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Technical regulation on the  
construction and equipment, etc. of  
passenger ships on domestic voyages

## CHAPTER II - 1 C

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## CHAPTER II - 1 C

### Construction – subdivision and stability, machinery and electrical installations

#### Part C Machinery

#### Regulation 1 General (R 26)

##### NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- .1 The machinery, boilers and other pressure vessels, associated piping systems and fittings shall be so installed and protected as to reduce to a minimum any danger to persons on board, due regard being paid to moving parts, hot surfaces and other hazards.
- .2 Means shall be provided whereby normal operation of propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative.
- .3 Means shall be provided to ensure that the machinery can be brought into operation from the dead ship condition without external aid.

##### NEW CLASS B AND C SHIPS:

- .4 Main propulsion machinery and all auxiliary machinery essential to the propulsion and the safety of the ship shall, as fitted in the ship, be designed to operate when the ship is upright and when inclined at any angle of list up to and including 15° either way under static conditions and 22.5° under dynamic conditions (rolling) either way and simultaneously inclined dynamically (pitching) 7.5° by bow or stern.

##### NEW CLASS A, B, C AND D SHIPS AND EXISTING CLASS B SHIPS:

- .5 Means shall be provided for the propulsion machinery and the propeller to be stopped in cases of emergencies from relevant positions outside of the engine room/engine control room, e.g. open deck or the wheel house.

##### CLASS B, C AND D SHIPS, CONSTRUCTED ON OR AFTER 1 JULY 2002:

- .6 Location and arrangement of vent pipes for fuel oil service, settling and lubricating oil tanks shall be such that in the event of a broken vent pipe this shall not directly lead to the risk of ingress of seawater splashes or rainwater. Two fuel oil service tanks for each type of fuel used on board necessary for propulsion and vital systems or equivalent arrangements shall be provided on new ship, with a capacity of at least 8 hours for class B ships and at least 4 hours for class C and D ships, at maximum continuous rating of the propulsion plant and normal operating load at sea of the generator plant.

**Regulation 2 Internal combustion engines (R 27)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- .1 Internal combustion engines of a cylinder diameter of 200 mm, or a crankcase volume of 0.6 m<sup>3</sup> and above shall be provided with crankcase explosion relief valves of a suitable type with sufficient relief area. The relief valves shall be arranged or provided with means to ensure that discharge from them is so directed as to minimise the possibility of injury to personnel.

**Regulation 3 Bilge pumping arrangement (R 21)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- .1.1 An efficient bilge pumping system shall be provided, capable of pumping from and draining any watertight compartment other than a space permanently appropriated for the carriage of fresh water, water ballast, oil fuel or liquid cargo and for which other efficient means of pumping are provided, under all practical conditions. Efficient means shall be provided for draining water from insulated holds.
- .1.2 Sanitary, ballast and general service pumps may be accepted as independent power bilge pumps if fitted with the necessary connections to the bilge pumping system.
- .1.3 All bilge pipes used in or under fuel storage tanks or in boiler or machinery spaces, including spaces in which oil-settling tanks or oil fuel pumping units are situated, shall be of steel or other suitable material.
- .1.4 The arrangement of the bilge and ballast pumping system shall be such as to prevent the possibility of water passing from the sea and from water ballast spaces into the cargo and machinery spaces, or from one compartment to another. Provision shall be made to prevent any deep tank having bilge and ballast connections being inadvertently flooded from the sea when containing cargo, or being discharged through a bilge pump when containing water ballast.
- .1.5 All distribution boxes and manually operated valves in connection with the bilge pumping arrangements shall be in positions which are accessible under ordinary circumstances.

NEW CLASS B, C AND D SHIPS:

- .1.6 Provision shall be made for the drainage of enclosed cargo spaces situated on the bulkhead deck.
  - .1 Where the freeboard to the bulkhead deck is such that the deck edge is immersed when the ship heels more than 5°, the drainage shall be by means of a sufficient number of scuppers of suitable size discharging directly overboard, fitted in accordance with the requirements of regulation 15.
  - .2 Where the freeboard is such that the edge of the bulkhead deck is immersed when the ship heels 5° or less, the drainage of the enclosed cargo spaces on the bulkhead deck shall be led to a suitable space, or spaces, of adequate capacity, having high water level alarm and provided with suitable arrangements for discharge overboard. In addition it will be ensured that:

- .1 the number, size and disposition of the scuppers are such as to prevent unreasonable accumulation of free water;
- .2 the pumping arrangements required by this regulation take account of the requirements for any fixed pressure water spraying fire-extinguishing system;
- .3 water contaminated with petrol or other dangerous substances is not drained to machinery spaces or other spaces where sources of ignition may be present; and
- .4 where the enclosed cargo space is protected by a CO<sub>2</sub> fire-extinguishing system the deck scuppers are fitted with means to prevent the escape of the smothering gas.

NEW CLASS A, B, C AND D SHIPS:

- .3 *The drainage from car decks/ro-ro decks shall be of sufficient capacity that two-thirds of the number of scuppers, wash ports etc. on the starboard and the port side shall be able to cope with a quantity of water originating from drencher and fire pumps, taking into account the ship's list and trim fore and aft. A head of water above scuppers and the like in the side of a maximum of 100 mm shall be accepted.*  
*Scuppers in the car deck shall be fitted with a removable grating with "vertical" ribs above the drain capable of preventing large items from fouling the drain. This shall, however, not apply to redundant scuppers.*  
*The grating may be vertical against the ship's side. The grating shall have a height of at least 1 metre above the deck and shall have a free flow area of at least 0.4 m<sup>2</sup>; the distance between the individual bars in the grating may not be more than 25 mm.*
- .4 When provided with sprinkler installations and hydrants, passenger and crew lounges shall have an adequate number of scuppers, sufficient to cope with the quantity of water originating from fire extinguishing by the room's sprinkler heads and from two fire hoses with jets. The scuppers shall be located in the most effective positions, e.g. in each corner.

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- .2.1 The bilge pumping system required by paragraph .1.1 shall be capable of operation under all practicable conditions after a casualty whether the ship is upright or listed. For this purpose wing suctions shall generally be fitted except in narrow compartments at the end of the ship where one suction may be sufficient. In compartments of unusual form, additional suctions may be required. Arrangements shall be made whereby water in the compartment may find its way to the suction pipes.
- .2.2 Where practicable, the power bilge pumps shall be placed in separate watertight compartments and so arranged or situated that these compartments will not be flooded by the same damage. If the main propulsion machinery, auxiliary machinery and boilers are in two or more watertight compartments, the pumps available for bilge service shall be distributed as far as is possible throughout these compartments.
- .2.3 With the exception of additional pumps which may be provided for peak compartments only, each required bilge

pump shall be so arranged as to draw water from any space required to be drained by paragraph .1.1.

- .2.4 Each power bilge pump shall be capable of pumping water through the required main bilge pipe at a speed of not less than 2 m/sec. Independent power bilge pumps situated in machinery spaces shall have direct suctions from these spaces, except that not more than two such suctions shall be required in any one space. Where two or more such suctions are provided there shall be at least one on each side of the ship. Direct suctions shall be suitably arranged and those in a machinery space shall be of a diameter not less than that required for the bilge main.
- .2.5 In addition to the direct bilge suction or suctions required by paragraph .2.4 a direct emergency bilge suction fitted with a non-return valve shall be led from the largest available independent power driven pump to the drainage level of the machinery space; the suction shall be of the same diameter as the main inlet to the pumps used.
- .2.6 The spindles of the sea inlet and direct suction valves shall extend well above the engine-room platform.
- .2.7 All bilge suction piping up to the connection to the pumps shall be independent of other piping.
- .2.8 The diameter “d” of the main and branch bilge suction pipes shall be calculated according to the following formulae. However, the actual internal diameter may be rounded off to the nearest standard size acceptable to the Administration of the flag State:

main bilge suction pipe:

$$d = 25 + 1.68 \sqrt{L(B + D)}$$

branch bilge suction pipes between collecting boxes and suctions:

$$D = 25 + 2.15 \sqrt{L_1(B + D)}$$

where:

d is the internal diameter of the bilge main (millimetres),

L and B are the length and the breadth of the ship (metres),

L<sub>1</sub> is the length of the compartment, and

D is the moulded depth of the ship to bulkhead deck (metres) provided that, in a ship having an enclosed cargo space on the bulkhead deck which is internally drained in accordance with the requirements of paragraph 1.6.2 and which extends for the full length of the ship, D shall be measured to the next deck above the bulkhead deck. Where the enclosed cargo spaces cover a lesser length, D shall be taken as the moulded depth to the bulkhead deck plus Ih/L where I and h are the aggregate length and height respectively of the enclosed cargo spaces.

- .2.9 Provision shall be made to prevent the compartment served by any bilge suction pipe being flooded in the event of the pipe being severed or otherwise damaged by collision or grounding in any other compartment. For this purpose, where the pipe is at any part situated nearer the side of the ship than one fifth of the breadth of the ship (measured at right angles to the centreline at the level of the deepest subdivision load line), or is in a duct keel, a non-return valve shall be fitted to the pipe in the compartment containing the open end.

- .2.10 Distribution boxes, cocks and valves in connection with the bilge pumping system shall be so arranged that, in the event of flooding, one of the bilge pumps may be operative on any compartment; in addition, damage to a pump or its pipe connecting to the bilge main outboard of a line drawn at one fifth of the breadth of the ship shall not put the bilge system out of action. If there is only one system of pipes common to all the pumps, the necessary valves for controlling the bilge suction must be capable of being operated from above the bulkhead deck. Where in addition to the main bilge pumping system an emergency bilge pumping system is provided, it shall be independent of the main system and so arranged that a pump is capable of operating on any compartment under flooding condition as specified in paragraph .2.1; in the case only the valves necessary for the operation of the emergency system need be capable of being operated from above the bulkhead deck.
- .2.11 All cocks and valves referred to in paragraph .2.10 which can be operated from above the bulkhead deck shall have their controls at their place of operation clearly marked and shall be provided with means to indicate whether they are open or closed.

**Regulation 4 Number and type of bilge pumps (R 21)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- Up to 250 passengers: one main engine pump and one independent power pump, located and powered outside the engine room.
- Over 250 passengers: one main engine pump and two independent power pumps, one of which has to be located and powered outside the engine room.

The main engine pump may be replaced by one independent power pump. The drainage of very small compartments may be dealt with movable hand pumps.

**Regulation 5 Means of going astern (R 28)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- .1 Sufficient power for going astern shall be provided to secure proper control of the ship in all normal circumstances.
- .2 The ability of the machinery to reverse the direction of thrust of the propeller in sufficient time, and so to bring the ship to rest within a reasonable distance from maximum ahead service speed, shall be demonstrated and recorded.
- .3 The stopping times, ship headings and distances recorded on trials, together with the results of trials to determine the ability of ships having multiple propellers to navigate and manoeuvre with one or more propellers inoperative, shall be available on board for use of the master or designated personnel.

**Regulation 6 Steering gear (R 29)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- .1 Every ship shall be provided with an efficient main and auxiliary steering system. The main steering system and the auxiliary steering system shall be so arranged that the failure of one of them will not render the other one inoperative.
- .2 The main steering gear and rudder stock where fitted shall be:
  - .1 of adequate strength, and capable to steer the ship at maximum service speed ahead, and so designed that they will not be damaged at maximum speed astern;
  - .2 capable of putting the rudder over from 35° on one side to 35° on the other side with the ship at its deepest seagoing draught and running ahead at maximum ahead service speed and, under the same conditions from 35° on either side to 30° on the other side in not more than 28 seconds;
  - .3 operated by power where necessary to meet the requirements of paragraph .2.2.2 and in any case when a rudder stock over 120 mm in diameter in way of the tiller, excluding strengthening for navigation in ice, is required in order to comply with paragraph .2.2.1.
- .3 If fitted, the auxiliary steering gear shall be:
  - .1 of adequate strength and capable of steering the ship at navigable speed and of being brought speedily into action in an emergency;
  - .2 capable of putting the rudder over from 15° on one side to 15° on the other side in not more than 60 seconds with the ship at its deepest seagoing draught and running ahead at one half of the maximum ahead service speed or 7 knots, whichever is the greater; and
  - .3 operated by power where necessary to meet the requirements of paragraph .3.2 and in any case where a rudder stock is more than 230 mm in diameter in way of the tiller, excluding strengthening for navigation in ice.

NEW CLASS B, C AND D SHIPS:

- .4 Steering power units shall be:
  - .1 arranged to restart automatically when power is restored after a power failure; and
  - .2 capable of being brought into operation from a position on the navigating bridge. In the event of a power failure to any of the steering power units, an audible and visual alarm shall be given on the navigating bridge.

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- .5 Where the main steering gear comprises two or more identical power units, an auxiliary steering gear need not be fitted, provided that:
  - .1 the main steering gear is capable of operating the rudder as required by paragraph .2.2 while any one of the power unit is out of operation;
  - .2 the main steering gear is so arranged that after a single failure in its piping system or in one of the power units

the defect can be isolated so that the steering capability can be maintained or speedily regained.

NEW CLASS B, C AND D SHIPS:

- .6 Steering gear control shall be provided:
  - .1 for the main steering gear, both on the navigating bridge and in the steering compartment;
  - .2 when the main steering gear is arranged in accordance with paragraph .4, by two independent control systems, both operable from the navigating bridge. This does not require duplication of the steering wheel or steering lever. Where the control system consists of a hydraulic telemotor, a second independent system need not be fitted;
  - .3 for the auxiliary steering gear, in the steering gear compartment and, if power operated, it shall also be operable from the navigating bridge and shall be independent of the control system for the main steering gear.
- .7 Any main and auxiliary steering gear control system operable from the navigating bridge shall comply with the following:
  - .1 if electric, it shall be served by its own separate circuit supplied from a steering gear power circuit from a point within the steering gear compartment, or directly from switchboard busbars supplying that steering gear power circuit at a point on the switchboard adjacent to the supply to the steering gear power circuit;
  - .2 means shall be provided in the steering gear compartment for disconnecting any control system operable from the navigating bridge from the steering gear it serves;
  - .3 the system shall be capable of being brought into operation from a position on the navigating bridge;
  - .4 in the event of a failure in the electrical power supply to the control system, an audible and visual alarm shall be given in the navigating bridge; and
  - .5 short circuit protection only shall be provided for steering gear control supply circuits.
- .8 The electrical power circuits and the steering gear control systems with their associated components, cables and pipes required by this regulation and by regulation 7 shall be separated as far as is practicable throughout their length.
- .9 A means of communication shall be provided between the navigating bridge and the steering gear compartment or alternative steering position.
- .10 The angular position of the rudder(s) shall:
  - .1 if the main steering gear is power operated, be indicated on the navigating bridge. The rudder angle indication shall be independent of the steering gear control system;
  - .2 be recognisable in the steering gear compartment.
- .11 Hydraulic power-operated steering gear shall be provided with the following:
  - .1 arrangements to maintain the cleanliness of the hydraulic fluid taking into consideration the type and design of the hydraulic system;

- .2 a low-level alarm for each hydraulic fluid reservoir to give the earliest practical indication of hydraulic fluid leakage. Audible and visual alarms shall be given on the navigating bridge and in the machinery space where they can be readily observed; and
  - .3 a fixed storage tank having sufficient capacity to recharge at least one power actuating system including the reservoir, where the main steering gear is required to be power-operated. The storage tank shall be permanently connected by piping in such manner that the hydraulic systems can be readily recharged from a position within the steering gear compartment and shall be provided with a contents gauge.
- .12 The steering gear compartments shall be:
- .1 readily accessible and, as far as practicable, separated from machinery spaces; and
  - .2 provided with suitable arrangements to ensure working access to steering gear machinery and controls. These arrangements shall include handrails and gratings or other nonslip surfaces to ensure suitable working conditions in the event of hydraulic fluid leakage.

**Regulation 7      Additional requirements for electric and electro-hydraulic steering gear (R 30)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- .1 Means for indicating that the motors of electric and electro-hydraulic steering gears are running shall be installed on the navigating bridge and at a suitable main machinery control position.

NEW CLASS B, C AND D SHIPS:

- .2 Each electric or electro-hydraulic steering system comprising one or more power units shall be served by at least two exclusive circuits fed directly from the main switchboard; however, one of the circuits may be supplied through the emergency switchboard. An auxiliary electric or electro-hydraulic steering system associated with a main electric or electro-hydraulic steering system may be connected to one of the circuits supplying this main steering system. The circuits supplying an electric or electro-hydraulic steering system shall have adequate rating for supplying all motors which can be simultaneously connected to them and may be required to operate simultaneously.

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

- .3 Short circuit protection and an overload alarm shall be provided for steering gear electric and electro-hydraulic circuits and motors. Protection against excess current, including starting current, if provided, shall be for not less than twice the full load current of the motor or circuit so protected, and shall be arranged to permit the passage of the appropriate starting currents.

NEW CLASS B, C AND D SHIPS:

The alarms required in this paragraph shall be both audible and visual and shall be situated in a conspicuous position in the main machinery space or control room from which the

main machinery is normally controlled and as may be required by regulation 6 of Part E of this chapter.

- .4 When an auxiliary steering gear required by regulation 6.3.3 to be operated by power is not electrically powered or is powered by an electric motor primarily intended for other services, the main steering system may be fed by one circuit from the main switchboard. Where such an electric motor primarily intended for other services is arranged to power such an auxiliary steering system, the requirements of paragraph .3 may be waived by the Administration of the flag State, if satisfied with the protection arrangement together with the requirements of regulation 6.4.1 and .4.2 applicable to auxiliary steering systems.

**Regulation 8 Ventilating systems in machinery spaces (R 35)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

Machinery spaces of category A shall be adequately ventilated so as to ensure that when machinery or boilers therein are operating at full power in all weather conditions including heavy weather, an adequate supply of air is maintained to the spaces for the safety and comfort of personnel and the operation of the machinery.

**Regulation 9 Communication between the navigating bridge and machinery space (R 37)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

At least two independent means of communication shall be provided for communication orders from the navigating bridge to the position in the machinery space or in the control room from which the speed and direction of thrust of the propellers are normally controlled: one of these shall be an engine-room telegraph which provides visual indication of the orders and responses both in the machinery space and on the navigating bridge. Appropriate means of communication shall be provided to any other position from which the speed or direction of thrust of the propellers may be controlled.

**Regulation 10 Engineers' alarm (R 38)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

An engineers' alarm shall be provided to be operated from the engine control room or at a manoeuvring platform as appropriate, and shall be clearly audible in the engineers' accommodation, and/or navigating bridge as appropriate.

**Regulation 11 Location of emergency installations (R 39)**

NEW CLASS B, C AND D AND EXISTING CLASS B SHIPS:

Emergency sources of electrical power, fire pumps, bilge pumps except those specifically serving the spaces forward of the collision bulkhead, and fixed fire-extinguishing system required by Chapter II-2 and other emergency installations which are essential for the safety of the ship, except anchor windlasses, shall not be installed forward of the collision bulkhead.

**Regulation 12 Machinery controls (R 31)**

NEW CLASS B, C AND D SHIPS:

- .1 Main and auxiliary machinery essential for the propulsion, control and safety of the ship shall be provided with effective means for its operation and control. All control systems essential for the propulsion, control and safety of the ship shall be independent systems or be designed such that a failure of one system does not degrade the performance of another system.
- .2 Where remote control of propulsion machinery from the navigating bridge is provided, the following shall apply:
  - .1 the speed, direction of thrust and, if applicable, the pitch of the propeller shall be fully controllable from the navigating bridge under all sailing conditions, including manoeuvring;
  - .2 the remote control shall be performed by a single control device for each independent propeller with automatic performance of all associated functions including, where necessary, means of preventing overload of the propulsion machinery. Where multiple propellers are designed to operate simultaneously, they may be controlled by one control device.
  - .3 the main propulsion machinery shall be provided with an emergency stopping device on the navigating bridge which shall be independent of the navigating bridge control system;
  - .4 propulsion machinery orders from the navigation bridge shall be indicated in the main machinery control room and at the manoeuvring platform;
  - .5 remote control of the propulsion machinery shall be possible only from one location at a time; at such locations interconnected control positions are permitted. At each location there shall be an indicator showing which location is in control of the propulsion machinery. The transfer of control between the navigating bridge and machinery spaces shall be possible only in the main machinery space or the main machinery control room. This system shall include means to prevent the propelling thrust from altering significantly when transferring control from one location to another;
  - .6 it shall be possible to control the propulsion machinery locally, even in the case of failure in any part of the remote control system. It shall be possible to control the auxiliary machinery essential for the propulsion and safety of the ship at or near the machinery concerned;
  - .7 the design of the remote control system shall be such that in case of its failure an alarm will be given. The pre-set speed and direction of thrust of the propellers shall be maintained until local control is in operation;
  - .8 indicators shall be fitted in the navigation bridge, the main machinery control room and at the manoeuvring platform for:
    - .1 propeller speed and direction of rotation in the case of fixed pitch propellers;

- .2 propeller speed and pitch position in the case of controllable pitch propellers;
- .9 an alarm shall be provided on the navigating bridge and in the machinery space to indicate low starting air pressure which shall be set at a level to permit further main engine starting operations. If the remote control system of the propulsion machinery is designed for automatic starting, the number of automatic consecutive attempts which fail to produce a start shall be limited in order to safeguard sufficient starting air pressure for starting locally.
- .3 Where the main propulsion and associated machinery, including sources of main electrical power supply, are provided with various degrees of automatic and remote control and are under continuous manual supervision from a control room the arrangements and controls shall be so designed, equipped and installed that the machinery operation will be as safe and effective as if it were under direct supervision; for this purpose regulations II-1/E/1 to II-1/E/5 shall apply as appropriate. Particular consideration shall be given to protect such spaces against fire and flooding.
- .4 In general, automatic starting, operational and control systems shall include provisions for manually overriding the automatic controls. Failure of any part of such systems shall not prevent the use of the manual override.

**Regulation 13 Steam pipe systems (R 33)**

NEW CLASS B, C AND D SHIPS:

- .1 Every steam pipe and every fitting connected thereto through which steam may pass shall be so designed, constructed and installed as to withstand the maximum working stresses to which it may be subjected.
- .2 Means shall be provided for draining every steam pipe in which dangerous water hammer action might otherwise occur.
- .3 If a steam pipe or fitting may receive steam from any source at a higher pressure than that for which it is designed a suitable reducing valve, relief valve and pressure gauge shall be fitted.

**Regulation 14 Air pressure systems (R 34)**

NEW CLASS B, C AND D SHIPS:

- .1 Means shall be provided to prevent overpressure in any part of compressed air systems and wherever water jackets or casings of air compressors and coolers might be subjected to dangerous overpressure due to leakage into them from air pressure parts. Suitable pressure relief arrangements shall be provided for all systems.
- .2 The main starting air arrangements for main propulsion internal combustion engines shall be adequately protected against the effects of backfiring and internal explosion in the starting air pipes.
- .3 All discharge pipes from starting air compressors shall lead directly to the starting air receivers, and all starting pipes from the air receivers to main and auxiliary engines shall be entirely separate from the compressor discharge pipe system.

- .4 Provision shall be made to reduce to a minimum the entry of oil into the air pressure systems and to drain these systems.

**Regulation 15 Protection against noise (R 36)<sup>1</sup>**

NEW CLASS B, C AND D SHIPS:

Measures shall be taken to reduce machinery noise in machinery spaces to acceptable levels. If this noise cannot be sufficiently reduced the source of excessive noise shall be suitably insulated or isolated or a refuge from noise shall be provided if the space is required to be manned. Ear protectors shall be provided for personnel required to enter such spaces.

**Regulation 16 Lifts<sup>2</sup>**

NEW CLASS A, B, C AND D SHIPS:

- .1 Passenger and goods lifts shall, in respect of dimensioning, layout, number of passengers and/or quantity of goods, comply with the provisions laid down by the Administration of the flag State in each individual case or for each type of plant.
- .2 Installation drawings and maintenance instructions, including provisions governing periodical inspections, shall be approved by the Administration of the flag State, which shall inspect and approve the plant before it is taken into use.
- .3 Following approval, the Administration of the flag State will issue a certificate which is to be kept on board.
- .4 The Administration of the flag State may permit the periodical inspections to be carried out by an expert authorised by the Administration, or by a recognised organisation.

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<sup>1</sup> Reference is made to technical regulation no. 5 of 3 July 1997 on noise in ships issued by the Danish Maritime Authority.

<sup>2</sup> Reference is made to technical regulation no. 7 of 3 July 1997 on person-carrying lifts in ships.