



# COMPENDIUM OF INDIAN STANDARDS ON LIFE SAVING EQUIPMENT FOR SEA GOING SHIPS



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## **Introduction**

The Indian Standards on Life Saving Equipment for sea-going ships play a crucial role in ensuring the safety and survival of crew and passengers during maritime emergencies.

These standards (**available at Know Your Standards**), developed by the Bureau of Indian Standards (BIS), align with international conventions like SOLAS (Safety of Life at Sea) and provide detailed specifications for the design, construction, performance, and maintenance of essential safety equipment such as lifeboats, life jackets, life rafts, distress signals, etc.

By adhering to these standards, shipbuilders and operators enhance the reliability and effectiveness of life-saving appliances, reducing the risk of fatalities at sea. Furthermore, these regulations promote uniformity and help India to safer maritime operations.

### **List of Indian Standards covered in the Compendium**

<b>Product Standards related to Life Saving Equipment for Sea going Ships</b>			
<b>Sl. No.</b>	<b>Indian Standard</b>	<b>Title</b>	<b>Pg. No.</b>
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## **Standards related to Life Saving Equipment for Sea going Ships**

### **1. IS 14270 (Part 1, 2, 3, 4, 5, & 8) Shipbuilding Pyrotechnic Distress Signals for Ships**

Pyrotechnic Distress Signals for Ships are essential safety equipment used in maritime emergencies to attract attention and signal distress. These are used to alert search and rescue teams during maritime emergencies like collision, grounding, or abandonment and also vital for enhancing survival chances in both day and night conditions.

#### **a) IS 14270 (Part 1): Shipbuilding pyrotechnic distress signals for ships: Part 1 general requirements**

This specification covers the general requirements for pyrotechnic signals used for ships, lifeboats and life rafts at the time of distress. Its function conforms to the signal equipment standard for the seagoing vessels, SOLAS Convention (1974) and Entertainment regulations for Preventing Collisions at sea (1972).

#### **b) IS 14270 (Part 2): Shipbuilding - Pyrotechnic distress signals for ships: Part 2 red flare parachute signal - Specification**

This standard (Part 2) covers sizes, materials and tests for red flare parachute signals for use in ships, lifeboats and liferafts, when they are in distress or need help.

#### **c) IS 14270 (Part 3): Shipbuilding - Pyrotechnic distress signals for ships: Part 3 red star rocket signal - Specification**

This specification (Part 3) specifies sizes, materials and tests for red star rocket signals for use in ships when they are in distress and need help, by the rescue stations or Marine emergency service units to guide those in distress ships, distress boats and rafts to land.

#### **d) IS 14270 (Part 4): Shipbuilding - Pyrotechnic distress signals for ships: Part 4 white flare signal - Specification**

This standard (Part 4) specifies sizes, material and tests for white flare signal for communications among the Rescue station. Marine rescue units and distress ships and people or for avoiding collision of ships.

#### **e) IS 14270 (Part 5): Shipbuilding - Pyrotechnic distress signals for ships: Part 5 white flare parachute signal - Specification**

This specification (Part 5) specifies sizes, materials and tests for white flare parachute signals for use in ships communication among the rescue station, Marine emergency help units and distress ships and people or for illumination required for search and rescue operations.

#### **f) IS 14270 (Part 8): Shipbuilding - Pyrotechnic distress signals for ships: Part 8 orange smoke signal - Specification**

This standard (Part 8) specifies sizes, material and tests for orange smoke signals, when the ships lifeboats and liferafts are in distress and need help or when the rescue station and Marine help units guide the distress ships to shore.

### **2. IS 3580: General Requirements for Distress Signals for Lifeboats and Liferafts**

The technical specification covers the general requirements for distress signals for lifeboats and liferafts. The requirements of the red hand flare smoke of rocket and red star mentioned in the standard.

### **3. IS 3732: Rigid liferafts - Specification**

This standard specifies the constructional requirements, equipment and tests for rigid liferafts. This standard covers the constructional requirements, minimum carrying capacity and mass of rigid liferafts, davit launched rigid liferafts, fitting, equipment etc.

### **4. IS 5326: Life - Buoys - Specification**

This standard covers the requirements of life-buoys for use onboard ships and other floating crafts. The construction, materials and dimensions covered in the standards. Self-igniting light lifebuoys are also covered under the same specification.

### **5. IS 6685: Life jackets**

This standard specifies the materials performance, safety requirements and test of life jackets for use by adults and children.

### **6. IS 5314: Specification for graduated drinking vessels for lifeboats and liferafts for sea - Going ships**

This standard specifies the material, dimensions and other requirements for graduated drinking vessels for lifeboats and liferafts for sea-going ships.

### **7. IS 12264: Signaling Mirror for Lifeboats and Liferafts for Sea-going Ships**

Specifies material, dimensions, general requirements and testing of signalling mirrors used for light signalling on lifeboats and liferafts for sea-going vessels.

### **8. IS 11608: Specification for signalling whistle for life saving appliances for sea - Going ships**

This standard specifies material, dimensions, general requirements and testing of signalling whistles for life saving appliances for sea-going ships. The method of testing is also covered under the mentioned specification.

### **9. IS 4551: Specification for lifeboat crutches**

This standard specifies the method of manufacture, material and dimensions of crutches. The number of crutches requirements based on the length of the lifeboats is also provided in the specification.

### **10. IS 11641: General requirements and testing of marine inflatable liferafts**

This standard gives the general requirements, equipment to be carried and tests for marine inflatable liferafts. This standard also covers the inflatable liferafts types:

- a) Types for use by jettisoning;
- b) Types for use with launching appliances

### **11. IS 3586: Recommendation for lifeboats equipment**

This standard lays down recommendations for lifeboats equipment which every lifeboat, onboard a merchant navy ship, shall carry at all times. This standard also lays down recommendations for the method of securing lifeboat equipment.

#### **12. IS 4602: General requirements and testing of lifeboats for less than one hundred persons**

This standard gives the general requirements and tests for lifeboats with carrying capacity less than 100 persons. The tests covered under the specification are test afloat with Full Load & Operational test.

#### **13. IS 5385: Lifeboat accessories - Specification**

This standard lays down specifications for lifeboat accessories, such as lifeboat plugs, rudder fastening arrangement, mast, mast step and sails.

#### **14. IS 9067: Ships and Marine Technology - Launching Appliances for Davit - Launched Lifeboats**

This Standard specifies the requirements of performances, design, construction, safety, maintenance and test of launching appliances for davit-launched lifeboats.

This Standard is applicable to launching appliances for davit-launched lifeboats as well as launching appliances for davit-launched rescue boats on every kind of sea-going ship, including launching appliances for fast rescue boats on ro-ro passenger ships, but is not applicable to launching appliances for free-fall lifeboats. This Standard is also a reference for similar appliances on inland ships.

#### **15. IS 5386: Specification General Purpose Ship's Davit**

This standard specifies the constructional, dimension, materials requirements for light duty davits fitted ships, for general use. The required test and testing method is also covered in the same standards.

#### **16. IS 3947: Shipbuilding - Testing, installation and maintenance of marine portable fire appliances - Code of practice**

This Indian Standard lays down the requirements in respect of installation, maintenance and testing of portable firefighting appliances used onboard ships. This standard covers the requirements of Fire Buckets, Fire Extinguishers, Fireman's Axe, Safety Lamp, Breathing Apparatus, Smoke Mask and Smoke Helmet and Portable Electric Drilling Machine requirements on ship.

#### **17. IS 17564: Ships and Marine Technology- Fire-Extinguishing Systems for Protection of Galley Cooking Equipment**

This Standard applies to the design, testing, and operation of pre-engineered fire extinguishing systems to protect the galley hoods, ducts, fryers and other grease-laden appliances.

Pre-engineered fire-extinguishing system units are also required to comply with requirements for the construction and components performance as applicable to specific types, designs, sizes and arrangements. This Standard also provides minimum requirements for the testing and evaluation of components.

#### **18. IS 17536 (Part 1,2,3,4 & 5): Ships and Marine Technology - Servicing of Inflatable Life-saving Appliances**

Servicing of Life-Saving Appliances (LSAs) onboard Ships is a critical part of ensuring maritime safety and compliance with international regulations. These appliances must be regularly inspected, maintained, and serviced by qualified personnel to ensure readiness during emergencies.

**a) IS 17536 (Part 1): Ships and Marine Technology - Servicing of inflatable life-saving appliances - Part 1: General**

This standard, in conjunction with IS 17536 (Part 2), IS 17536 (Part 3), IS 17536 (Part 4) and IS 17536 (Part 5), states general provisions for servicing stations for inflatable life-saving appliances.

**b) IS 17536 (Part 2): Ships and Marine Technology - Servicing of inflatable life-saving appliances -- Part 2: Inflatable life rafts**

This standard, in conjunction with IS 17536 (Part 1), provides provisions for servicing stations servicing inflatable life rafts referred to in SOLAS III/20.8. This specification is applicable to non-SOLAS inflatable life rafts, as appropriate.

**c) IS 17536 (Part 3): Ships and marine technology - Servicing of inflatable life-saving appliances - Part 3: Inflatable lifejackets**

This standard, in conjunction with IS 17536 (Part 1), provides provisions for servicing stations conducting servicing of inflatable lifejackets, including, but not limited to, those subject to SOLAS III/20.8.

**d) IS 17536 (Part 4): Ships and marine technology- Servicing of inflatable life-saving appliances - Part 4: Marine evacuation systems**

This standard, in conjunction with IS 17536 (Part 1), provides provisions for servicing stations for marine evacuation systems referred to in SOLAS III (20.8). This specification is applicable to non-SOLAS marine evacuation systems, as appropriate.

**e) IS 17536 (Part 5): Ships and marine technology - Servicing of inflatable life-saving appliances - Part 5: Inflated rescue boats**

This standard, in conjunction with IS 17536 (Part 1), provides provisions for servicing stations servicing inflated rescue boats referred to in SOLAS III/20.8. This specification is applicable to non-SOLAS inflated rescue boats, as appropriate.

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