a group of components or a whole system needs to be tested to ensure that the international requirements are fulfilled. | — | Reg. II-2/9,<br>Reg. X/3. | —                         | Reg. II-2/9,<br>IMO Res. MSC.97(73)- (2000 HSC Code) 7. | —  | IMO Res. MSC.307(88)- (2010 FTP Code).                           | B + D<br>B + E |
| A.1/3.18 | Surface materials and floor  | — | Reg. II-2/3,              | —                         | Reg. II-2/3,  | —  | IMO Res. MSC.307(88)-  | B + D<br>B + E |

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|----------|---|---|-------------------|---|--|---|
|          | coverings with low flame-spread characteristics   | — | Reg. II-2/5,      | — | Reg. II-2/5,                           | (2010 FTP Code).                                  |
|          | (a) decorative veneers  | — | Reg. II-2/6       | — | Reg. II-2/6,                           |   |
|          | (b) paint systems,  | — | for (a), (b), (c) | — | Reg. II-2/9,                           |   |
|          | (c) floor coverings,  | — | Reg. II-2/9,      | — | IMO Res. MSC.36(63)-(1994              |   |
|          | (d) pipe insulation covers,   | — | for (e), (f)      | — | HSC Code) 7,                           |   |
|          | (e) adhesives used in the construction of “A”, “B” & “C” class divisions, combustibles ducts membrane | — | Reg. X/3.         | — | IMO Res. MSC.97(73)-(2000 HSC Code) 7. |   |
|          |   | — |                   | — | IMO MSC/Circ.1120.                     |   |
| A.1/3.19 | Draperies, curtains and other suspended textile materials and films                                   | — | Reg. II-2/3,      | — | Reg. II-2/3,                           | IMO B + D Res. B + E MSC.307(88)-(2010 FTP Code). |
|          |   | — | Reg. II-2/9,      | — | Reg. II-2/9,                           |   |
|          |   | — | Reg. X/3.         | — | IMO Res. MSC.36(63)-(1994 HSC Code) 7, |   |
|          |   | — |                   | — | IMO Res. MSC.97(73)-(2000 HSC Code) 7. |   |
| A.1/3.20 | Upholstered furniture   | — | Reg. II-2/3,      | — | Reg. II-2/3,                           | IMO B + D Res. B + E MSC.307(88)-(2010 FTP Code). |
|          |   | — | Reg. II-2/5,      | — | Reg. II-2/5,                           |   |
|          |   | — | Reg. II-2/9,      | — | Reg. II-2/9,                           |   |



|          |   |                      |                                     |   |   |   |   |
|----------|---|----------------------|-------------------------------------|---|---|---|---|
|          |   | —                    | Reg. X/3.                           | — | IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7.                           |   |   |
| A.1/3.21 | Bedding components  | —                    | Reg. II-2/3, Reg. II-2/9, Reg. X/3. | — | Reg. II-2/3, Reg. II-2/9, IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7. | — | IMO Res. B + D B + E MSC.307(88)-(2010 FTP Code). |
| A.1/3.22 | Fire dampers  | —                    | Reg. II-2/9.                        | — | Reg. II-2/9.  | — | IMO Res. B + D B + E MSC.307(88)-(2010 FTP Code)  |
| A.1/3.23 | Non-combustible duct penetrations through "A" class divisions | Moved to A.1/3.26    |                                     |   |   |   |   |
| A.1/3.24 | Electric Cable Transits through "A" class divisions           | Moved to A.1/3.26(a) |                                     |   |   |   |   |

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|          |  |   |                                      |   |  |   |                                     |                         |
|----------|--|---|--------------------------------------|---|--|---|-------------------------------------|-------------------------|
| A.1/3.25 | “A” and “B” class fire proof windows and side scuttles   | — | Reg. II-2/9.                         | — | Reg. II-2/9, IMO MSC/Circ.1120.  | — | IMO Res. MSC.7(88)-(2010 FTP Code). | B + D<br>B + E          |
| A.1/3.26 | Penetrations through “A” class divisions<br>(a) electric cable transits,<br>(b) pipe, duct, trunk, etc. penetrations.                          | — | Reg. II-2/9.                         | — | Reg. II-2/9, IMO MSC.1/Circ.1276. (only applicable to (b))   | — | IMO Res. MSC.7(88)-(2010 FTP Code). | B + D<br>B + E          |
| A.1/3.27 | Penetrations through “B” class divisions<br>(a) electric cable transits,<br>(b) pipe, duct, trunk, etc. penetrations.                          | — | Reg. II-2/9.                         | — | Reg. II-2/9.   | — | IMO Res. MSC.7(88)-(2010 FTP Code). | B + D<br>B + E          |
| A.1/3.28 | Sprinkler systems (limited to sprinkler heads). (Nozzles for fixed sprinkler systems, for high speed craft (HSC) are included under this item) | — | Reg. II-2/7, Reg. II-2/10, Reg. X/3. | — | Reg. II-2/7, Reg. II-2/10, Or, IMO Res. MSC.36(10) (1994) (2001), A2 HSC (2004) and Code A3 (2006).<br>7, IMO Res. MSC.44(65), IMO Res. MSC.97(73)-(2000 HSC Code) 7, IMO Res. | — | ISO 6182-1 (2004) B + F             | B + D<br>B + E<br>B + F |

|          |  |        |                                  |             |  |   |                         |
|----------|--|--------|----------------------------------|-------------|--|---|-------------------------|
|          |  |        |                                  |             | MSC 98(73)-<br>(FSS<br>Code)<br>8,<br>IMO<br>MSC/<br>Circ.912.   |   |                         |
| A.1/3.29 | Fire hoses   | —<br>— | Reg.<br>II-2/10,<br>Reg.<br>X/3. | —<br>—      | Reg.<br>II-2/10,<br>IMO<br>Res.<br>MSC 36(63)-<br>(1994<br>HSC<br>Code)<br>7,<br>IMO<br>Res.<br>MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>7. | EN<br>14540<br>(2004)<br>including<br>A.1<br>(2007).  | B + D<br>B + E<br>B + F |
| A.1/3.30 | Portable<br>oxygen<br>analysis and<br>gas detection<br>equipment | —<br>— | Reg.<br>II-2/4,<br>Reg.<br>VI/3. | —<br>—<br>— | Reg.<br>II-2/4,<br>Reg.<br>VI/3,<br>IMO<br>Res.<br>MSC 98(73)-<br>(FSS<br>Code)<br>15.   | EN<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008)<br>or<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>60092-504<br>(2001)<br>including<br>IEC<br>60092-504<br>Corrigendum<br>1<br>(2011) | B + D<br>B + E<br>B + F |

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|          |                   |   |  | <p>— IEC 60533 (1999),<br/>and as applicable to:</p> <p>a) Category 1: (safe area):</p> <p>— EN 50104 (2010),</p> <p>— EN 60079-29-1 (2007).</p> <p>b) Category 2: (explosive gas atmospheres):</p> <p>— EN 50104 (2010),</p> <p>— EN 60079-29-1 (2007),</p> <p>— EN 60079-0 (2012),</p> <p>— EN 60079-1 (2007) including IEC 60079-1 Corrigendum 1 (2008),</p> <p>— EN 60079-10-1 (2009),</p> <p>— EN 60079-11 (2012),</p> <p>— EN 60079-15 (2010),</p> <p>— EN 60079-26 (2007).</p> |
| A.1/3.31 | Nozzles for fixed | Item deleted as it is covered by A.1/3.9 and A.1/3.28 |  |   |

|          |  |   |           |   |   |   |                                       |                |
|----------|--|---|-----------|---|---|---|---------------------------------------|----------------|
|          | sprinkler systems, for high speed craft (HSC)                      |   |           |   |   |   |                                       |                |
| A.1/3.32 | Fire restricting materials (except furniture) for high speed craft | — | Reg. X/3. | — | IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7. | — | IMO Res. MSC.307(88)-(2010 FTP Code). | B + D<br>B + E |
| A.1/3.33 | Fire restricting materials for furniture for high speed craft      | — | Reg. X/3. | — | IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7. | — | IMO Res. MSC.307(88)-(2010 FTP Code). | B + D<br>B + E |
| A.1/3.34 | Fire resisting divisions for high speed craft                      | — | Reg. X/3. | — | IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7. | — | IMO Res. MSC.307(88)-(2010 FTP Code). | B + D<br>B + E |
| A.1/3.35 | Fire doors on high speed craft                                     | — | Reg. X/3. | — | IMO Res. MSC.36(63)-(1994 HSC   | — | IMO Res. MSC.307(88)-(2010            | B + D<br>B + E |

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|          |   |   |                                |   | Code)<br>7,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>7.   | FTP<br>Code).   |                         |
| A.1/3.36 | Fire dampers<br>on high speed<br>craft  | — | Reg.<br>X/3.                   | — | IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>7,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>7.   | IMO<br>Res.<br>MSC.307(88)-<br>(2010<br>FTP<br>Code).   | B + D<br>B + E          |
| A.1/3.37 | Penetrations<br>through fire<br>resisting<br>divisions on<br>high speed<br>craft<br>(a) electric<br>cable<br>transits,<br>(b) pipe,<br>duct,<br>trunk<br>etc. penetrations. | — | Reg.<br>X/3.                   | — | IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>7,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>7.   | IMO<br>Res.<br>MSC.307(88)-<br>(2010<br>FTP<br>Code).   | B + D<br>B + E          |
| A.1/3.38 | Portable fire-<br>extinguishing<br>equipment for<br>lifeboats and<br>rescue boats   | — | Reg.<br>III/4,<br>Reg.<br>X/3. | — | Reg.<br>III/34,<br>IMO<br>Res.<br>A.951(23),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>8,<br>IMO<br>Res. | EN<br>3-7<br>(2004)<br>including<br>A1<br>(2007),<br>EN<br>3-8<br>(2006)<br>including<br>AC<br>(2007),<br>EN<br>3-9 | B + D<br>B + E<br>B + F |

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|----------|--|--------|---|--------|---|---|--|
|          |  |        |   |        | MSC 48(66)-<br>(LSA<br>Code)<br>I,<br>IV,<br>V,<br>IMO<br>Res.<br>MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>8.  | (2006)<br>including<br>AC<br>(2007),<br>EN<br>3-10<br>(2009). |  |
| A.1/3.39 | Nozzles for equivalent water-mist fire extinguishing systems for machinery spaces and cargo pump rooms | —<br>— | Reg. II-2/10,<br>Reg. X/3.                                    | —<br>— | Reg. II-2/10,<br>IMO Res. MSC 36(63)-<br>(1994<br>HSC<br>Code)<br>7,<br>IMO Res. MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>7,<br>IMO Res. MSC 98(73)-<br>(FSS<br>Code)<br>7,<br>IMO MSC 1/<br>Circ. 1313. | IMO B + D<br>MSC/B + E<br>Circ. 165.F                         |  |
| A.1/3.40 | Low-location lighting systems (components only)  | —<br>— | Reg. II-2/13,<br>IMO Res. MSC 98(73)-<br>(FSS<br>Code)<br>11. | —<br>— | Reg. II-2/13,<br>IMO Res. Or, A.752(48),<br>IMO Res. MSC 98(73)-<br>(FSS<br>Code)<br>11.  | IMO B + D<br>Res. B + E<br>A.752(48)<br>ISO 15370<br>(2010).  |  |
| A.1/3.41 | Emergency escape   | —      | Reg. II-2/13.   | —      | Reg. II-2/13,   | ISO B + D<br>23269<br>B + E                                   |  |

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|          | breathing devices (EEBD)     | — | —            | IMO Res. MSC (FSS Code) 3, IMO MSC/Circ. 849   | (2008) B + F and alternatively:<br>For self-contained: open circuit compressed air breathing apparatus with full mask or mouthed piece assembly for escape:<br>— EN 402(2003).<br>For self-contained: open circuit compressed air breathing apparatus with a hood for escape:<br>— EN 1146(2005).<br>For self-contained: closed circuit compressed air breathing apparatus:<br>— EN 13794(2002). |
| A.1/3.42 | Inert gas systems components | — | Reg. II-2/4. | Reg. II-2/4, IMO Res. A.567(14), IMO Res. MSC 98(73)-(FSS Code) 15, IMO MSC/Circ. 353, | IMO B + D MSC/B + E Circ. 353+ F G   |



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|----------|---|-------------|---|-------------|--|-------------|--|
|          |   |             |   | —           | IMO<br>MSC/<br>Circ.485,   |             |  |
|          |   |             |   | —           | IMO<br>MSC/<br>Circ.731,   |             |  |
|          |   |             |   | —           | IMO<br>MSC/<br>Circ.1120.  |             |  |
| A.1/3.43 | Nozzles for deep fat cooking equipment fire extinguishing systems (automatic or manual type). | —<br>—<br>— | Reg. II-2/1,<br>Reg. II-2/10,<br>Reg. X/3.                      | —<br>—<br>— | Reg. II-2/1,<br>Reg. II-2/10,<br>IMO Res. MSC.97(73)-(2000 HSC Code) 7,<br>IMO MSC.1/ Circ.1433.                                       | —<br>—<br>— | ISO 15371 (2009)<br>B + D<br>B + E<br>B + F  |
| A.1/3.44 | Fire-fighters outfit — lifeline   | —<br>—<br>— | Reg. II-2/10,<br>Reg. X/3,<br>IMO Res. MSC.98(73)-(FSS Code) 3. | —<br>—<br>— | Reg. II-2/10,<br>IMO Res. MSC.36(63)-(1994 HSC Code) 7,<br>IMO Res. MSC.97(73)-(2000 HSC Code) 7,<br>IMO Res. MSC.98(73)-(FSS Code) 3. | —<br>—<br>— | IMO Res. MSC.98(73)-(FSS Code) 3,<br>IMO Res. MSC.307(88)-(2010 FTP Code).<br>B + D<br>B + E<br><del>B + F</del> |
| A.1/3.45 | Equivalent fixed gas fire extinguishing systems components (extinguishing                     | —<br>—<br>— | Reg. II-2/10,<br>Reg. X/3,<br>IMO Res.                          | —<br>—<br>— | Reg. II-2/10,<br>IMO Res. MSC.36(63)-(1994   | —<br>—<br>— | IMO MSC.888+ F<br>IMO MSC.1/ Circ.1316.<br>B + D<br>B + E<br>B + F   |

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|          | medium, head valves and nozzles) for machinery spaces and cargo pump rooms             |             | MSC.98(73)-<br>(FSS Code)<br>5.  | —           | HSC Code)<br>7,<br>IMO Res.<br>MSC.97(73)-<br>(2000<br>HSC Code)<br>7,<br>IMO Res.<br>MSC.98(73)-<br>(FSS Code)<br>5,<br>IMO MSC/<br>Circ.848,<br>IMO MSC.1/<br>Circ.1313,<br>IMO MSC.1/<br>Circ.1316.          |  |
| A.1/3.46 | Equivalent fixed gas fire extinguishing systems for machinery spaces (aerosol systems) | —<br>—<br>— | Reg. II-2/10,<br>Reg. X/3,<br>IMO Res. MSC.98(73)-<br>(FSS Code)<br>5. | —<br>—<br>— | Reg. II-2/10,<br>IMO Res. MSC.36(63)-<br>(1994<br>HSC Code)<br>7,<br>IMO Res.<br>MSC.97(73)-<br>(2000<br>HSC Code)<br>7,<br>IMO Res.<br>MSC.98(73)-<br>(FSS Code)<br>5,<br>IMO MSC.1/<br>Circ.1270<br>including | IMO B + D<br>MSC. B + E<br>Circ.1270 F<br>including<br>Corrigendum<br>1. |

|          |  |   |                                  | Corrigendum<br>1 |   |   |                                       |
|----------|--|---|----------------------------------|------------------|---|---|---------------------------------------|
|          |  |   |                                  | —                | IMO<br>MSC.1/<br>Circ.1313.   |   |                                       |
| A.1/3.47 | Concentrate<br>for Fixed<br>High<br>Expansion<br>Foam Fire<br>Extinguishing<br>Systems for<br>Machinery<br>Spaces and<br>Cargo Pump<br>Rooms.<br><i>Note:</i> The<br>fixed high<br>expansion<br>foam fire<br>extinguishing<br>system<br>(including<br>those systems<br>which use<br>inside air<br>from their<br>working<br>spaces for<br>their intended<br>performance),<br>for machinery<br>spaces and<br>cargo pump<br>rooms must<br>still be tested<br>with the<br>approved<br>concentrate<br>to the<br>satisfaction<br>of the<br>Administration. | — | Reg.<br>II-2/10.                 | —                | Reg.<br>II-2/10,<br>IMO<br>Res.<br>MSC.98(73)-<br>(FSS<br>Code)<br>6.         | — | IMO B + D<br>MSC/B + E<br>Circ.670+ F |
| A.1/3.48 | Fixed water<br>based local<br>application<br>fire fighting<br>systems<br>components<br>for use in<br>category “A”  | — | Reg.<br>II-2/10,<br>Reg.<br>X/3. | —                | Reg.<br>II-2/10,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>7, | — | IMO B + D<br>MSC/B + E<br>Circ.1387.F |

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|          | machinery spaces (Nozzles and performance tests).   |                  |                                   | — | IMO Res. MSC.97(73)-(2000 HSC Code) 7. |  |  |
| A.1/3.49 | Fixed water-based fire-fighting systems for ro-ro spaces, vehicle spaces and special category spaces  | —                | Reg. II-2/19,                     | — | Reg. II-2/19,                          | —  | IMO B + D<br>MSC. B + E<br>Circ. 1430.F                |
|          |   | —                | Reg. II-2/20,                     | — | Reg. II-2/20,                          | —  | and the  |
|          |   | —                | Reg. X/3,                         | — | IMO Res. MSC.98(73)-(FSS Code) 7.      | —  | additional design elements for:                        |
|          |   | —                | IMO Res. MSC.98(73)-(FSS Code) 7. | — | IMO Res. MSC.97(73)-(2000 HSC Code) 7. | —  | Prescriptive-based systems as per Circ. 1430 Clause 4: |
|          |   |                  |                                   | — | IMO Res. MSC.98(73)-(FSS Code) 7.      | —  | Performance-based systems as per Circ. 1430 Clause 5.  |
| A.1/3.50 | Protective clothing resistant to chemical attack  | Moved to A.2/3.9 |                                   |   |  |  |  |
| A.1/3.51 | Fixed fire detection and fire alarm systems components for control stations, service spaces, accommodation spaces, cabin balconies, machinery spaces and unattended | —                | Reg. II-2/7,                      | — | Reg. II-2/7,                           | Control and indicating equipment. Electrical installations in ships: | B + D<br>B + E<br>B + F                                |
|          |   | —                | Reg. X/3,                         | — | IMO Res. MSC.98(73)-(FSS Code) 9.      | —  | EN 54-2 (1997) including AC(1999) and A1(2006).        |
|          |   | —                | IMO Res. MSC.98(73)-(FSS Code) 9. | — | IMO Res. MSC.97(73)-(2000 HSC Code) 7. | —  | Power supply equipment:                                |

|     |   |   |                                       |   |
|-----|---|---|---------------------------------------|---|
|     | machinery spaces  |   | Code)                                 | EN  |
| (a) | Control and indicating equipment  | — | 7, IMO Res. MSC 98(73)- (FSS Code) 9, | 54-4 (1997) including AC(1999), A1(2002) and A2(2006).                                    |
| (b) | Power supply equipment  |   |                                       |   |
| (c) | Heat detectors — Point detectors  | — | IMO MSC 1742 Circ.1                   | Heat detectors — Point detectors:   |
| (d) | Smoke detectors: Point detectors using scattered light, transmitted light or ionization |   |                                       | — EN 54-5 (2000) including A1(2002).  |
| (e) | Flame detectors: Point detectors  |   |                                       | Smoke detectors — Point detectors using scattered light, transmitted light or ionization: |
| (f) | Manual call points  |   |                                       | — EN 54-7 (2000) including A1(2002) and A2(2006).   |
| (g) | Short circuit isolators   |   |                                       |   |
| (h) | Input/output devices  |   |                                       |   |
| (i) | Cables  |   |                                       | Flame detectors — Point detectors: — EN 54-10 (2002) including A1(2005).                  |
|     |   |   |                                       | Manual call points: — EN 54-11 (2001) including A1(2005).                                 |

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|          |   |   |                              |   |  | <p>Short circuit isolators:<br/> — EN 54-17 (2007) including AC(2007).</p> <p>Input/output devices:<br/> — EN 54-18 (2005) including AC(2007).</p> <p>Cables:<br/> — EN 60332-1-2 (2004).<br/> — IEC 60092-376 (2003).</p> <p>And, as applicable, electrical and electronic installations in ships:<br/> — IEC 60092-504 (2001) including IEC 60092-504 Corrigendum 1 (2011),<br/> — IEC 60533 (1999).</p> |                         |
| A.1/3.52 | Non-portable and transportable fire extinguishers | — | Reg. II-2/10,<br>— Reg. X/3. | — | Reg. II-2/4,<br>Reg. II-2/10,<br>— IMO Res. MSC.80(63)-<br>(1994)<br>— HSC Code)<br>7, | — EN 1866-3 (2007),<br>EN 1866-3 (2013).<br>— ISO 11601 (2008).  | B + D<br>B + E<br>B + F |

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|          |   |   |                                     | — | IMO Res. MSC.97(73)-(2000 HSC Code) 7.                   |   |                         |
| A.1/3.53 | Fire alarm devices — Sounders                     | — | Reg. II-2/7, —                      | — | Reg. II-2/7, —   | Sounders — EN 54-3 (2001) including A1(2002) and A2(2006), IEC 60092-504 (2001) including IEC 60092-504 Corrigendum 1 (2011), IEC 60533 (1999). | B + D<br>B + E<br>B + F |
|          |   | — | Reg. X/3, —                         | — | IMO Res. MSC.36(63)-(1994 HSC Code) 7, —                 |   |                         |
|          |   | — | IMO Res. MSC.98(73)-(FSS Code) 9. — | — | IMO Res. MSC.97(73)-(2000 HSC Code) 7, —                 |   |                         |
|          |   |   |                                     | — | IMO Res. MSC.98(73)-(FSS Code) 9, —                      |   |                         |
|          |   |   |                                     | — | IMO MSC.1/Circ.1313.                                     |   |                         |
| A.1/3.54 | Fixed oxygen analysis and gas detection equipment | — | Reg. II-2/4, —                      | — | Reg. II-2/4, —   | IEC 60092-504 (2001) including IEC 60092-504 Corrigendum 1 (2011), IEC 60533 (1999), and as applicable to: a) Category 4: (safe area)           | B + D<br>B + E<br>B + F |
|          |   | — | Reg. VI/3. —                        | — | IMO Res. MSC.98(73)-(FSS Code) 15. —                     |   |                         |
|          |   |   |                                     | — | For combined O <sub>2</sub> /HC systems additionally:, — |   |                         |
|          |   |   |                                     | — | IMO MSC.1/Circ.1370.                                     |   |                         |

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|          |   |        |                                  |        | —   | EN<br>50104<br>(2010).   |
|          |   |        |                                  |        | b)  | Category<br>3:<br>(explosive<br>gas<br>atmospheres)  |
|          |   |        |                                  |        | —   | EN<br>50104<br>(2010),   |
|          |   |        |                                  |        | —   | EN<br>60079-0<br>(2012),   |
|          |   |        |                                  |        | —   | EN<br>60079-29-1<br>(2007).  |
|          |   |        |                                  |        | For combined<br>O <sub>2</sub> /HC<br>systems<br>additionally;  |  |
|          |   |        |                                  |        | —   | IMO<br>MSC.1/<br>Circ.1370.  |
| A.1/3.55 | Dual purpose<br>type nozzles<br>(spray/jet<br>type) | —<br>— | Reg.<br>II-2/10,<br>Reg.<br>X/3. | —<br>— | Reg.<br>II-2/10,<br>IMO<br>Res.<br>MSC.97(73)<br>(1994)<br>HSC<br>Code)<br>7,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000)<br>HSC<br>Code)<br>7. | Hand-held<br>branchpipes<br>for fire<br>service use –<br>Smooth bore<br>jet and/or one<br>fixed spray<br>jet angle<br>branchpipes<br>PN 16:<br>B + D<br>B + E<br>B + F<br>EN<br>15182-1<br>(2007)<br>including<br>A1(2009),<br>EN<br>15182-2<br>(2007)<br>including<br>A1(2009). |
|          |   |        |                                  |        | Hand-held<br>branchpipes<br>for fire<br>service use –<br>Smooth bore<br>jet and/or one<br>fixed spray<br>jet angle<br>branchpipes<br>PN 16: |  |



|          |   |   |                                  |   |  |   |   |
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|          |   |   |                                  |   | —  | EN<br>15182-1<br>(2007)<br>including<br>A1(2009). |   |
| A.1/3.56 | Fire hoses<br>(reel type)   | — | Reg.<br>II-2/10,<br>Reg.<br>X/3. | — | Reg.<br>II-2/10,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>7,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>7. | —   | EN<br>671-1<br>(2012)<br>B + D<br>B + E<br>B + F                                    |
| A.1/3.57 | Medium<br>Expansion<br>Foam Fire<br>Extinguishing<br>Systems<br>components<br>Fixed Deck<br>Foam for<br>Tankers                               | — | Reg.<br>II-2/10.                 | — | Reg.<br>II-2/10.8.1,<br>IMO<br>Res.<br>MSC.98(73)-<br>(FSS<br>Code)<br>14,<br>IMO<br>MSC.1/<br>Circ.1239,<br>IMO<br>MSC.1/<br>Circ.1276.   | —   | IMO<br>MSC.788<br>B + D<br>B + E<br>B + F   |
| A.1/3.58 | Fixed Low<br>Expansion<br>Foam Fire<br>Extinguishing<br>Systems<br>components<br>for<br>Machinery<br>Spaces and<br>Tanker Deck<br>Protection. | — | Reg.<br>II-2/10.                 | — | Reg.<br>II-2/10,<br>IMO<br>Res.<br>MSC.98(73)-<br>(FSS<br>Code)<br>6,<br>14,<br>IMO<br>MSC.1/<br>Circ.1239,<br>IMO<br>MSC.1/<br>Circ.1276, | —   | IMO<br>MSC.112<br>B + D<br>B + E<br>B + F<br>IMO<br>MSC.1/<br>Circ.1312/<br>Corr.1. |

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| A.1/3.59 | Expansion Foam for Fixed Fire Extinguishing Systems for Chemical Tankers  | — | Reg. II-2/1, IMO Res. MSC.4(48)-(IBC Code) 11 | — | IMO Res. MSC.4(48)-(IBC Code) 11, IMO MSC/ Circ.553.                   | — | IMO MSC.1/ Circ.1312/ Corr.1. | B + D<br>B + E<br>B12.F |
| A.1/3.60 | Nozzles for fixed pressure water-spraying fire-extinguishing systems for cabin balconies  | — | Reg. II-2/10.                                 | — | Reg. II-2/10, IMO Res. MSC.98(73)-(FSS Code) 7, IMO MSC.1/ Circ.1313.. | — | IMO MSC.1/ Circ.1312/         | B + D<br>B + E<br>B68.F |
| A.1/3.61 | a) Inside air high expansion foam systems for the protection of machinery spaces and cargo pump rooms.<br>b) Outside air high expansion foam systems for the protection of machinery spaces and cargo | — | Reg. II-2/10.                                 | — | Reg. II-2/10, IMO Res. MSC.98(73)-(FSS Code) 6.                        | — | IMO MSC.1/ Circ.1312/         | B + D<br>B + E<br>B84.F |

|  |   |             |  |             |  |   |  |
|--|---|-------------|--|-------------|--|---|--|
|  | <p>pump rooms.</p> <p>Note: Inside/ Outside air high expansion foam systems for the protection of machinery spaces and cargo pump rooms shall be tested with the approved concentrate to the satisfaction of the Administration</p> |             |  |             |  |   |  |
| A.1/3.62                                       | Dry chemical powder extinguishing systems   | —           | Reg. II-2/1.                                   | —           | Reg. II-2/1, IMO Res. MSC.5(48)-(IGC Code) 11.                                       | — | IMO B + D<br>MSC B + E<br>Circ. 115.F  |
| A.1/3.63<br>Refer to note b) of this Annex A.1 | Sample extraction smoke detection systems components  | —<br>—<br>— | Reg. II-2/7,<br>Reg. II-2/19,<br>Reg. II-2/20. | —<br>—<br>— | Reg. II-2/7,<br>Reg. II-2/19,<br>Reg. II-2/20,<br>IMO Res. MSC.98(73)-(FSS Code) 10. | — | IMO B + D<br>Res. B + E<br>MSC 98(73)-<br>(FSS Code)<br>10,<br>and for:<br>Control and indicating equipment.<br>Electrical installations in ships:<br>— EN 54-2 (1997) including AC(1999) and A1(2006).<br>Power supply equipment: |

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|  |                   |   |              |   | —                         | EN 54-4 (1997) including AC(1999), A1(2002) and A2(2006).   |   |
|  |                   |   |              |   |                           | Aspiring smoke detectors:<br>— EN 54-20 (2006) including AC(2008).  |   |
|  |                   |   |              |   |                           | And, as applicable, electrical and electronic installations in ships:<br>— IEC 60092-504 (2001) including IEC 60092-504 Corrigendum 1 (2011)<br>— IEC 60533 (1999). |   |
|  |                   |   |              |   |                           | And, as applicable for explosive atmospheres:<br>— EN 60079-0 (2012).   |   |
| A.1/3.64<br>Refer to note b) of this Annex A.1 | C class Divisions | — | Reg. II-2/3. | — | Reg. II-2/3, Reg. II-2/9. | —   | IMO B + D Res. B + E MSC <del>307</del> (88)-(2010 FTP Code). |
| A.1/3.65                                       | Fixed hydrocarbon | — | Reg. II-2/4. | — | Reg. II-2/4,              | —   | IMO B + D MSC B + E Circ. <del>1370</del> ,F                  |

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|---|---|---|------------------------------------|---|------------------------------------|---|-------------------|
| Refer to note b) of this Annex A.1          | gas detection system  | — | IMO Res. MSC.98(73)-(FSS Code) 16, | — | IMO Res. MSC.1/Circ.1370.          | EN 60079-0 (2012), EN 60079-29-1 (2007), IEC 60092-504 (2001) including IEC 60092-504 Corrigendum 1 (2011), IEC 60533 (1999). |                   |
| A.1/3.66 Refer to note b) of this Annex A.1 | Evacuation guidance systems used as an alternative to low-location lighting systems | — | Reg. II-2/13.                      | — | Reg. II-2/13, IMO MSC.1/Circ.1168. | IMO B + D MSC. B + E Circ.1168.F  |                   |
| A.1/3.67 Refer to note c) of this Annex A.1 | Helicopter facility foam fire-fighting appliances                                   | — | Reg. II-2/18.                      | — | Reg. II-2/18, IMO MSC.1/Circ.1431. | EN 13565 (2003) including A1 (2007).  | B + D B + E B + F |

#### 4. Navigation equipment

Notes applicable to section 4: Navigation equipment.

Column 5 : IEC 61162 series refer to the following reference standards for Maritime navigation and radiocommunication equipment and systems — Digital interfaces:

- IEC 61162-1 ed4.0 (2010-11) - Part 1: Single talker and multiple listeners
- IEC 61162-2 ed1.0 (1998-09) - Part 2: Single talker and multiple listeners, high-speed transmission
- IEC 61162-3 ed1.1 Consol. with am1 (2010-11) - Part 3: Serial data instrument network
- IEC 61162-3 ed1.0 (2008-05) - Part 3: Serial data instrument network
- IEC 61162-3-am1 ed1.0 (2010-06) Amendment 1 — Part 3: Serial data instrument network

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- IEC 61162-450 ed1.0 (2011-06) - Part 450: Multiple talkers and multiple listeners — Ethernet interconnection

EN 61162 series refer to the following reference standards for Maritime navigation and radiocommunication equipment and systems — Digital interfaces:

- EN 61162-1 (2011) - Part 1: Single talker and multiple listeners
- EN 61162-2 (1998) - Part 2: Single talker and multiple listeners, high-speed transmission
- EN 61162-3 (2008) - Part 3: Serial data instrument network
  - EN 61162-3-am1 (2010) Amendment 1 — Part 3: Serial data instrument network
- EN 61162-450 (2011) - Part 450: Multiple talkers and multiple listeners — Ethernet interconnection

| No.     | Item designation                   | Regulation SOLAS 74, as amended, where “type approval” is required  | Regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO, as applicable   | Testing standards  | Modules for conformity assessment |
|---------|------------------------------------|---|---|--|-----------------------------------|
| 1       | 2                                  | 3   | 4   | 5  | 6                                 |
| A.1/4.1 | Magnetic compass Class A for ships | — Reg. V/18,<br>— Reg. X/3,<br>— IMO Res. MSC.36(63)-(1994)<br>HSC Code) 13,<br>— IMO Res. MSC.97(73)-(2000)<br>HSC Code) 13. | — Reg. V/19,<br>— IMO Res. A.382(X),<br>— IMO Res. A.694(17),<br>— IMO Res. MSC.36(63)-(1994)<br>HSC Code) 13,<br>— IMO Res. MSC.97(73)-(2000)<br>HSC Code) 13. | — ISO 1069 (1973),<br>— ISO 25862 (2009),<br>— EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008).<br>Or,<br>— ISO 1069 (1973),<br>— ISO 25862 (2009), | B + D<br>B + E<br>B + F<br>G      |



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| A.1/4.3 | Gyro compass                        | —  | Reg. V/18,                                     | — | Reg. V/19, IMO Res. A.424(XI), IMO Res. A.694(17), IMO Res. MSC.191(79). | — | EN ISO 8728 (1997), EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008), EN 61162 series, EN 62288 (2008). | — | — | — | EN ISO 8728 (1997), IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61162 series, IEC 62288 Ed.1.0(2008). | B + D<br>B + E<br>B + F<br>G |
| A.1/4.4 | Radar equipment                     | Moved to A.1/4.34, A.1/4.35 and A.1/4.36 |  |   |  |   |   |   |   |   |  |                              |
| A.1/4.5 | Automatic radar plotting aid (ARPA) | Moved to A.1/4.34                        |  |   |  |   |   |   |   |   |  |                              |
| A.1/4.6 | Echo — sounding equipment           | —  | Reg. V/18, Reg. X/3, IMO Res. MSC.36(63)-(1994 | — | Reg. V/19, IMO Res. A.224(VII), IMO Res. A.694(17),                      | — | EN ISO 9875 (2001)G including ISO Technical Corrigendum   | — | — | — | EN ISO 9875 (2001)G including ISO Technical Corrigendum  | B + D<br>B + E<br>B + F<br>G |



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|         |   |   | HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | — | IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.74(69)<br>Annex<br>4,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)Or,<br>13,<br>IMO<br>Res.<br>MSC.191(79). | — | 1:<br>2006,<br>EN<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>series,<br>EN<br>62288<br>(2008).<br>ISO<br>9875<br>(2000)<br>including<br>ISO<br>Technical<br>Corrigendum<br>1:<br>2006,<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>series,<br>IEC<br>62288<br>Ed.1.0(2008). |
| A.1/4.7 | Speed and<br>distance<br>measuring<br>equipment<br>(SDME) | — | Reg.<br>V/18,<br>Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC       | — | Reg.<br>V/19,<br>IMO<br>Res.<br>A.694(17),<br>IMO<br>Res.<br>A.824(19),<br>IMO<br>Res.   | — | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),  |

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|         |                                    |  | Code)<br>13,<br>IMO<br>Res.<br>MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>13.  | MSC 36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC 96(72),<br>IMO<br>Res.<br>MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC 191(79).             | EN<br>61023<br>(2007),<br>EN<br>61162<br>series,<br>EN<br>62288<br>(2008).<br>Or,<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61023<br>(2007),<br>IEC<br>61162<br>series,<br>IEC<br>62288<br>Ed.1.0(2008). |
| A.1/4.8 | Rudder angle, rpm, pitch indicator | Moved to A.1/4.20, A.1/4.21 and A.1/4.22 |   |  |  |
| A.1/4.9 | Rate-of-turn indicator             | —  | Reg. V/18,<br>— Reg. X/3,<br>— IMO Res. MSC 36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>— IMO Res. MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>13. | — Reg. V/19,<br>— IMO Res. A.526(13),<br>— IMO Res. A.694(17),<br>— IMO Res. MSC 36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>— IMO Res. MSC 97(73)-<br>(2000<br>HSC<br>Code)<br>13. | EN B + D<br>60945 B + E<br>(2002) B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>series,<br>ISO<br>20672<br>(2007),<br>EN<br>62288<br>(2008).<br>Or,<br>IEC<br>60945  |

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|          |                      |                         |  | Code)<br>13,<br>IMO<br>Res.<br>MSC.191(79). | (2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>series,<br>ISO<br>20672<br>(2007),<br>IEC<br>62288<br>Ed.1.0(2008).   |   |  |
| A.1/4.10 | Direction<br>finder  | Deliberately left blank |  |   |   |   |  |
| A.1/4.11 | Loran-C<br>equipment | —                       | Reg.<br>V/18,<br>—<br>Reg.<br>X/3,<br>—<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>—<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | —   | Reg.<br>V/19,<br>—<br>IMO<br>Res.<br>A.694(17),<br>—<br>IMO<br>Res.<br>A.818(19),<br>—<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>—<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>—<br>IMO<br>Res.<br>MSC.191(79). | — | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61075<br>(1993),<br>EN<br>61162<br>series,<br>EN<br>62288<br>(2008).<br>Or,<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61075<br>(1991),<br>IEC<br>61162<br>series, |

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|          |                                 |                         |   |   |  | IEC<br>62288<br>Ed.1.0(2008).  |  |
| A.1/4.12 | Chayka<br>equipment             | —                       | Reg.<br>V/18,   | — | Reg.<br>V/19,  | EN B + D<br>60945B + E<br>(2002)B + F<br>including   |  |
|          |                                 | —                       | Reg.<br>X/3,  | — | IMO<br>Res.  | including<br>IEC<br>60945  |  |
|          |                                 | —                       | IMO<br>Res.<br>MSC36(63)-<br>(1994<br>HSC<br>Code)<br>13, | — | A.694<br>(17),<br>IMO<br>Res.<br>A.818<br>(19),  | Corrigendum<br>1<br>(2008),<br>EN<br>61075<br>(1993),  |  |
|          |                                 | —                       | IMO<br>Res.<br>MSC97(73)-<br>(2000<br>HSC<br>Code)<br>13. | — | IMO<br>Res.<br>MSC36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC191(79). | EN<br>61162<br>series,<br>EN<br>62288<br>(2008).<br>Or,<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61075<br>(1991),<br>IEC<br>61162<br>series,<br>IEC<br>62288<br>Ed.1.0(2008). |  |
| A.1/4.13 | Decca<br>navigator<br>equipment | Deliberately left blank |   |   |  |  |  |
| A.1/4.14 | GPS<br>equipment                | —                       | Reg.<br>V/18,   | — | Reg.<br>V/19,  | EN B + D<br>60945B + E<br>(2002)B + F<br>including   |  |
|          |                                 | —                       | Reg.<br>X/3,  | — | IMO<br>Res.  | including<br>IEC<br>60945  |  |
|          |                                 | —                       | IMO<br>Res.<br>MSC36(63)-<br>(1994                        | — | A.694<br>(17),<br>IMO<br>Res.<br>MSC36(63)-  | Corrigendum  |  |

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|          |                      |   | HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13.   |   | (1994<br>HSC<br>Code);—<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code);—<br>IMO<br>Res.<br>MSC.12(73),<br>IMO<br>Res.<br>MSC.191(79).  |   | 1<br>(2008),<br>EN<br>61108-1<br>(2003),<br>EN<br>61162<br>series,<br>EN<br>62288<br>(2008).<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61108-1<br>(2003),<br>IEC<br>61162<br>series,<br>IEC<br>62288<br>Ed.1.0(2008). |
| A.1/4.15 | GLONASS<br>equipment | — | Reg.<br>V/18,<br>Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | — | Reg.<br>V/19,<br>IMO<br>Res.<br>A.694(17),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>Or,<br>IMO<br>Res.<br>MSC.113(73), | — | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61108-2<br>(1998),<br>EN<br>61162<br>series,<br>EN<br>62288<br>(2008).<br>IEC<br>60945<br>(2002)   |

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|          |                              |   | —          | IMO Res. MSC.191(79). |  | including IEC 60945 Corrigendum 1 (2008), IEC 61108-2 (1998), IEC 61162 series, IEC 62288 Ed.1.0(2008). |  |
| A.1/4.16 | Heading control system (HCS) | — | Reg. V/18. | —                     | Reg. V/19, IMO Res. A.342(X), IMO Res. A.694(17), IMO Res. MSC.64(67) Annex 3, IMO Res. MSC.191(79). | —   | ISO B + D 11674 B + E (2006) B + F EN G 60945 (2002) including IEC 60945 Corrigendum 1 (2008), EN 61162 series, EN 62288 (2008).<br>Or,<br>— |
|          |                              |   |            |                       |  | —   | ISO 11674 (2006), IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61162 series, IEC 62288 Ed.1.0(2008).                       |

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| A.1/4.17 | Mechanical pilot hoist               | Moved to A.1/1.40 |                             |   |                             |   |                          |               |
| A.1/4.18 | 9 GHz SAR transponder (SART)         | —                 | Reg. III/4,                 | — | Reg. III/6,                 | — | EN 60945                 | B + D         |
|          |                                      | —                 | Reg. IV/14,                 | — | Reg. IV/7,                  | — | (2002) including         | B + F         |
|          |                                      | —                 | Reg. V/18,                  | — | IMO Res. A.530(13),         | — | IEC 60945                | including     |
|          |                                      | —                 | Reg. X/3,                   | — | IMO Res. A.802(19),         | — | Corrigendum 1            | Corrigendum   |
|          |                                      | —                 | IMO Res. MSC.36(63)- (1994) | — | IMO Res. A.694(17),         | — | (2008), EN 61097-1       | (2007).       |
|          |                                      | —                 | HSC Code) 13,               | — | IMO Res. MSC.36(63)- (1994) | — | IEC 60945                | (2002)        |
|          |                                      | —                 | IMO Res. MSC.97(73)- (2000) | — | HSC Code) 8,                | — | including                | including     |
|          |                                      | —                 | HSC Code) 13.               | — | IMO Res. MSC.97(73)- (2000) | — | IEC 60945                | Corrigendum 1 |
|          |                                      | —                 |                             | — | IMO Res. MSC.97(73)- (2000) | — | (2008),                  | (2008),       |
|          |                                      | —                 |                             | — | HSC Code) 8,                | — | IEC 61097-1              | IEC 61097-1   |
|          |                                      | —                 |                             | — | 14,                         | — | (2007).                  | (2007).       |
|          |                                      | —                 |                             | — | ITU-R M.628-3(11/93).       | — |                          |               |
| A.1/4.19 | Radar equipment for high-speed craft | Moved to A.1/4.37 |                             |   |                             |   |                          |               |
| A.1/4.20 | Rudder angle indicator               | —                 | Reg. V/18,                  | — | Reg. V/19,                  | — | EN 60945                 | B + D         |
|          |                                      | —                 | Reg. X/3,                   | — | IMO Res. A.694(17),         | — | (2002) including         | B + E         |
|          |                                      | —                 | IMO Res. MSC.36(63)- (1994) | — | IMO Res. MSC.36(63)- (1994) | — | IEC 60945                | B + F         |
|          |                                      | —                 | HSC Code) 13,               | — | HSC Code) 13,               | — | Corrigendum 1            | including     |
|          |                                      | —                 | IMO Res.                    | — | IMO Res. MSC.97(73)- (2000) | — | (2008), EN 61162 series, | including     |

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|          |                                      |                  | MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13.   | —                | IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>Or,<br>IMO<br>Res.<br>MSC.191(79).   | —                | ISO<br>20673<br>(2007),<br>EN<br>62288<br>(2008).<br><br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>series,<br>ISO<br>20673<br>(2007),<br>IEC<br>62288<br>Ed.1.0(2008).                         |
| A.1/4.21 | Propeller<br>revolution<br>indicator | —<br>—<br>—<br>— | Reg.<br>V/18,<br>Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | —<br>—<br>—<br>— | Reg.<br>V/19,<br>IMO<br>Res.<br>A.694(17),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>Or,<br>IMO<br>Res.<br>MSC.191(79). | —<br>—<br>—<br>— | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>series,<br>ISO<br>22554<br>(2007),<br>EN<br>62288<br>(2008).<br><br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum |



|          |  |                            |   |                            |  |  |
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|          |  |                            |   |                            |  | 1<br>(2008),<br>IEC<br>61162<br>series,<br>ISO<br>22554<br>(2007),<br>IEC<br>62288<br>Ed.1.0(2008).  |
| A.1/4.22 | Pitch indicator                        | —<br>—<br>—<br>—<br>—<br>— | Reg. V/18,<br>Reg. X/3,<br>IMO Res. MSC36(63)-(1994 HSC Code) 13,<br>IMO Res. MSC97(73)-(2000 HSC Code) 13. | —<br>—<br>—<br>—<br>—<br>— | Reg. V/19,<br>IMO Res. A.694(17),<br>IMO Res. MSC36(63)-(1994 HSC Code) 13,<br>IMO Res. MSC97(73)-(2000 HSC Code) 13,<br>Or,<br>IMO Res. MSC191(79). | EN B + D<br>60945<br>(2002)<br>B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>series,<br>ISO<br>22555<br>(2007),<br>EN<br>62288<br>(2008).<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>series,<br>ISO<br>22555<br>(2007),<br>IEC<br>62288<br>Ed.1.0(2008). |
| A.1/4.23 | Compass for lifeboats and rescue boats | —<br>—                     | Reg. III/4,<br>Reg. X/3,  | —<br>—                     | Reg. III/34,<br>IMO Res.   | ISO B + D<br>1069 B + E<br>(1973) B + F<br>G   |

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|          |  | —                 | IMO Res. MSC.36(63)- (1994 HSC Code) — 13, —                         | IMO Res. MSC.97(73)- (2000 HSC Code) 13. — | MSC.48(66)- (LSA Code) IV, V, IMO Res. MSC.36(63)- (1994 HSC Code) 8, 13, IMO Res. MSC.97(73)- (2000 HSC Code) 8, 13. | ISO 25862 (2009), IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008). |  |
| A.1/4.24 | Automatic radar plotting aid (ARPA) for high-speed craft | Moved to A.1/4.37 |  |  |   |  |  |
| A.1/4.25 | Automatic tracking aid (ATA)                             | Moved to A.1/4.35 |  |  |   |  |  |
| A.1/4.26 | Automatic tracking aid (ATA) for high speed craft        | Moved to A.1/4.38 |  |  |   |  |  |
| A.1/4.27 | Electronic plotting aid (EPA)                            | Moved to A.1/4.36 |  |  |   |  |  |
| A.1/4.28 | Integrated bridge system                                 | Moved to A.2/4.30 |  |  |   |  |  |
| A.1/4.29 | Voyage data recorder (VDR)                               | —                 | Reg. V/18, — Reg. V/20, — Reg. X/3, — IMO Res. MSC.36(63)- (1994 HSC | —  | Reg. V/20, — IMO Res. A.694 (17), — IMO Res. MSC.36(63)- (1994 HSC  | —  | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), |

|          |   |   |  |   |  |   |  |
|----------|---|---|--|---|--|---|--|
|          |   |   | Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13.   |   | Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.191(79),<br>IMO<br>Res.<br>MSC.333(90).   |   | IEC<br>61162<br>Series,<br>IEC<br>61996-1<br>(2013-05).<br>IEC<br>62288<br>Ed.1.0(2008)  |
| A.1/4.30 | Electronic<br>chart<br>display and<br>information<br>system<br>(ECDIS)<br>with backup,<br>and raster<br>chart display<br>system<br>(RCDS) | — | Reg.<br>V/18,<br>—<br>Reg.<br>X/3,<br>—<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>—<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | — | Reg.<br>V/19,<br>—<br>IMO<br>Res.<br>A.694(17),<br>—<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>—<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>Or,<br>—<br>IMO<br>Res.<br>MSC.191(79),<br>—<br>IMO<br>Res.<br>MSC.232(82),<br>—<br>IMO<br>SN.1/<br>Circ.266. | — | EN B + D<br>60945 B + E<br>(2002) B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>Series,<br>EN<br>61174<br>(2008),<br>EN<br>62288<br>(2008).<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>Series,<br>IEC<br>61174<br>(2008),<br>IEC<br>62288<br>Ed.1.0(2008). |
|          |   |   | [ECDIS back-<br>up and RCDS<br>are only<br>applicable<br>when this<br>functionality<br>is included in<br>the ECDIS.<br>The module  |   |  |   |  |

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|          |   |   |   | B certificate shall indicate whether these options were tested]. |   |   |   |                              |
|----------|---|---|---|--|---|---|---|------------------------------|
| A.1/4.31 | Gyro compass for high-speed craft                         | — | Reg. X/3, IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13. | —  | IMO Res. A.694(17), IMO Res. A.821(19), IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13, Or, IMO Res. MSC.191(79). | — | ISO 16328 (2001), EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008), EN 61162 Series, EN 62288 (2008).<br>ISO 16328 (2001), IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61162 Series, IEC 62288 Ed.1.0(2008). | B + D<br>B + E<br>B + F<br>G |
| A.1/4.32 | Universal automatic identification system equipment (AIS) | — | Reg. V/18, Reg. X/3, IMO Res. MSC.36(63)-(1994 HSC  | —  | Reg. V/19, IMO Res. A.694(17), IMO Res. MSC.36(63)-(1994  | — | EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008),   | B + D<br>B + E<br>B + F<br>G |

|          |  |   |  |   |   |
|----------|--|---|--|---|---|
|          |  |   | Code)<br>13,<br>IMO<br>Res. —<br>MSC.97(73)-<br>(2000<br>HSC —<br>Code)<br>13. | HSC —<br>Code)<br>13,<br>IMO —<br>Res. —<br>MSC.74(69),<br>IMO —<br>Res. —<br>MSC.97(73)-<br>(2000<br>Or,<br>HSC —<br>Code)<br>13,<br>IMO —<br>Res. —<br>MSC.191(79),<br>ITU-<br>R<br>M.<br>1371-4(2010). | EN<br>61162<br>Series,<br>EN<br>61993-2<br>(2013),<br>EN<br>62288<br>(2008).<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>Series,<br>IEC<br>61993-2<br>(2012),<br>IEC<br>62288<br>Ed.1.0(2008). |
| A.1/4.33 | Track control system (working at ship's speed from minimum manoeuvring speed up to 30 knots) | — | Reg. V/18.   | Reg. V/19,<br>IMO<br>Res. A.694(17),<br>IMO<br>Res. MSC.74(69),<br>IMO<br>Res. MSC.191(79).   | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>Series,<br>EN<br>62065<br>(2002),<br>EN<br>62288<br>(2008).<br>Or,<br>IEC<br>60945<br>(2002)  |

*Note:*  
ITU-R M.  
1371-4(2010)  
shall only be  
applicable in  
accordance  
with  
requirements  
of IMO  
Res.MSC.74(69).

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|----------|-----------------------------|---|---------------|---|---|---|
|          |                             |   |               |   |   | including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>— IEC<br>61162<br>Series,<br>— IEC<br>62065<br>(2002),<br>— IEC<br>62288<br>Ed.1.0(2008).   |
| A.1/4.34 | Radar<br>equipment<br>CAT 1 | — | Reg.<br>V/18. | — | Reg.<br>V/19.<br>— IMO<br>Res.<br>A.278(VIII),<br>— IMO<br>Res.<br>A.694(17),<br>— IMO<br>Res.<br>A.823(19),<br>— IMO<br>Res.<br>MSC.191(79),<br>— IMO<br>Res.<br>MSC.192(79),<br>— ITU-<br>R<br>M.<br>1177-4(04/11). | — EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>— EN<br>61162<br>Series,<br>— EN<br>62288<br>(2008),<br>— EN<br>62388<br>(2008).<br>Or,<br>— IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>— IEC<br>61162<br>Series,<br>— IEC<br>62288<br>Ed.1.0(2008).<br>— IEC<br>62388<br>Ed.1.0(2007). |

|          |                          |   |               |   |  |   |   |
|----------|--------------------------|---|---------------|---|--|---|---|
| A.1/4.35 | Radar equipment<br>CAT 2 | — | Reg.<br>V/18. | — | Reg.<br>V/19,<br>IMO<br>Res.<br>A.278(VIII),<br>IMO<br>Res.<br>A.694(17),<br>IMO<br>Res.<br>MSC.191(79),<br>IMO<br>Res.<br>MSC.192(79),<br>ITU-<br>R<br>M.<br>1177-4(04/11).<br>Or,<br>— | — | EN<br>B + D<br>60945<br>B + E<br>(2002)<br>B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>Series,<br>EN<br>62288<br>(2008),<br>EN<br>62388<br>(2008).<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>Series,<br>IEC<br>62288<br>Ed.1.0(2008).<br>IEC<br>62388<br>Ed.1.0(2007). |
| A.1/4.36 | Radar equipment<br>CAT 3 | — | Reg.<br>V/18. | — | Reg.<br>V/19,<br>IMO<br>Res.<br>A.278(VIII),<br>IMO<br>Res.<br>A.694(17),<br>IMO<br>Res.<br>MSC.191(79),<br>IMO<br>Res.<br>MSC.192(79),  | — | EN<br>B + D<br>60945<br>B + E<br>(2002)<br>B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>Series,<br>EN<br>62288<br>(2008),  |

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|----------|---|---|---|---|--|---|--|--|
|          |   |   |   | — | ITU-R M.1177-4(04/11).   | — | EN 62388 (2008).   |  |
|          |   |   |   |   |  | — | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008),   |  |
|          |   |   |   |   |  | — | IEC 61162 Series,  |  |
|          |   |   |   |   |  | — | IEC 62288 Ed.1.0(2008).  |  |
|          |   |   |   |   |  | — | IEC 62388 Ed.1.0(2007).  |  |
| A.1/4.37 | Radar equipment for high speed craft applications (CAT 1H and CAT 2H) | — | Reg. X/3, IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13. | — | IMO Res. A.278(VIII), IMO Res. A.694(17), IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13, Or, IMO Res. MSC.191(79), IMO Res. MSC.192(79), ITU-R M.1177-4(04/11). | — | EN B + D 60945B + E (2002)B + F including IEC 60945 Corrigendum 1 (2008), EN 61162 Series, EN 62288 (2008), EN 62388 (2008). |  |
|          |   |   |   |   |  | — | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008),   |  |





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|          |   |             |  |   |   |
|----------|---|-------------|--|---|---|
|          |   |             | MSC.36(63)-<br>(1994<br>HSC<br>Code)—<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)—<br>13.                              | HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13.<br>MSC.164(78).   | including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>Or,<br>ISO<br>8729-1<br>(2010),<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008).   |
| A.1/4.40 | Heading<br>control<br>system for<br>high speed<br>craft | —<br>—<br>— | Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | IMO<br>Res.<br>A.694(17),<br>IMO<br>Res.<br>A.822(19),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.191(79). | ISO B + D<br>16329<br>B + E<br>(2003)<br>B + F<br>EN G<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>series,<br>EN<br>62288<br>(2008).<br>Or,<br>ISO<br>16329<br>(2003),<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008), |

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|          |   |   |  |   |  | IEC<br>61162<br>series,<br>IEC<br>62288<br>Ed.1.0(2008). |  |
| A.1/4.41 | Transmitting heading device THD (GNSS method) | — | Reg. V/18, Reg. X/3, IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13. | — | Reg. V/19, IMO Res. A.694(17), IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13, IMO Res. MSC.116(73), IMO Res. MSC.191(79). | —  | ISO B + D 22090B + E (2004)B + F including ISO Corrigendum 1 (2005), EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008), EN 61162 series, EN 62288 (2008). Or, ISO 22090-3 (2004) including ISO Corrigendum 1 (2005), IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61162 series, |

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|----------|--|---|--|---|--|---|--|
|          |  |   |  |   | —  | IEC<br>62288<br>Ed.1.0(2008).   |  |
| A.1/4.42 | Searchlight<br>for high<br>speed craft               | — | Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | — | IMO<br>Res.<br>A.694(17),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13.  | —   | ISO B + D<br>17884B + E<br>(2004)B + F<br>EN G<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008).<br>—                           |
|          |  |   |  |   | —  | ISO<br>17884<br>(2004),<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008). |  |
| A.1/4.43 | Night vision<br>equipment for<br>high speed<br>craft | — | Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | — | IMO<br>Res.A.694(17),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.94(72),<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.191(79). | —   | ISO B + D<br>16273B + E<br>(2003)B + F<br>EN G<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>62288<br>(2008).<br>— |
|          |  |   |  |   | —  | ISO<br>16273<br>(2003),<br>IEC<br>60945<br>(2002)<br>including<br>IEC   |  |

|          |   |  |   |                                 |   |  |  |
|----------|---|--|---|---------------------------------|---|--|--|
|          |   |  |   |                                 |   | 60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>62288<br>Ed.1.0(2008).  |  |
| A.1/4.44 | Differential<br>beacon<br>receiver for<br>DGPS and<br>DGLONASS<br>Equipment | —<br>—<br>—<br>—<br>—                      | Reg.<br>V/18,<br>Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | —<br>—<br>—<br>—<br>—<br>—<br>— | Reg.<br>V/19,<br>IMO<br>Res.<br>A.694<br>(17),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.114(73). | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61108-4<br>(2004),<br>EN<br>61162<br>series.<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61108-4<br>(2004),<br>IEC<br>61162<br>series. |  |
| A.1/4.45 | Chart<br>facilities for<br>shipborne<br>radar                               | Item deleted, as it is covered by A.1/4.38 |   |                                 |   |  |  |
| A.1/4.46 | Transmitting<br>heading<br>device THD<br>(Gyroscopic<br>method)             | —<br>—<br>—                                | Reg.<br>V/18,<br>Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC   | —<br>—<br>—<br>—<br>—           | Reg.<br>V/19,<br>IMO<br>Res.<br>A.694<br>(17),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC  | ISO B + D<br>22090B + E<br>(2002)B + F<br>including<br>Corr.1<br>(2005),<br>EN<br>60945<br>(2002)  |  |

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|-----------|---|---|--|---|---|
|           |   | — | Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13. | (1994<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>13,<br>IMO<br>Res.<br>MSC.46(73),<br>IMO<br>Res.<br>MSC.191(79). | including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>series,<br>EN<br>62288<br>(2008).<br>Or,<br>ISO<br>22090-1<br>(2002)<br>including<br>Corr.1<br>(2005),<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>series,<br>IEC<br>62288<br>Ed.1.0(2008). |
| A.1./4.47 | Simplified<br>voyage data<br>recorder (S-<br>VDR) | — | Reg.<br>V/20.  | —<br>Reg.<br>V/20,<br>IMO<br>Res.<br>A.694(17),<br>IMO<br>Res.<br>MSC.163(78),<br>IMO<br>Res.<br>MSC.191(79).   | —<br>EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>series,<br>EN<br>61996-2<br>(2008),<br>EN<br>62288<br>(2008).  |

|          |                        |   |  |   |  |   |  |                                   |
|----------|------------------------|---|--|---|--|---|--|-----------------------------------|
|          |                        |   |  |   | Or,<br>—<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>—<br>IEC<br>61162<br>series,<br>—<br>IEC<br>61996-2<br>(2007),<br>—<br>IEC<br>62288<br>Ed.1.0(2008). |   |  |                                   |
| A.1/4.48 | Mechanical pilot hoist | Deliberately left blank (as IMO Res. MSC.308(88), in force on 1 July 2012, quotes: “Mechanical pilot hoists shall not be used”) |  |   |  |   |  |                                   |
| A.1/4.49 | Pilot ladder           | —   | Reg. V/23,<br>—<br>Reg. X/3.   | — | Reg. V/23,<br>—<br>IMO Res. A.1045(27),<br>—<br>IMO MSC/Circ.773.  | — | IMO Res. A.1045(27),<br>—<br>ISO 799<br>(2004).  | B + D<br>B + E(27),<br>B + F<br>G |
| A.1/4.50 | DGPS Equipment         | —   | Reg. V/18,<br>—<br>Reg. X/3,<br>—<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code)<br>13,<br>—<br>IMO Res. MSC.97(73)-<br>(2000 HSC Code)<br>13. | — | Reg. V/19,<br>—<br>IMO Res. A.694<br>(17),<br>—<br>IMO Res. MSC.36(63)-<br>(1994 HSC Code)<br>13,<br>—<br>IMO Res. MSC.97(73)-<br>(2000 HSC Code)<br>13,   | — | EN 60945<br>(2002) including<br>IEC 60945<br>Corrigendum<br>1<br>(2008),<br>—<br>EN 61108-1<br>(2003),<br>—<br>EN 61108-4<br>(2004),<br>—<br>EN 61162<br>series,<br>—<br>EN 62288<br>(2008). | B + D<br>B + E<br>B + F<br>G      |





|          |                          |   |                                     |   |                                     |   |  |
|----------|--------------------------|---|-------------------------------------|---|-------------------------------------|---|--|
|          |                          |   |                                     |   | —                                   | IEC 61108-2 (1998),   |  |
|          |                          |   |                                     |   | —                                   | IEC 61108-4 (2004),   |  |
|          |                          |   |                                     |   | —                                   | IEC 61162 series,   |  |
|          |                          |   |                                     |   | —                                   | IEC 62288 Ed.1.0(2008).   |  |
| A.1/4.52 | Daylight signalling lamp | — | Reg. V/18,                          | — | Reg. V/19,                          | EN B + D 60945B + E (2002)B + F including IEC 60945 Corrigendum 1 (2008), |  |
|          |                          | — | Reg. X/3,                           | — | IMO Res. A.694(17),                 | ISO 25861 (2007).   |  |
|          |                          | — | IMO Res. MSC36(63)-(1994 HSC Code), | — | IMO Res. MSC36(63)-(1994 HSC Code), | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008),                |  |
|          |                          | — | IMO Res. MSC97(73)-(2000 HSC Code). | — | IMO Res. Or, MSC95(72),             | ISO 25861 (2007).   |  |
|          |                          |   |                                     |   | IMO Res. MSC97(73)-(2000 HSC Code). | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008),                |  |
|          |                          |   |                                     |   |                                     | ISO 25861 (2007).   |  |
| A.1/4.53 | Radar target enhancer    | — | Reg. V/18,                          | — | IMO Res. A.694(17),                 | ISO B + D 8729-B + E (2009)B + F  |  |
|          |                          | — | Reg. X/3,                           | — | IMO Res. MSC36(63)-(1994 HSC Code)  | EN G 60945 (2002) including IEC 60945 Corrigendum 1 (2008),               |  |
|          |                          | — | IMO Res. MSC36(63)-(1994 HSC Code)  | — | IMO Res. MSC97(73)-(2000 HSC        |   |  |
|          |                          | — | IMO Res. MSC97(73)-(2000 HSC        | — | IMO Res. MSC97(73)-(2000 HSC        |   |  |

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|----------|-----------------------|---|---------------------------------------|---|--|---|---|
|          |                       |   | HSC<br>Code)<br>13.                   | — | Code)<br>13,<br>IMO<br>Res.<br>MSC 164(78),<br>ITU-<br>R M<br>1176-1<br>(02/13)  | — | ISO<br>8729-2<br>(2009),<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008).  |
| A.1/4.54 | Bearing<br>Device     | — | Reg.<br>V/18.                         | — | Reg.<br>V/19.  | — | ISO B + D<br>25862<br>B + E<br>(2009)<br>B + F<br>EN G<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br><br>Or,<br>—<br>ISO<br>25862<br>(2009),<br>—<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008). |
| A.1/4.55 | AIS SART<br>equipment | — | Reg.<br>III/4,<br>—<br>Reg.<br>IV/14. | — | Reg.<br>III/6,<br>Reg.<br>IV/7,<br>IMO<br>Res.<br>MSC 246(83),<br>—<br>IMO<br>Res.<br>MSC 247(83),<br>—<br>IMO<br>Res.<br>MSC 246(84),<br>—<br>ITU-<br>R | — | EN B + D<br>60945<br>B + E<br>(2002)<br>B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61097-14<br>(2010).<br>IEC<br>60945  |

|          |  |   |  |                  |  |   |
|----------|--|---|--|------------------|--|---|
|          |  |   |  | M. 1371-4(2010). | (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61097-14 (2010).  |   |
| A.1/4.56 | Galileo Receiver                               | — | Reg. V/18, Reg. X/3, IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13. | —                | Reg. V/19, IMO Res. A.694(17), IMO Res. A.813(19), IMO Res. MSC.36(63)-(1994 HSC Code) 13, IMO Res. MSC.97(73)-(2000 HSC Code) 13, IMO Res. MSC.191(79), IMO Res. MSC.233(82). | EN B + D 60945B + E (2002)B + F including IEC 60945 Corrigendum 1 (2008), EN 61108-3 (2010), EN 61162 Series, EN 62288 (2008). Or, IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61108-3 (2010), IEC 61162 Series, IEC 62288 Ed.1.0(2008). |
| A.1/4.57 | Bridge Navigational Watch Alarm System (BNWAS) | — | Reg. V/18.   | —                | IMO Res. A.694(17), EN 60945B + E (2002)B + F including IEC  |   |

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|--|------------------------|---|---------------------------------------|-----------------------|----------------------------|--|---|
|  |                        |   | —                                     | IMO Res. MSC.128(75), | —                          | 60945 Corrigendum 1 (2008),                                |   |
|  |                        |   | —                                     | IMO Res. MSC.191(79). | —                          | EN 61162 Series, EN 62288 (2008),                          |   |
|  |                        |   |                                       |                       | Or,                        |  |   |
|  |                        |   |                                       |                       | —                          | IEC 62616(2010) including IEC 62616 Corrigendum 1 (2012).  |   |
|  |                        |   |                                       |                       | —                          | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), |   |
|  |                        |   |                                       |                       | —                          | IEC 61162 Series, IEC 62288 Ed.1.0(2008),                  |   |
|  |                        |   |                                       |                       | —                          | IEC 62616(2010) including IEC 62616 Corrigendum 1 (2012).  |   |
| A.1/4.58<br>Refer to note c) of this Annex A.1 | Sound reception system | — | Reg. V/18,                            | —                     | Reg. V/19,                 | —  | EN B + D 60945B + E (2002)B + F including IEC 60945 Corrigendum 1 (2008), |
|  |                        | — | Reg. X/3,                             | —                     | IMO Res. A.694(17),        |  |   |
|  |                        | — | IMO Res. MSC.36(63)- (1994 HSC Code), | —                     | IMO Res. MSC.36(63)- (1994 |  |   |

|                         |                              |   |  |   |  |   |  |
|-------------------------|------------------------------|---|--|---|--|---|--|
|                         |                              | — | IMO Res. MSC.97(73)- (2000 HSC Code)   | — | HSC Code), IMO Res. MSC.86(70), IMO Res. MSC.97(73)- (2000 HSC Code), IMO Res. MSC.191(79).  | — | EN 61162 series, EN 62288 (2008), ISO 14859 (2012). IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61162 series, IEC 62288 Ed.1.0(2008), ISO 14859 (2012). |
| A.1/4.59<br>Ex A.2/4.15 | Integrated navigation system | — | Reg. V/18, Reg. X/3, IMO Res. MSC.36(63)- (1994 HSC Code) 13, IMO Res. MSC.97(73)- (2000 HSC Code) 13. | — | Reg. V/19, IMO Res. A.694(17), IMO Res. MSC.36(63)- (1994 HSC Code) 13, IMO Res. MSC.97(73)- (2000 HSC Code) 13, Or, IMO Res. MSC.191(79), | — | EN B + D 60945B + E (2002)B + F including IEC 60945 Corrigendum 1 (2008), EN 61162 series, EN 62288 (2008), IEC 61924-2 (2012). IEC 60945 (2002) including IEC             |

|  |  |  |   |  |  |
|--|--|--|---|--|--|
|  |  |  | — | IMO Res. MSC 252(83), 1                                  | 60945<br>Corrigendum   |
|  |  |  | — | IMO Res. MSC 302(83) - (Bridge Alert Management, (BAM)). | (2008),<br>IEC 61162 series,<br>IEC 62288 Ed. 1.0 (2008),<br>IEC 61924-2 (2012). |

## 5. Radiocommunication equipment

Notes applicable to section 5: Radiocommunication equipment.

Column 5 : In case of conflicting requirements between IMO MSC/Circ.862 and the product testing standards, the IMO MSC/Circ.862 requirements shall take precedence.

Column 5 : IEC 61162 series refer to the following reference standards for Maritime navigation and radiocommunication equipment and systems — Digital interfaces:

- IEC 61162-1 ed4.0 (2010-11) - Part 1: Single talker and multiple listeners
- IEC 61162-2 ed1.0 (1998-09) - Part 2: Single talker and multiple listeners, high-speed transmission
- IEC 61162-3 ed1.1 Consol. with am1 (2010-11) - Part 3: Serial data instrument network
- IEC 61162-3 ed1.0 (2008-05) - Part 3: Serial data instrument network
  - IEC 61162-3-am1 ed1.0 (2010-06) Amendment 1 — Part 3: Serial data instrument network
- IEC 61162-450 ed1.0 (2011-06) - Part 450: Multiple talkers and multiple listeners — Ethernet interconnection

EN 61162 series refer to the following reference standards for Maritime navigation and radiocommunication equipment and systems — Digital interfaces:

- EN 61162-1 (2011) - Part 1: Single talker and multiple listeners
- EN 61162-2 (1998) - Part 2: Single talker and multiple listeners, high-speed transmission
- EN 61162-3 (2008) - Part 3: Serial data instrument network
  - EN 61162-3-am1 (2010) Amendment 1 — Part 3: Serial data instrument network



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|---------|--------------------------------|---|--|---|--|--|
|         |                                |   |  | — | ITU-R M.4890, (10/95),                   | V1.3.1 (2010-09).  |
|         |                                |   |  | — | ITU-R M.493-13 (10/09),                  | IMO MSC/Circ.862, IEC 60945 (2002)   |
|         |                                |   |  | — | ITU-R M.541-9 (05/04),                   | including IEC 60945  |
|         |                                |   |  | — | ITU-R M.689-2 (09/94),                   | Corrigendum 1 (2008), IEC 61097-3 (1994), IEC 61097-7 (1996), IEC 61162 series.            |
| A.1/5.2 | VHF DSC watch-keeping receiver | — | Reg. IV/14,                              | — | Reg. IV/7,                               | EN B + D 60945B + E (2002)B + F including IEC 60945 Corrigendum 1 (2008), EN 61162 series, |
|         |                                | — | Reg. X/3,                                | — | Reg. X/3,                                | ETSI EN 300 338-1 V1.3.1 (2010-02),  |
|         |                                | — | IMO Res. MSC.36(63)-(1994) HSC Code) 14, | — | IMO Res. A.694(17), IMO Res. A.803(19),  | EN 300 338-1 V1.3.1 (2010-02),   |
|         |                                | — | IMO Res. MSC.97(73)-(2000) HSC Code) 14. | — | IMO Res. MSC.36(63)-(1994) HSC Code) 14, | ETSI EN 300 338-2 V1.3.1 (2010-02),  |
|         |                                |   |  | — | IMO Res. MSC.97(73)-(2000) HSC Code) 14, | ETSI EN 300 338-2 V1.3.1 (2010-02),  |
|         |                                |   |  | — | IMO COMSAR Circ.32,                      | EN 301033  |



|         |                 |   |                             |                        |                             |                         |                             |                        |   |
|---------|-----------------|---|-----------------------------|------------------------|-----------------------------|-------------------------|-----------------------------|------------------------|---|
|         |                 |   | —                           | ITU-R M.489-2 (10/95), | —                           | ITU-R M.493-13 (10/09), | —                           | ITU-R M.541-9 (05/04). | V1.3.1 (2010-09),<br>ETSI EN 301 843-2 V1.2.1 (2004-06),<br>IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008),<br>IEC 61097-3 (1994),<br>IEC 61097-8 (1998),<br>IEC 61162 series. |
| A.1/5.3 | NAVTEX receiver | — | Reg. IV/14,                 | —                      | Reg. IV/7,                  | —                       | Reg. X/3,                   | —                      | EN B + D 60945B + E (2002)B + F including IEC 60945 Corrigendum 1 (2008),<br>ETSI EN 300 065-1 V1.2.1 (2009-01),<br>ETSI EN 301 843-4 V1.2.1 (2004-06),<br>IEC 60945 (2002)               |
|         |                 | — | Reg. X/3,                   | —                      | Reg. X/3,                   | —                       | IMO Res. MSC.36(63)- (1994) | —                      |   |
|         |                 | — | IMO Res. MSC.36(63)- (1994) | —                      | IMO Res. A.694(17),         | —                       | HSC Code) 14,               | —                      |   |
|         |                 | — | IMO Res. MSC.97(73)- (2000) | —                      | IMO Res. MSC.97(73)- (2000) | —                       | IMO Res. MSC.97(73)- (2000) | —                      |   |
|         |                 | — | HSC Code) 14.               | —                      | HSC Code) 14,               | —                       | IMO Res. MSC.148(77),       | —                      |   |

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|         |              |   | —   | IMO<br>COMSAR<br>Circ.32,<br>—<br>ITU-<br>R<br>M.540-2<br>(06/90),<br>—<br>ITU-<br>R<br>M.625-3<br>(10/95). |  | including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61097-6<br>(2005-12). |  |
| A.1/5.4 | EGC receiver | — | Reg.<br>IV/14,<br>—<br>Reg.<br>X/3,<br>—<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>14,<br>—<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>14. | —   | Reg.<br>IV/7,<br>—<br>Reg.<br>X/3,<br>—<br>IMO<br>Res.<br>A.570(14),<br>—<br>IMO<br>Res.<br>A.694(47),<br>—<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>14,<br>—<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>14,<br>—<br>IMO<br>Res.<br>MSC.306(87),<br>—<br>IMO<br>COMSAR<br>Circ.32. | —  | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>ETSI<br>ETS<br>300460<br>Ed.1<br>(1996-05),<br>ETSI<br>ETS<br>300<br>460/<br>A1<br>(1997-11),<br>ETSI<br>EN<br>300829<br>V1.1.1<br>(1998-03),<br>ETSI<br>EN<br>301<br>843-1<br>V1.3.1<br>(2012-08),<br>Or,<br>—<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008), |

|         |   |   |   |   |   |                           |   |
|---------|---|---|---|---|---|---------------------------|---|
|         |   |   |   |   |   | IEC<br>61097-4<br>(2007). |   |
| A.1/5.5 | HF marine<br>safety<br>information<br>(MSI)<br>equipment<br>(HF NBDP<br>receiver) | — | Reg.<br>IV/14,<br>Reg.<br>X/3,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>14,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>14 | — | Reg.<br>IV/7,<br>Reg.<br>X/3,<br>IMO<br>Res.<br>A.694(17),<br>IMO<br>Res.<br>A.699(47),<br>IMO<br>Res.<br>A.700(47),<br>IMO<br>Res.<br>A.806(19),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>14,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>14,<br>IMO<br>Res.<br>M.491-1<br>(07/86),<br>ITU-<br>R<br>M.492-6<br>(10/95),<br>ITU-<br>R<br>M.540-2<br>(06/90),<br>ITU-<br>R<br>M.625-3<br>(10/95), | —                         | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>Series,<br>ETSI<br>ETS<br>300067<br>Ed.1<br>(1990-11),<br>ETSI<br>ETS<br>300<br>067/<br>A1<br>Ed.1<br>(1993-10).<br>Or,<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>Series,<br>ETSI<br>ETS<br>300067<br>Ed.1<br>(1990-11),<br>ETSI<br>ETS<br>300<br>067/<br>A1<br>Ed.1<br>(1993-10). |

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|         |                               |   |  | — | ITU-R M.688 (06/90).                       |   |   |
| A.1/5.6 | 406 MHz EPIRB (COSPAS-SARSAT) | — | Reg. IV/14,                            | — | Reg. IV/7,                                 | — | IMO B + D   |
|         |                               | — | Reg. X/3,                              | — | Reg. X/3,                                  | — | MSC/B + E   |
|         |                               | — | IMO Res. MSC36(63)-(1994 HSC Code) 14, | — | IMO Res. A.662(16),                        | — | Circ.862, F EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008),         |
|         |                               | — | IMO Res. MSC97(73)-(2000 HSC Code) 14. | — | IMO Res. A.694(17),                        | — | ETSI EN 300066 V 1.3.1 (2001-01).   |
|         |                               |   |  | — | IMO Res. Or, MSC36(63)-(1994 HSC Code) 14, | — | IMO MSC/ Circ.862, IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), |
|         |                               |   |  | — | IMO Res. MSC97(73)-(2000 HSC Code) 14,     | — | IEC 61097-2 (2008),   |
|         |                               |   |  | — | IMO Circ.862,                              | — | <i>Note:</i>  |
|         |                               |   |  | — | COMSAR Circ.32,                            | — | IMO MSC/ Circ. 862  |
|         |                               |   |  | — | ITU-R M.633-3 (05/04),                     | — | is applicable only  |
|         |                               |   |  | — | ITU-R M.690-1 (10/95).                     | — | to the optional remote activation device, not to                              |

|          |   |                         |  |   |  |                         |  |
|----------|---|-------------------------|--|---|--|-------------------------|--|
|          |   |                         |  |   |  | the<br>EPIRB<br>itself. |  |
| A.1/5.7  | L- band<br>EPIRB<br>(INMARSAT)  | Deliberately left blank |  |   |  |                         |  |
| A.1/5.8  | 2182 kHz<br>watch<br>receiver   | Deliberately left blank |  |   |  |                         |  |
| A.1/5.9  | Two-tone<br>alarm<br>generator  | Deliberately left blank |  |   |  |                         |  |
| A.1/5.10 | MF radio<br>capable of<br>transmitting<br>and receiving<br>DSC and<br>radiotelephony<br><i>Note:</i> In line<br>with IMO<br>and ITU<br>decisions, the<br>requirements<br>for Two<br>Tone Alarm<br>generator and<br>transmission<br>on H3E are<br>no longer<br>applicable in<br>the testing<br>standards | —                       | Reg.<br>IV/14,<br>—<br>Reg.<br>X/3,<br>—<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code) —<br>14,<br>—<br>IMO<br>Res. —<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>14.<br>— | — | Reg.<br>IV/9,<br>—<br>Reg.<br>IV/10,—<br>—<br>Reg.<br>X/3,<br>—<br>IMO<br>Res.<br>A.694(17),<br>—<br>IMO<br>Res.<br>A.804(19),<br>—<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994—<br>HSC<br>Code)<br>14,<br>—<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>14,<br>—<br>IMO<br>COMSAR<br>Circ.32,<br>—<br>ITU-<br>R<br>M.493-13<br>(10/09),<br>—<br>ITU-<br>R<br>M.541-9<br>(05/04). | —                       | IMO B + D<br>MSC/B + E<br>Circ.862, F<br>EN<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>series,<br>ETSI<br>EN<br>300<br>338-1<br>V1.3.1<br>(2010-02),<br>ETSI<br>EN<br>300<br>338-2<br>V1.3.1<br>(2010-02),<br>ETSI<br>EN<br>300<br>373-1<br>V1.3.1<br>(2011-01),<br>ETSI<br>EN<br>301<br>843-5<br>V1.1.1<br>(2004-06), |



|          |  |   |  |  |   |  |
|----------|--|---|--|--|---|--|
|          |  |   | —  | ITU-R M.493-13 (10/09),                      | — | ETSI EN 301 843-5 V1.1.1 (2004-06),                                  |
|          |  |   | —  | ITU-R M.5410, (05/04),                       | — | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008),           |
|          |  |   | —  | ITU-R M.1173 (10/95).                        | — | IEC 61097-3 (1994), IEC 61097-8 (1998), IEC 61162 series.            |
| A.1/5.12 | Inmarsat-B SES<br><i>Note:</i> The service will be discontinued on and after 31 December 2014. | — | Reg. IV/14,                              | Reg. IV/10,                                  | — | IMO B + D MSC/B + E  |
|          |  | — | Reg. X/3,                                | Reg. X/3,                                    | — | Circ B + F 862,  |
|          |  | — | IMO Res. MSC.36(63)- (1994 HSC Code) 14, | IMO Res. A.570(14),                          | — | EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008).            |
|          |  | — | IMO Res. MSC.97(73)- (2000 HSC Code) 14. | IMO Res. A.808(19),                          | — | IMO MSC/   |
|          |  |   |  | IMO Or, Res. MSC.36(63)- (1994 HSC Code) 14, | — | Circ 862, IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008). |
|          |  |   |  | IMO Res. MSC.97(73)- (2000 HSC Code) 14,     | — | IMO MSC/   |
|          |  |   |  |  | — | Circ 862, IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008). |





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|----------|---|---|--|---|---|--|
|          |   |   |  | — | IMO<br>COMSAR<br>Circ.32-   | 1<br>(2008),<br>IEC<br>61097-4<br>(2007),<br>IEC<br>61162<br>series.   |
| A.1/5.14 | MF/HF radio capable of transmitting and receiving DSC, NBDP and radiotelephony<br><i>Note:</i> In line with IMO and ITU decisions, the requirements for Two Tone Alarm generator and transmission on A3H are no longer applicable in testing standards. | — | Reg. IV/14,<br>Reg. X/3,<br>IMO Res. MSC.36(63)-(1994)<br>HSC Code) 14,<br>IMO Res. MSC.97(73)-(2000)<br>HSC Code) 14. | — | Reg. IV/10,<br>Reg. X/3,<br>IMO Res. A.694(17),<br>IMO Res. A.806(19),<br>IMO Res. MSC.36(63)-(1994)<br>HSC Code) 14,<br>IMO Res. MSC.97(73)-(2000)<br>HSC Code) 14,<br>IMO MSC/Circ.862,<br>IMO COMSAR Circ.32,<br>ITU-R M.476-5 (10/95),<br>ITU-R M.491-1 (07/86),<br>ITU-R M.492-6 (10/95),<br>ITU-R | B + D<br>MSC/B + E<br>Circ.862, F<br>EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008),<br>EN 61162 series,<br>ETSI ETS 300067 Ed.1 (1990-11),<br>ETSI ETS 300 067/A1 Ed.1 (1993-10),<br>ETSI EN 300 338-1 V1.3.1 (2010-02),<br>ETSI EN 300 338-2 V1.3.1 (2010-02),<br>ETSI ETS 300 373-1 |

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|----------|---|------------------|--|--|---|---|
|          |   |                  |  | M.493-13<br>(10/09),<br>ITU-<br>R<br>M.541-9<br>(05/04),<br>ITU-<br>R<br>M.6250 <del>2</del><br>(10/95),<br>ITU-<br>R<br>M.1173 <del>3</del><br>(10/95). | V1.3.1<br>(2011-01),<br>ETSI<br>EN<br>301<br>843-5<br>V1.1.1<br>(2004-06),<br><br>IMO<br>MSC/<br>Circ.862,<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61097-3<br>(1994),<br>IEC<br>61097-9<br>(1997),<br>IEC<br>61162<br>series. |   |
| A.1/5.15 | MF/HF DSC<br>scanning<br>watch<br>keeping<br>receiver | —<br>—<br>—<br>— | Reg. IV/14,<br>Reg. X/3,<br>IMO Res.<br>MSC.36(63)-<br>(1994)<br>HSC<br>Code)<br>14,<br>IMO Res.<br>MSC.97(73)-<br>(2000)<br>HSC<br>Code)<br>14. | —<br>—<br>—<br>—   | Reg. IV/10,<br>Reg. X/3,<br>IMO Res.<br>A.694(17),<br>IMO Res.<br>A.806(19),<br>IMO Res.<br>MSC.36(63)-<br>(1994)<br>HSC<br>Code)<br>14,<br>IMO Res.<br>MSC.97(73)-<br>(2000)<br>HSC  | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>EN<br>61162<br>series,<br>ETSI<br>EN<br>300<br>338-1<br>V1.3.1<br>(2010-02),<br>ETSI<br>EN<br>300<br>338-2 |

|          |  |                  |                  |  |   |   |
|----------|--|------------------|------------------|--|---|---|
|          |  |                  |                  | Code)<br>14,<br>IMO<br>COMSAR<br>Circ.32,<br>ITU-<br>R<br>M.493-43<br>(10/09),<br>ITU-<br>R<br>M.<br>541-9<br>(05/04)Or,<br>—                                      | V1.3.1<br>(2010-02),<br>ETSI<br>EN<br>301033<br>V1.3.1<br>(2010-09),<br>ETSI<br>EN<br>301<br>843-5<br>V1.1.1<br>(2004-06).<br><br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61097-3<br>(1994),<br>IEC<br>61097-8<br>(1998),<br>IEC<br>61162<br>series. |   |
| A.1/5.16 | Aeronautical two way VHF radio telephone apparatus           | Moved to A.2/5.8 |                  |  |   |   |
| A.1/5.17 | Portable survival craft two-way VHF radiotelephone apparatus | —                | Reg. IV/14,<br>— | Reg. III/6,<br>IMO<br>Res. A.694(17),<br>IMO<br>Res. A.809(19),<br>IMO<br>Res. MSC.36(63)-<br>(1994)<br>HSC<br>Code)<br>14,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000 | —   | EN B + D<br>60945B + E<br>(2002)B + F<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>ETSI<br>EN<br>300225<br>V1.4.1<br>(2004-12), |

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|          |   |   |   |   |   |   |  |
|----------|---|---|---|---|---|---|--|
|          |   |   | HSC Code) 14.   | — | 8, 14, IMO Res. MSC.97(73)- (2000) HSC Code) 8, 14, IMO Res. MSC.149(77), ITU-R M.489-2 (10/95).  | — | ETSI EN 301 843-2 V1.2.1 (2004-06).<br>IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61097-12 (1996).   |
| A.1/5.18 | Fixed survival craft two-way VHF radiotelephone apparatus | — | Reg. IV/14, Reg. X/3, IMO Res. MSC.36(63)- (1994) HSC Code) 14, IMO Res. MSC.97(73)- (2000) HSC Code) 14. | — | Reg. III/6, IMO Res. A.694(17), IMO Res. A.809(19), IMO Res. MSC.36(63)- (1994) HSC Code) 8, 14, IMO Res. MSC.97(73)- (2000) HSC Code) 8, 14, IMO Res. MSC.97(73)- (2000) HSC Code) 8, 14, ITU-R M.489-2 (10/95). | — | EN B + D 60945B + E (2002)B + F including IEC 60945 Corrigendum 1 (2008), ETSI EN 301466 V1.1.1 (2000-10), IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61097-12 (1996). |
| A1/5.19  | Inmarsat-F77  | — | Reg. IV/14, Reg. X/3,   | — | Reg. IV/10, IMO Res.  | — | IMO B + D MSC/B + E Circ.862, F EN 60945   |

|  |   |  |   |  |
|--|---|--|---|--|
|  | — | IMO Res. MSC.36(63)- (1994 HSC Code) 14, | A.570 (14), IMO Res. A.808 (19),                                    | (2002) including IEC 60945 Corrigendum 1 (2008),   |
|  | — | IMO Res. MSC.97(73)- (2000 HSC Code) 14. | IMO Res. A.694 (17), IMO Or, Res. — MSC.36(63)- (1994 HSC Code) 14, | IEC 61097-13 (2003). IMO MSC/ Circ.862, IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), |
|  | — |  | IMO Res. MSC.97(73)- (2000 HSC Code) 14,                            | IEC 61097-13 (2003).   |
|  | — |  | IMO Res. MSC/ Circ.862,   |  |
|  | — |  | IMO COMSAR Circ.32.   |  |

#### 6. Equipment required under COLREG 72

| No.     | Item designation  | Regulation COLREG 72 where “type approval” is required | Regulations of COLREG and the relevant resolutions and circulars of the IMO, as applicable | Testing standards                      | Modules for conformity assessment                        |
|---------|-------------------|--|--|--|--|
| 1       | 2                 | 3  | 4  | 5                                      | 6  |
| A.1/6.1 | Navigation lights | —  | COLREG Annex I/14.   | COLREG Annex I/14, IMO Res. A.694(17), | EN 14744 (2005) including AC (2006), B + D B + E B + F G |

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|  |  |  |   |                      |     |   |
|--|--|--|---|----------------------|-----|---|
|  |  |  | — | IMO Res. MSC 253(83) | —   | EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008).                                       |
|  |  |  |   |                      | Or, |   |
|  |  |  |   |                      | —   | EN 14744 (2005) including AC (2006), IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008). |

**7. Bulk carrier safety equipment**

No items in Annex A.1.

**8. Equipment under SOLAS Chapter II-1. Construction –structure, subdivision and stability, machinery and electrical installations**

| No.     | Item designation      | Regulation SOLAS 74, as amended, where “type approval” is required | Regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO, as applicable | Testing standards  | Modules for conformity assessment             |                |
|---------|-----------------------|--|---|--------------------|---|----------------|
| 1       | 2                     | 3  | 4   | 5                  | 6   |                |
| A.1/8.1 | Water level detectors | —  | Reg. II-1/22-1, —   | Reg. II-1/25, —    | IEC 60092-504E (2001) including IEC 60092-504 | B + D<br>B + F |
|         |                       | —  | Reg. II-1/25, —   | Reg. XII/12, —     | IEC 60092-504                                 |                |
|         |                       | —  | Reg. XII/12. —  | IMO Res.A.1021(26) | 60092-504                                     |                |

|  |  |  |   |                             |   |
|--|--|--|---|-----------------------------|---|
|  |  |  | — | IMO<br>Res.<br>MSC.188(79). | Corrigendum<br>1<br>(2011),<br>IEC<br>60529<br>(2001)<br>including:<br>Corrigendum<br>1<br>(2003),<br>Corrigendum<br>2<br>(2007),<br>Corrigendum<br>3<br>(2009),<br>IMO<br>Res.<br>MSC.188(79),<br>IMO<br>MSC.1/<br>Circ. 1291. |
|--|--|--|---|-----------------------------|---|

## ANNEX A.2

**EQUIPMENT FOR WHICH NO DETAILED TESTING  
STANDARDS EXIST IN INTERNATIONAL INSTRUMENTS**

1. **Life-saving appliances**

Column 4 : IMO MSC/Circular 980 should apply except when superseded by the specific instruments referred to in Column 4.

| No.     | Item designation              | Regulation SOLAS 74, as amended, where “type approval” is required | Regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO, as applicable | Testing standards | Modules for conformity assessment |
|---------|-------------------------------|--|---|-------------------|-----------------------------------|
| 1       | 2                             | 3  | 4   | 5                 | 6                                 |
| A.2/1.1 | Radar reflector for liferafts | — Reg. III/4,<br>— Reg. III/34,                                    | — IMO Res. MSC.48(66)-<br>(LSA Code).   |                   |                                   |

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|         |  |                         |                                   |   |   |  |  |
|---------|--|-------------------------|-----------------------------------|---|---|--|--|
|         |  | —                       | Reg.<br>X/3.                      |   |   |  |  |
| A.2/1.2 | Immersion suit materials   | Deliberately left blank |                                   |   |   |  |  |
| A.2/1.3 | Float-free launching appliances for survival craft   | —                       | Reg.<br>III/4,<br>Reg.<br>III/34. | — | Reg.<br>III/13,<br>Reg.<br>III/16,<br>Reg.<br>III/26,<br>Reg.<br>III/34,<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code)<br>8,<br>IMO<br>Res.<br>MSC.48(66)-<br>(LSA<br>Code)<br>I,<br>IV,<br>VI,<br>IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code)<br>8. |  |  |
| A.2/1.4 | Embarkation ladders  | Moved to A.1/1.29       |                                   |   |   |  |  |
| A.2/1.5 | Public address & general emergency alarm system (when used as fire alarm device item A.1/3.53 shall apply) | —                       | Reg.<br>III/6.                    | — | IMO<br>Res.<br>A.1021(26),<br>IMO<br>Res.<br>MSC.36(63)-<br>(1994<br>HSC<br>Code),<br>IMO<br>Res.<br>MSC.48(66)-<br>(LSA<br>Code),  |  |  |



|  |  |  |   |   |  |
|--|--|--|---|---|--|
|  |  |  | — | IMO<br>Res.<br>MSC.97(73)-<br>(2000<br>HSC<br>Code),<br>—<br>IMO<br>MSC/<br>Circ.808. |  |
|--|--|--|---|---|--|

## 2. Marine pollution prevention

| No.     | Item designation  | Regulation MARPOL 73/78, as amended, where “type approval” is required | Regulations of MARPOL 73/78, as amended, and the relevant resolutions and circulars of the IMO, applicable | Testing standards | Modules for conformity assessment |
|---------|---|--|--|-------------------|-----------------------------------|
| 1       | 2   | 3  | 4  | 5                 | 6                                 |
| A.2/2.1 | NO <sub>x</sub> analyser of Chemiluminescent detector (CLD) or heated chemiluminescent detector type (HCLD) type for use in on board direct measurement | Moved to A.1/2.8   |  |                   |                                   |
| A.2/2.2 | On board exhaust gas cleaning systems   | Moved to A.1/2.10  |  |                   |                                   |
| A.2/2.3 | Equipment using other equivalent methods to reduce on board NO <sub>x</sub> emissions   | — Annex VI, Reg. 4.  | — Annex VI, Reg. 4   |                   |                                   |

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|                    |  |   |   |   |  |  |  |
|--------------------|--|---|---|---|--|--|--|
| A.2/2.4            | Equipment using other technological methods to limit SOx emissions   | — | IMO Res. MEPC.176(58) - (Revised MARPOL Annex VI, Reg. 4), IMO Res. MEPC.184(59). | — | IMO Res. MEPC.176(58) - (Revised MARPOL Annex VI, Reg. 4). |  |  |
| A.2/2.5 (new item) | On board NOx analysers using a measurement method other than the Direct Measurement and Monitoring Method of the NOx Technical Code 2008 | — | IMO Res. MEPC.176(58) - (Revised MARPOL Annex VI, Reg. 4)                         | — | IMO Res. MEPC.176(58) - (Revised MARPOL Annex VI, Reg. 4)  |  |  |

### 3. Fire protection equipment

| No.     | Item designation                             | Regulation SOLAS 74, as amended, where “type approval” is required | Regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO, as applicable | Testing standards | Modules for conformity assessment |
|---------|--|--|---|-------------------|-----------------------------------|
| 1       | 2  | 3  | 4   | 5                 | 6                                 |
| A.2/3.1 | Non-portable and transportable extinguishers | Moved to A.1/3.52  |   |                   |                                   |
| A.2/3.2 | Nozzles for fixed pressure                   | Moved to A.1/3.49  |   |                   |                                   |

|         |   |                   |                      |   |                      |   |                   |
|---------|---|-------------------|----------------------|---|----------------------|---|-------------------|
|         | water-spraying fire-extinguishing systems for special category spaces, ro-ro cargo spaces, ro-ro spaces and vehicle spaces  |                   |                      |   |                      |   |                   |
| A.2/3.3 | Cold-weather starting of generator sets (starting devices)  | Moved to A.2/8.1  |                      |   |                      |   |                   |
| A.2/3.4 | Dual purpose type nozzles (spray/jet type)  | Moved to A.1/3.55 |                      |   |                      |   |                   |
| A.2/3.5 | Fixed fire detection and fire alarm systems components for control stations, service spaces, accommodation spaces, machinery spaces and unattended machinery spaces | Moved to A.1/3.51 |                      |   |                      |   |                   |
| A.2/3.6 | Smoke detectors   | Moved to A.1/3.51 |                      |   |                      |   |                   |
| A.2/3.7 | Heat detectors  | Moved to A.1/3.51 |                      |   |                      |   |                   |
| A.2/3.8 | Electric safety lamp  | —                 | Reg. II-2/10,        | — | Reg. II-2/10,        | — | IEC 60079 series. |
|         |   | —                 | Reg. X/3,            | — | IMO Res. MSC.36(63)- |   |                   |
|         |   | —                 | IMO Res. MSC.98(73)- |   | (1994 HSC Code)      |   |                   |
|         |   |                   | (FSS Code) 3.        |   | 7,                   |   |                   |

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|          |   |                   |               |  |   |  |
|----------|---|-------------------|---------------|--|---|--|
|          |   |                   | —             | IMO Res. MSC.97(73)-(2000 HSC Code) 7, |   |  |
|          |   |                   | —             | IMO Res. MSC.98(73)-(FSS Code), 3.     |   |  |
| A.2/3.9  | Protective clothing resistant to chemical attack  | —                 | Reg. II-2/19. | —                                      | Reg. II-2/19, IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7. | EN 943-1 (2002) including AC (2005), EN 943-2 (2002), EN ISO 6529 (2001), EN ISO 6530 (2005), EN 14605 (2005) including A1(2009), IMO MSC/Circ.1120. |
| A.2/3.10 | Low-location lighting systems   | Moved to A.1/3.40 |               |  |   |  |
| A.2/3.11 | Nozzles for fixed pressure water spraying fire extinguishing systems for machinery spaces | Moved to A.1/3.10 |               |  |   |  |
| A.2/3.12 | Equivalent fixed gas fire   | Moved to A.1/3.45 |               |  |   |  |

|          |  |                   |               |   |                                    |
|----------|--|-------------------|---------------|---|------------------------------------|
|          | extinguishing systems for machinery spaces and cargo pump rooms  |                   |               |   |                                    |
| A.2/3.13 | Compressed airline breathing apparatus (High Speed Craft)  | Item deleted      |               |   |                                    |
| A.2/3.14 | Fire hoses (reel type)   | Moved to A.1/3.56 |               |   |                                    |
| A.2/3.15 | Sample extraction smoke detection systems components   | Moved to A.1/3.63 |               |   |                                    |
| A.2/3.16 | Flame detectors  | Moved to A.1/3.51 |               |   |                                    |
| A.2/3.17 | Manual call points   | Moved to A.1/3.51 |               |   |                                    |
| A.2/3.18 | Alarm devices  | Moved to A.1/3.53 |               |   |                                    |
| A.2/3.19 | Fixed water based local application fire fighting systems components for use in category "A" machinery spaces. | Moved to A.1/3.48 |               |   |                                    |
| A.2/3.20 | Upholstered furniture  | Moved to A.1/3.20 |               |   |                                    |
| A.2/3.21 | Paint lockers and flammable liquid lockers fire extinguishing systems components                               | —                 | Reg. II-2/10. | — | Reg. II-2/10, IMO MSC.1/Circ.1239. |

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|          |   |                   |               |   |  |                      |  |
|----------|---|-------------------|---------------|---|--|----------------------|--|
| A.2/3.22 | Galley Exhaust Duct Fixed Fire Extinguishing Systems components | —                 | Reg. II-2/9.  | — | Reg. II-2/9.                           |                      |  |
| A.2/3.23 | Helicopter Deck Fire Extinguishing Systems components           | Moved to A.1/3.67 |               |   |  |                      |  |
| A.2/3.24 | Portable Foam Applicator Units                                  | —                 | Reg. II-2/10, | — | Reg. II-2/10,                          |                      |  |
|          |   | —                 | Reg. II-2/20, | — | Reg. II-2/20,                          |                      |  |
|          |   | —                 | Reg. X/3.     | — | IMO Res. MSC.36(63)-(1994 HSC Code) 7, |                      |  |
|          |   |                   |               | — | IMO Res. MSC.97(73)-(2000 HSC Code) 7, |                      |  |
|          |   |                   |               | — | IMO Res. MSC.98(73)-(FSS Code) 4,      |                      |  |
|          |   |                   |               | — | IMO MSC.1/Circ.1239,                   |                      |  |
|          |   |                   |               | — | IMO MSC.1/Circ.1313.                   |                      |  |
| A.2/3.25 | C class Divisions   | Moved to A.1/3.64 |               |   |  |                      |  |
| A.2/3.26 | Gaseous Fuel Systems Used for Domestic Purposes (components)    | —                 | Reg. II-2/4.  | — | Reg. II-2/4,                           |                      |  |
|          |   |                   |               | — | IMO MSC.1/Circ.1276.                   |                      |  |
| A.2/3.27 | Fixed Gas Fire  | —                 | Reg. II-2/10, | — | Reg. II-2/10,                          | Electrical Automatic |  |

|  |   |           |                   |  |   |
|--|---|-----------|-------------------|--|---|
| Extinguishing Systems (CO <sub>2</sub> ) components. | — | Reg. X/3. | —                 | Reg. II-2/20   | control and delay devices:                          |
|  |   |           | —                 | IMO Res. MSC 36(63)-                                       | EN 12094-1 (2003).                                  |
|  |   |           | —                 | (1994) HSC Code 7,   | Non-electrical automatic control and delay devices: |
|  |   |           | —                 | IMO Res. MSC 97(73)-                                       | EN 12094-2 (2003).                                  |
|  |   |           | —                 | (2000) HSC Code 7,   | Manual triggering and stop devices:                 |
|  |   |           | —                 | IMO Res. MSC 98(73)-                                       | EN 12094-3 (2003).                                  |
|  |   |           | —                 | (FSS Code) 5,  | Container valve assemblies and their actuators:     |
|  |   | —         | IMO Res. MSC 1315 |  |   |
|  |   | —         | IMO Res. MSC 17   | EN 12094-4 (2004).   |   |
|  |   | —         | Circ. 318.        |  |   |
|  |   |           |                   | High and low pressure selector valves and their actuators: |   |
|  |   |           |                   | EN 12094-5 (2006).   |   |
|  |   |           |                   | Non-electrical disable devices:                            |   |
|  |   |           |                   | EN 12094-6 (2006).   |   |
|  |   |           |                   | Nozzles for CO <sub>2</sub> systems:                       |   |
|  |   |           |                   | EN 12094-7 (2000) including                                |   |

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|          |   |                   |   |
|----------|---|-------------------|---|
|          |   |                   | <p>A1<br/>(2005).</p> <p>Connectors:<br/>— EN<br/>12094-8<br/>(2006).</p> <p>Pressure<br/>gauges and<br/>pressure<br/>switches:<br/>— EN<br/>12094-10<br/>(2003).</p> <p>Mechanical<br/>weighing<br/>devices:<br/>— EN<br/>12094-11<br/>(2003).</p> <p>Check valves<br/>and non-<br/>return valves:<br/>— EN<br/>12094-13<br/>(2001)<br/>including<br/>AC<br/>(2002).</p> <p>Odorizing<br/>devices for<br/>CO<sub>2</sub> low<br/>pressure<br/>systems:<br/>— EN<br/>12094-16<br/>(2003).</p> |
| A.2/3.28 | Medium<br>Expansion<br>Foam Fire<br>Extinguishing<br>Systems<br>components —<br>Fixed Deck<br>Foam for<br>Tankers | Moved to A.1/3.57 |   |
| A.2/3.29 | Fixed Low<br>Expansion<br>Foam Fire<br>Extinguishing  | Moved to A.1/3.58 |   |



|                      |  |                   |               |   |  |  |
|----------------------|--|-------------------|---------------|---|--|--|
|                      | Systems components for Machinery Spaces and Tanker Deck Protection.      |                   |               |   |  |  |
| A.2/3.30             | Expansion Foam for Fixed Fire Extinguishing Systems for Chemical Tankers | Moved to A.1/3.59 |               |   |  |  |
| A.2/3.31             | Water Spraying Hand Operated System                                      | —                 | Reg. II-2/10, | — | Reg. II-2/10,                          |  |
|                      |  | —                 | Reg. II-2/19. | — | Reg. II-2/19.                          |  |
| A.2/3.32             | Dry chemical powder extinguishing systems                                | Moved to A.1/3.62 |               |   |  |  |
| A.2/3.33<br>New item | Fire hoses with diameter > 52 mm   | —                 | Reg. II-2/10, | — | Reg. II-2/10,                          |  |
|                      |  | —                 | Reg. X/3.     | — | IMO Res. MSC.36(63)-(1994 HSC Code) 7, |  |
|                      |  |                   |               | — | IMO Res. MSC.97(73)-(2000 HSC Code) 7. |  |

#### 4. Navigation equipment

Notes applicable to section 4: Navigation equipment

Columns 3 and 4 : References to SOLAS Chapter V are to SOLAS 1974 as amended by MSC 73 and entering into force on 1 July 2002.

Column 5 : IEC 61162 series refer to the following reference standards for Maritime navigation and radiocommunication equipment and systems — Digital interfaces:

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- IEC 61162-1 ed4.0 (2010-11) - Part 1: Single talker and multiple listeners
- IEC 61162-2 ed1.0 (1998-09) - Part 2: Single talker and multiple listeners, high-speed transmission
- IEC 61162-3 ed1.1 Consol. with am1 (2010-11) - Part 3: Serial data instrument network
- IEC 61162-3 ed1.0 (2008-05) - Part 3: Serial data instrument network
  - IEC 61162-3-am1 ed1.0 (2010-06) Amendment 1 — Part 3: Serial data instrument network
- IEC 61162-450 ed1.0 (2011-06) - Part 450: Multiple talkers and multiple listeners — Ethernet interconnection

EN 61162 series refer to the following reference standards for Maritime navigation and radiocommunication equipment and systems — Digital interfaces:

- EN 61162-1 (2011) - Part 1: Single talker and multiple listeners
- EN 61162-2 (1998) - Part 2: Single talker and multiple listeners, high-speed transmission
- EN 61162-3 (2008) - Part 3: Serial data instrument network
  - EN 61162-3-am1 (2010) Amendment 1 — Part 3: Serial data instrument network
- EN 61162-450 (2011) - Part 450: Multiple talkers and multiple listeners — Ethernet interconnection

| No.     | Item designation  | Regulation SOLAS 74, as amended, where “type approval” is required | Regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO, as applicable | Testing standards | Modules for conformity assessment |
|---------|---|--|---|-------------------|-----------------------------------|
| 1       | 2   | 3  | 4   | 5                 | 6                                 |
| A.2/4.1 | Gyro compass for high speed craft                                 | Moved to A.1/4.31  |   |                   |                                   |
| A.2/4.2 | Heading control system for high speed craft (formerly auto-pilot) | Moved to A.1/4.40  |   |                   |                                   |

|          |  |                   |                                      |   |                                      |   |   |
|----------|--|-------------------|--------------------------------------|---|--------------------------------------|---|---|
| A.2/4.3  | Transmitting heading device THD (GNSS method)                  | Moved to A.1/4.41 |                                      |   |                                      |   |   |
| A.2/4.4  | Daylight signalling lamp                                       | Moved to A.1/4.52 |                                      |   |                                      |   |   |
| A.2/4.5  | Searchlight for high speed craft                               | Moved to A.1/4.42 |                                      |   |                                      |   |   |
| A.2/4.6  | Night vision equipment for high speed craft                    | Moved to A.1/4.43 |                                      |   |                                      |   |   |
| A.2/4.7  | Track control system   | Moved to A.1/4.33 |                                      |   |                                      |   |   |
| A.2/4.8  | Electronic Chart Display and Information System (ECDIS).       | Moved to A.1/4.30 |                                      |   |                                      |   |   |
| A.2/4.9  | Electronic Chart Display and Information System (ECDIS) backup | Moved to A.1/4.30 |                                      |   |                                      |   |   |
| A.2/4.10 | Raster Chart Display System (RCDS)                             | Moved to A.1/4.30 |                                      |   |                                      |   |   |
| A.2/4.11 | Combined GPS/GLONASS equipment                                 | —                 | Reg. V/18,                           | — | Reg. V/19,                           | — | EN 60945 (2002), including IEC 60945 Corrigendum 1 (2008), EN 61108-1 (2003), |
|          |  | —                 | Reg. X/3,                            | — | IMO Res. A.694(17),                  |   |   |
|          |  | —                 | IMO Res. MSC.36(63)-(1994 HSC Code), | — | IMO Res. MSC.36(63)-(1994 HSC Code), |   |   |
|          |  | —                 | IMO Res. MSC.97(73)-(2000            | — | IMO Res. MSC.97(73)-                 |   |   |



|          |   |                   |                                      |   |                                      |   |   |
|----------|---|-------------------|--------------------------------------|---|--------------------------------------|---|---|
| A.2/4.18 | Sound reception system                    | Moved to A.1/4.58 |                                      |   |                                      |   |   |
| A.2/4.19 | Magnetic compass for high speed craft     | —                 | Reg. X/3,                            | — | IMO Res. A.382(X),                   | — | ISO 1069 (1973),  |
|          |   | —                 | IMO Res. MSC.36(63)-(1994 HSC Code), | — | IMO Res. A.694(17),                  | — | ISO 25862(2009), EN 60945 (2002)  |
|          |   | —                 | IMO Res. MSC.97(73)-(2000 HSC Code). | — | IMO Res. MSC.36(63)-(1994 HSC Code), | — | including IEC 60945 Corrigendum 1 (2008).                                   |
|          |   | —                 |                                      | — | IMO Res. MSC.97(73)-(2000 HSC Code). | — | ISO 1069 (1973),  |
|          |   | —                 |                                      | — |                                      | — | ISO 25862(2009), IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008). |
| A.2/4.20 | Track control system for high-speed craft | —                 | Reg. X/3,                            | — | IMO Res. A.694(17),                  | — | EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008),                   |
|          |   | —                 | IMO Res. MSC.36(63)-(1994 HSC Code), | — | IMO Res. MSC.36(63)-(1994 HSC Code), | — | EN 61162 series, EN 62288 (2008).   |
|          |   | —                 | IMO Res. MSC.97(73)-(2000 HSC Code). | — | IMO Res. MSC.97(73)-(2000 HSC Code), | — | EN 60945 (2002)   |
|          |   | —                 |                                      | — | IMO Or, Res. MSC.191(79).            | — | IEC 60945 (2002)  |

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|          |   |                   |                                      |   |  |   |                                |   |                                 |  |
|----------|---|-------------------|--------------------------------------|---|--|---|--------------------------------|---|---------------------------------|--|
|          |   |                   |                                      |   |  |   |                                |   |                                 | including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008),<br>IEC<br>61162<br>series,<br>IEC<br>62288<br>Ed.<br>1.0<br>(2008). |
| A.2/4.21 | Chart facilities for shipborne radar                | Moved to A.1/4.45 |                                      |   |  |   |                                |   |                                 |  |
| A.2/4.22 | Transmitting heading device THD (Gyroscopic method) | Moved to A.1/4.46 |                                      |   |  |   |                                |   |                                 |  |
| A.2/4.23 | Transmitting heading device THD (Magnetic method)   | Moved to A.1/4.2  |                                      |   |  |   |                                |   |                                 |  |
| A.2/4.24 | Thrust indicator                                    | —                 | Reg. V/18,                           | — | Reg. V/19,                               | — | EN 60945 (2002)                | including IEC 60945 Corrigendum 1 (2008), | EN 61162 series,                | EN 62288 (2008).   |
|          |   | —                 | Reg. X/3,                            | — | IMO Res. A.694(17),                      | — | EN 60945 Corrigendum 1 (2008), | EN 61162 series,                          | EN 62288 (2008).                |  |
|          |   | —                 | IMO Res. MSC.36(63)-(1994 HSC Code), | — | IMO Res. MSC.36(63)-(1994 HSC Code),     | — | EN 61162 series,               | EN 62288 (2008).                          |                                 |  |
|          |   | —                 | IMO Res. MSC.97(73)-(2000 HSC Code). | — | IMO Res. MSC.97(73)-(2000 HSC Or, Code), | — | EN 62288 (2008).               | IEC 60945 (2002)                          | including IEC 60945 Corrigendum |  |
|          |   |                   |                                      | — | IMO Res. MSC.191(79).                    | — | IEC 60945 (2002)               | including IEC 60945 Corrigendum           |                                 |  |

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|----------|---|-------------------|--|---|---|--|
|          |   |                   |  |   |   | 1<br>(2008),<br>IEC<br>61162<br>series,<br>IEC<br>62288<br>Ed.<br>1.0<br>(2008).   |
| A.2/4.25 | Lateral thrust, pitch and mode indicators | —                 | Reg. V/18,<br>— Reg. X/3,<br>— IMO Res. MSC.36(63)-(1994 HSC Code),<br>— IMO Res. MSC.97(73)-(2000 HSC Code).<br>— | — | Reg. V/19,<br>IMO Res. A.694(17),<br>IMO Res. MSC.36(63)-(1994 HSC Code),<br>IMO Res. MSC.97(73)-(2000 HSC Code),<br>—<br>IMO Res. MSC.191(79). | EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008),<br>EN 61162 series,<br>EN 62288 (2008).<br>Or,<br>IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008),<br>IEC 61162 series,<br>IEC 62288 Ed. 1.0 (2008). |
| A.2/4.26 | Rate-of-turn indicator                    | Moved to A.1/4.9  |  |   |   |  |
| A.2/4.27 | Rudder angle indicator                    | Moved to A.1/4.20 |  |   |   |  |
| A.2/4.28 | Propeller revolution indicator            | Moved to A.1/4.21 |  |   |   |  |

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|----------|--|-------------------------|--|---|--|---|--|
| A.2/4.29 | Pitch indicator  | Moved to A.1/4.22       |  |   |  |   |  |
| A.2/4.30 | Bridge equipment system  | —                       | Reg. V/18,                               | — | Reg. V/19,                               | — | EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008), EN 61162 Series, EN 62288 (2008).            |
|          |  | —                       | Reg. X/3,                                | — | IMO Res. A.694 (17),                     | — | IEC 60945 Corrigendum 1 (2008), EN 61162 Series, EN 62288 (2008).                                      |
|          |  | —                       | IMO Res. MSC.36(63)- (1994 HSC Code) 13, | — | IMO Res. MSC.36(63)- (1994 HSC Code) 15, | — | EN 61162 Series, EN 62288 (2008).  |
|          |  | —                       | IMO Res. MSC.97(73)- (2000 HSC Code) 13. | — | IMO Res. MSC.97(73)- (2000 HSC Code) 15, | — | EN 62288 (2008).   |
|          |  |                         |  | — | IMO Res. MSC.191(79),                    | — | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61162 Series, IEC 62288 Ed. 1.0 (2008). |
|          |  |                         |  | — | IMO SN.1/ Circ.288.                      | — | IEC 61162 Series, IEC 62288 Ed. 1.0 (2008).  |
| A.2/4.31 | Bearing Device   | Moved to A.1/4.54       |  |   |  |   |  |
| A.2/4.32 | Bridge Navigational Watch Alarm System (BNWAS)                         | Moved to A.1/4.57       |  |   |  |   |  |
| A.2/4.33 | Track control system (working at ship's speed from 30 knots and above) | Deliberately left blank |  |   |  |   |  |
| A.2/4.34 | Equipment with Long  | —                       | Reg. V/19+1.                             | — | Reg. V/19+1,                             | — | EN 60945   |



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|          |   |                   |   |   |
|----------|---|-------------------|---|---|
|          | Range Identification and Tracking (LRIT) capability | —                 | IMO Res. A.694(17),<br>— IMO Res. A.813(19),<br>— IMO Res. — MSC 202(81),<br>— IMO Res. Or, MSC 241(81),<br>— IMO Res. MSC 263(84),<br>— IMO Res. MSC 1/Circ.1307.<br>— | (2002) including IEC 60945 Corrigendum 1 (2008), EN 61162 Series.<br>IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), IEC 61162 Series. |
| A.2/4.35 | Galileo Receiver                                    | Moved to A.1/4.56 |   |   |
| A.2/4.36 | AIS SART equipment                                  | Moved to A.1/4.55 |   |   |

## 5. Radiocommunication equipment

Notes applicable to section 5: Radiocommunication equipment.

- Column 5 : — IEC 61162 series refer to the following reference standards for Maritime navigation and radiocommunication equipment and systems — Digital interfaces:
- IEC 61162-1 ed4.0 (2010-11) - Part 1: Single talker and multiple listeners
  - IEC 61162-2 ed1.0 (1998-09) - Part 2: Single talker and multiple listeners, high-speed transmission
  - IEC 61162-3 ed1.1 Consol. with am1 (2010-11) - Part 3: Serial data instrument network
  - IEC 61162-3 ed1.0 (2008-05) - Part 3: Serial data instrument network
    - IEC 61162-3-am1 ed1.0 (2010-06) Amendment 1 — Part 3: Serial data instrument network
  - IEC 61162-450 ed1.0 (2011-06) - Part 450: Multiple talkers and multiple listeners — Ethernet interconnection

EN 61162 series refer to the following reference standards for Maritime navigation and radiocommunication equipment and systems — Digital interfaces:

- EN 61162-1 (2011) - Part 1: Single talker and multiple listeners

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- EN 61162-2 (1998) - Part 2: Single talker and multiple listeners, high-speed transmission
- EN 61162-3 (2008) - Part 3: Serial data instrument network
  - EN 61162-3-am1 (2010) Amendment 1 — Part 3: Serial data instrument network
- EN 61162-450 (2011) - Part 450: Multiple talkers and multiple listeners — Ethernet interconnection

| No.     | Item designation | Regulation SOLAS 74, as amended, where “type approval” is required   | Regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO, as applicable   | Testing standards   | Modules for conformity assessment |
|---------|------------------|--|---|---|-----------------------------------|
| 1       | 2                | 3  | 4   | 5   | 6                                 |
| A.2/5.1 | VHF EPIRB        | — Reg. IV/14,<br>— Reg. X/3,<br>— IMO Res. MSC.36(63)-<br>(1994 HSC Code),<br>— IMO Res. MSC.97(73)-<br>(2000 HSC Code). | — Reg. IV/8,<br>— IMO Res. A.662(16),<br>— IMO Res. A.694(17),<br>— IMO Res. A.805(19),<br>— IMO Res. MSC.36(63)-<br>(1994 HSC Code),<br>— IMO Res. MSC.97(73)-<br>(2000 HSC Code),<br>— ITU-R M.489-2<br>(10/95),<br>— ITU-R M.693<br>(06/90). | EN 60945 (2002) including IEC 60945 Corrigendum 1 (2008).<br>IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008). |                                   |

|         |                                |                       |  |                                 |  |                                 |   |
|---------|--------------------------------|-----------------------|--|---------------------------------|--|---------------------------------|---|
| A.2/5.2 | Radio reserve source of energy | —<br>—<br>—<br>—<br>— | Reg. IV/14,<br>Reg. X/3,<br>IMO Res. MSC.36(63)-(1994 HSC Code),<br>IMO Res. MSC.97(73)-(2000 HSC Code). | —<br>—<br>—<br>—<br>—<br>—<br>— | Reg. IV/13,<br>IMO Res. A.694(17),<br>IMO Res. MSC.36(63)-(1994 HSC Code),<br>IMO Res. MSC.97(73)-(2000 HSC Code),<br>IMO COMSAR Circ.16,<br>IMO COMSAR Circ.32. | —<br>—<br>—<br>—<br>—<br>—<br>— | EN<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008).<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008). |
| A.2/5.3 | Inmarsat-F SES                 | Moved to A.1/5.19.    |  |                                 |  |                                 |   |
| A.2/5.4 | Distress panel                 | —<br>—<br>—<br>—<br>— | Reg. IV/14,<br>Reg. X/3,<br>IMO Res. MSC.36(63)-(1994 HSC Code),<br>IMO Res. MSC.97(73)-(2000 HSC Code). | —<br>—<br>—<br>—<br>—<br>—<br>— | Reg. IV/6,<br>IMO Res. A.694(17),<br>IMO Res. MSC.36(63)-(1994 HSC Code),<br>IMO Res. MSC.97(73)-(2000 HSC Code),<br>IMO MSC/ Circ. 862,<br>IMO COMSAR Circ.32.  | —<br>—<br>—<br>—<br>—<br>—<br>— | EN<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008).<br>IEC<br>60945<br>(2002)<br>including<br>IEC<br>60945<br>Corrigendum<br>1<br>(2008). |
| A.2/5.5 | Distress alarm or alert panel  | —                     | Reg. IV/14,  | —                               | Reg. IV/6,   | —                               | EN<br>60945<br>(2002)   |

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|------------------------|--------------------------------|-------------------------|--------------------------------------|-----|--------------------------------------|--|--|
|                        |                                | —                       | Reg. X/3,                            | —   | IMO Res. A.694(17),                  | including IEC 60945  |  |
|                        |                                | —                       | IMO Res. MSC.36(63)-(1994 HSC Code), | —   | IMO Res. MSC.36(63)-(1994 HSC Code), | Corrigendum 1 (2008).                                      |  |
|                        |                                | —                       | IMO Res. MSC.97(73)-(2000 HSC Code). | —   | IMO Res. MSC.97(73)-(2000 HSC Code), | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008). |  |
|                        |                                |                         |                                      | —   | IMO MSC/Circ.862,                    |  |  |
|                        |                                |                         |                                      | —   | IMO COMSAR Circ.32.                  |  |  |
| A.2/5.6                | L- band EPIRB (INMARSAT)       | Deliberately left blank |                                      |     |                                      |  |  |
| A.2/5.7                | Ship security alert system     | —                       | Reg. XI-2/6,                         | —   | EN 60945 (2002)                      |  |  |
|                        |                                | —                       | IMO Res. A.694(17),                  | —   | including IEC 60945                  |  |  |
|                        |                                | —                       | IMO Res. MSC.147(77),                | —   | Corrigendum 1 (2008),                |  |  |
|                        |                                | —                       | IMO MSC/Circ.1072.                   | —   | EN 61162 Series.                     |  |  |
|                        |                                |                         |                                      | Or, |                                      |  |  |
|                        |                                |                         |                                      | —   | IEC 60945 (2002)                     |  |  |
|                        |                                |                         |                                      |     | including IEC 60945                  |  |  |
|                        |                                |                         |                                      |     | Corrigendum 1 (2008),                |  |  |
|                        |                                |                         |                                      | —   | IEC 61162 Series.                    |  |  |
| A.2/5.8<br>Ex A.1/5.16 | Aeronautical two way VHF radio | —                       | Reg. IV/14,                          | —   | Reg. IV/7,                           | EN 60945 (2002)  |  |

|                     |   |  |   |   |  |
|---------------------|---|--|---|---|--|
| telephone apparatus | — | Reg. X/3,                                | — | IMO Res. A.694(17),                             | including IEC 60945  |
|                     | — | IMO Res. MSC.36(63)- (1994 HSC Code) 14, | — | IMO Res. MSC.36(63)- (1994 HSC Code) 14,        | Corrigendum 1 (2008). ETSI EN 301 688 V1.1.1 (2000-07).                                      |
|                     | — | IMO Res. MSC.97(73)- (2000 HSC Code) 14. | — | IMO Res. MSC.97(73)- (2000 HSC Code) 14,        | IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008). ETSI EN 301 688 V1.1.1 (2000-07). |
|                     | — |  | — | IMO Res. MSC.80(70),                            | IEC 60945 Corrigendum 1 (2008).  |
|                     | — |  | — | IMO COMSAR Circ.32,                             | IEC 60945 Corrigendum 1 (2008). ETSI EN 301 688 V1.1.1 (2000-07).                            |
|                     | — |  | — | ICAO Convention, Annex 10, Radio - Regulations. | EN 301 688 V1.1.1 (2000-07).   |

## 6. Equipment required under COLREG 72

| No.     | Item designation        | Regulation COLREG 72 where “type approval” is required | Regulations of COLREG and the relevant resolutions and circulars of the IMO, as applicable | Testing standards | Modules for conformity assessment |
|---------|-------------------------|--|--|-------------------|-----------------------------------|
| 1       | 2                       | 3  | 4  | 5                 | 6                                 |
| A.2/6.1 | Navigation lights       | Moved to A.1/6.1.                                      |  |                   |                                   |
| A.2/6.2 | Sound signal appliances | —  | COLREG 72  | COLREG 72         | EN 60945 (2002)                   |

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|  |  |              |   |                                  |   |
|--|--|--------------|---|----------------------------------|---|
|  |  | Annex III/3. | — | Annex III/3, IMO Res. A.694(17). | including IEC 60945 Corrigendum 1 (2008), Whistles — COLREG 72 Annex III/1 (Performance), Bells or Gongs — COLREG 72 Annex III/2 (Performance).<br>Or, IEC 60945 (2002) including IEC 60945 Corrigendum 1 (2008), Whistles — COLREG 72 Annex III/1 (Performance), Bells or Gongs — COLREG 72 Annex III/2 (Performance). |
|--|--|--------------|---|----------------------------------|---|

7. Bulk carrier safety equipment

| No. | Item designation | Regulation SOLAS 74, as amended, where | Regulations of SOLAS 74, as amended, and the | Testing standards | Modules for conformity assessment |
|-----|------------------|--|--|-------------------|-----------------------------------|
|-----|------------------|--|--|-------------------|-----------------------------------|

| 1       | 2                                      | 3  | 4  | 5                      | 6 |  |
|---------|--|--|--|------------------------|---|--|
| A.2/7.1 | Loading instrument                     | — Reg. XII/11, 1997 SOLAS Conference Res. 5. | — Reg. XII/11, 1997 SOLAS Conference Res. 5. | — IMO MSC.1/Circ.1229. |   |  |
| A.2/7.2 | Water level detectors on bulk carriers | Item deleted                                 |  |                        |   |  |

#### 8. SOLAS Chapter II-1 equipment

| No.     | Item designation   | Regulation SOLAS 74, as amended, where “type approval” is required | Regulations of SOLAS 74, as amended, and the relevant resolutions and circulars of the IMO, as applicable | Testing standards | Modules for conformity assessment |
|---------|--|--|---|-------------------|-----------------------------------|
| 1       | 2  | 3  | 4   | 5                 | 6                                 |
| A.2/8.1 | Cold-weather starting of generator sets (starting devices) | — Reg. II-1/44, — Reg. X/3.  | — Reg. II-1/44, — IMO Res. MSC.36(63)-(1994 HSC Code) 12, — IMO Res. MSC.97(73)-(2000 HSC                 |                   |                                   |

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|  |  |  | 12.   |  |



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- (1) OJ L 312, 10.11.2012, p. 1.
- (2) OJ L 304, 14.11.2013, p. 1.