

REPUBLIC



OF CYPRUS

**MINISTRY OF COMMUNICATIONS AND WORKS  
DEPARTMENT OF MERCHANT SHIPPING  
LEMESOS**

Circular No. 12/2002

TEN 1/5  
TEN 35  
TEN 35/23  
TEN 35/24

29 April 2002

All Recognized and Authorized  
Classification Societies

All Owners, Managers  
And Representatives of Ships  
Under the Cyprus Flag

**Subject: Inspection regulations for lifting appliances and elevators**

I refer to the above subject and further to our Circular No. 15/2001, I wish to inform you the following:

(1) The Republic of Cyprus has ratified the ILO Conventions 152 and 147 by virtue of Laws 197 of 1987 and 13 (III) of 1995, respectively. Part V of the latter contains a general provision with regard to the prevention of occupational accidents.

(2) Circular 15/2001 is superseded by this circular. The Department of Merchant Shipping has prepared draft regulations for the inspection of lifting appliances and elevators on board Cyprus flag vessels. These regulations will apply to:

- (a) Cargo ships having an overall capacity of 100 G.T or more and
- (b) Passenger ships, irrespective of capacity, if they have lifting appliances.

Consequently, all lifting appliances and elevators and their loose gears, which are permanently installed on the above mentioned categories of ships must be approved, tested and certified, not later than the first annual or renewal class survey after the 1<sup>st</sup> June 2002. They must also be subject to a periodical inspection and test in accordance with these regulations, which are attached herewith.

(3) As regards lifting appliances of existing ships for handling non cargo items (e.g. provisions cranes, engine room gantry cranes, crew lifts, hose handling davits and other fitting appliances), which are in good working condition, in case there are no approved plans available, plan approval and design approval is not required unless they are

necessary for conducting the relevant tests. The attending surveyor will conduct the relevant tests to his satisfaction and issue the appropriate certificates.

(4) These inspections should be carried out by the classification societies which are recognized by the Government of the Republic of Cyprus.

(5) The present draft regulations for the inspection of ships' lifting appliances and elevators should be used as standing instructions to the owners and the recognized classification societies, until the process of their approval is completed.

(6) Existing European Union standards governing the construction, installation and safety inspection of all items described by these regulations may also be utilized.

S. S. Serghiou  
Director

cc: Permanent Secretary, Ministry of Communications and Works  
Permanent Secretary, Ministry of Foreign Affairs  
Maritime Offices of the Department of Merchant Shipping abroad  
Diplomatic and Consular Missions of the Republic of Cyprus  
Honorary Consular Officers of the Republic of Cyprus  
Cyprus Shipping Association (Sea Rovers) Ltd  
Union of Cypriot Shipowners  
Cyprus Bar Association  
Cyprus Shipping Council

YP/OE

# INSPECTION REGULATION FOR SHIP'S LIFTING APPLIANCES AND ELEVATOR

## PART I

### GENERAL PROVISIONS

#### Definitions

1. For the purposes of this Regulation, these terms are taken to mean:

- (1) Competent Authority means the Minister of Communications and Works and the organizations (Class Society) or persons appointed by the Minister.
- (2) "Passenger Ship" – a ship which is carrying more than 12 passengers.
- (3) "Cargo Ship" – a ship which does not carry passengers.
- (4) "Lifting Appliances" – This terms includes, cranes, winches, derrick and derrick masts, cargo and personnel elevators, as well as any other mechanism or appliance that is permanently installed on board, which is used for lifting, loading and unloading of cargo or supplies.

The following are not included in the term "lifting appliances":

- (a) the launching appliances of the life boats, inflatable life rafts, rescue boats and common boats,
- (b) the launching appliances of the passenger, crew and navigator disembarkation ladders,
- (c) the hoisting mechanism for the Suez floodlights,

The said mechanisms are not included in the term "lifting appliances" and are inspected in accordance with current provisions.

- (5) "Elevator" – The lifting appliance used for the vertical carriage of personnel or supplies.
- (6) "Recognized Organization" – (Classification Society). The inspection organization which is recognized according to the Law 46 (I) 2001.

#### Implementation

- 2.\_(1) The lifting appliances on ships flying the Cyprus flag are inspected as to their positions when in operation at regular intervals to ascertain that they work without danger to their operators, the crew and workers general on board the ship. In particular, the elevators are inspected according to the afore-mentioned Parts II.
- (2) The above mentioned inspections are carried out:
  - (a) On cargo ships having an overall capacity of 100 G.T or more and
  - (b) Passenger ships, irrespective of capacity if they have lifting appliances.
- (3) Ships which have not validly implemented the provisions of this present Regulation and do not have Certificates of Suitability of Lifting Appliances and Elevators for Passenger Ships or Book of inspection of Lifting Appliances for Cargo Ships or certificate of Fitness of Lifting Appliances and Elevators of Cargo ships are not allowed to operate or use the lifting appliances and Elevators on board the ship.

#### Initial Inspection

3. The lifting appliances are inspected and tested prior to being put into operation, and their maximum load capacity is confirmed with a Certificate of Suitability of Lifting Appliances and Elevators for Passenger Ship or an Inspection Booklet for Cargo Ship Lifting Appliances, or certificate of suitability of Lifting Appliances (for Non Cargo Handling) and Elevators for Cargo ship.

#### **Periodical 5 yearly and yearly Inspections.**

4. Ship's lifting appliances, irrespective of their categories are inspected periodically as follows:

- (1) Loaders, bearings, mast band of king posts and loaders, as well as all permanently fitted appliances and parts which cannot be dismantled, are inspected every 12 months (Annual Inspection) and examined in detail every five years (Five year Inspection) with particular emphasis on non-visible parts taking the total load and which should be examined after dismantling.
- (2) Cranes, winches, tackle, iron hooks as well as any other part not covered in 4.1 are examined visually and in detail every twelve months (Annual and periodical Inspection).
- (3) The standards for the examination of elevators are more particularly described in paragraph 10.
- (4) Further, a periodical inspection to be carried out by the crew every three months and the results to be recorded in the Official Log Book.

#### **Construction materials**

5. The material of the hooks, chains, wire ropes, blocks, tackle and other mechanisms, parts and appliances should be of adequate strength, so as to be capable of fulfilling their working obligations in safety. This will be confirmed by the certificate issued by the manufacturers or an authorized Organization as per paragraph 36.

#### **Maximum permitted load**

6. (1) On each lifting appliance used on the ship, the maximum permitted load by its operators should be clearly and visually marked. For marking, the term SWL (Safe Working Load) should be indicated with the number of the maximum permitted load.
- (2) Any change in the lifting appliance capability, in relation with the working radius of the lifting appliance, should be noted on a table in a manner and position so as to be visible to the operator.
- (3) No lifting appliance is allowed to be loaded more than its maximum permitted load.

#### **Protective Means**

7. (1) Motors, wheel gears, torque transmitting appliances, electrical cables, and steam pipes of lifting appliances should have protective means fitted in a manner so as not to obstruct safe operation.
- (2) Loader bases should be adequately supported to avoid movement or displacement of their supports.
- (3) Cranes, and winches, should be fitted with proper means so as to limit to the minimum the danger of falling the cargo incidentally during the hoisting and lowering operations.

#### **Chains and Related Mechanisms**

8. (1) Chains and related mechanisms, elongated, modified or repaired with welding, should be tested and examined again.

- (2) Measures should be taken so that chains are not shortened by knots or are subject to wastage due to rubbing against other surfaces.

### Lifting Appliances Operation

9. (1) No load is permitted to remain suspended on a lifting appliance if the operation of the mechanism is not controlled by a competent personnel throughout the period the load will remain suspended.
- (2) Operators of lifting appliances should be experienced persons.

### Elevators

10. (1) Installation-Maintenance: The elevators should be installed and maintained in accordance with the manufacturer's instruction manual and drawings which are approved by the competent authorities, or recognized Classification Society.
- (2) Inspections:
- (a) An initial inspection of the appliances is carried out by the competent authority or recognized classification society, upon completion of installation, carrying out operational inspection and tests, as foreseen in paragraph 34.
- (b) The annual inspections are carried out each year and include examination and testing with satisfactory results, as foreseen in paragraph 35 by the competent authority or recognized classification society.
- (3) Certificates: After each initial, or five year periodical inspection the competent authority or recognized classification society will issue the corresponding relevant certificates according to Annex 1 and III. The certificates are valid for five years and are endorsed annually upon periodical annual inspection with satisfactory results.

### Cargo Ships: Tonnage 100 gross tons or over and Passenger Ships Irrespective of Tonnage Capacity.

11. Lifting appliances on cargo ships of tonnage 100 gross tons and over and Passenger ships irrespective of tonnage capacity, are inspected and examined by the competent authority or recognized classification society referred to in paragraph 36 according to the provisions of Part I and II of this Regulation.

### Load Testing

12. Load tests of ship's lifting appliances on board as implemented by the provisions of this Part, are given in the following table:

Item	Load Test
Group hoisting SWL up to 20 tons	25% in excess of the SWL
Hoisting mechanisms, adjusted, SWL exceeding 20 but not exceeding 50 tons	5 tons in excess of the SWL
Hoisting mechanisms with SWL over 50 tons	10% in excess of the SWL
Wire Ropes	
a) Operating load up to 10 tones	5 X Operating Load
b) Operating load above 10 tones	4 X Operating Load
Chains hooks, rings, adjusters, shackles, etc SWL ≤25T	2 x SWL
Chains hooks, rings, adjusters, shackles, etc SWL <25T	(1,22 x SWL) + 20 tons
Pulley Blocks (single sheave blocks)	4 X SWL
Multiple sheave block with SWL ≤25Tt	2 x SWL

Multiple sheave block with SWL >25T≤160T	(0,933 x SWL) + 27 tons
Multiple sheave block with SWL >160T	1,1 x SWL tons

### Shipyards Auxiliaries

13. The provisions of this regulation are implemented on shipyard auxiliaries, over 100 gross tons capacity fitted with lifting appliances, as on the shipyard auxiliaries which are used exclusively to carry out loading/unloading and any other nature of lifting work, irrespective of capacity.

### Ships under Foreign Flag

14. (1) Ships registered under foreign flag, sailing to Cyprus ports are checked by the Port State Control with a view to ascertaining whether they have the certificate or register book which is valid, issued by the competent authority of its flag country, or of an authorized organization of its country, by which it verifies that the lifting appliances on board have been tested and inspected, that they are capable of operation without danger to the operators, the crew or any other individual boarding the ship.
- (2) Foreign flag ships which do not have the above certificate or register cargo gear book, are not allowed to carry out whatsoever loading/unloading work with their own lifting appliances, if they do not first produce a declaration from the competent Authority of the flag country, or from an authorized organization, that the lifting appliances on board the ship are capable of operating in safety.
- (3) If, within the provisions of this paragraph there are interruptions on foreign flag ships, and there are delays in loading/unloading or sailing, the inspecting Authority is obliged to inform the Consul of the country by the fastest possible method.

### Shipyards Auxiliaries under foreign flag

15. The provisions of paragraph 13 are implemented accordingly and on the shipyard auxiliaries sailing to Cyprus ports, under foreign flag, if they have lifting appliances on board.

### Carrying out of Tests

16. (1) The test load is suspended from the lifting appliance using all parts used during normal lifting operations of the mechanism.
- (2) During test on the derrick, care should be taken during the test that it forms with the horizontal level the smallest possible angle from which it can operate.
- (3) After the load has been lifted the lifting machinery is revolved towards both sides of the ship.
- (4) If the lifting appliance motor is powered by electricity, the supply will be provided by the ship's current, while provision of current on land is allowed only if it passes through the main electricity supply panel of the main switchboard of the ship.
- (5) During test the capability of the level and holding of the load is inspected in each desired position.
- (6) After the satisfactory lifting test there follows a detailed examination of the wire ropes, blocks, rings, goose neck fittings and whatsoever other part, at the discretion of the surveyor. Parts showing wear or deformation should be replaced.
- (7) In the event of repairs, modifications or re-fitting of lifting mechanisms, as well as during the five year inspection, they will be re-inspected as per the provisions of paragraph 3.

Where there is lack of movable weights, it is possible to use machinery or hydraulic accurate dynamometers.

- (8) The test is considered satisfactory, only when the indicator on the dynamometer under test loads remains stable for 5 minutes. Special care is taken to ensure the accuracy of the dynamometer used.
- (9) In the event of replacement of wire ropes, a resistance certificate should be submitted by the manufacturer.

### **Certificates and Cargo Gear Inspection Books**

- 17.\_(1) After carrying out initial inspections with satisfactory results, the "Certificate of Fitness of Lifting Appliances & Elevators of a Passenger Ship" is issued according to type in Annex I, or "Inspection Book for Lifting Appliances on Cargo Ships" (Cargo Gear Book) according to the type in Annex II, or "certificate of fitness of Lifting Appliances (for Non Cargo handling) and Elevators on Cargo Ships over 100 GT" is issued according to type in Annex III are issued, which are valid for five years, from the date of the initial inspection.
- (2) "The Certificates of Fitness of Lifting Appliances and Elevators of Passenger and Cargo Ships" or the Cargo Gear Book are to be endorsed by the competent authority or the organization by which they will be issued every year, after carrying out the annual inspection with satisfactory results.
- (3) The validity of the above certificates or inspection book may be extended by three months, if it is not convenient to carry out the corresponding periodical inspection. The extensions will be issued after the approval of the competent authority to the organization that issued the certificates or book.
- (4) The yearly inspection may be carried out three months before, or after the date of the expiry of the certificates or inspection book.
- (5) After expiry of the fitness certificates or inspection book, periodical inspection is carried out. If the results of this inspection are satisfactory, a new certificate is issued valid for five (5) years or is worked out new five year endorsement of the inspections book.

## **PART II**

### **ELEVATORS INSPECTIONS**

#### **Implementation**

- 18.\_(1) The provisions of this chapter are implemented on all elevators, of ships which are launched for the first time after the validity of this Regulation.
- (2) For the elevator installations on ships, which have been launched and navigate prior to the validity of this Regulation, only the requirements of paragraph 35 are implemented.

#### **General**

- 19.\_(1) The elevators are inspected and tested prior to being put into operation, in accordance with the manufacturer's instructions and the requirements of this Regulation.
- (2) Provisions or details which are according to other recognized models, will be accepted on condition that they are equally successful in the requirements of this Regulation.
- (3) Under the supervision of the Captain, necessary measures should be taken in the choice and the designation from the ship's crew of one or more experienced personnel as members of a specialist Committee, which will be responsible for the prevention of accidents.

#### **Operating Conditions**

- 20.\_(1) Elevators with auxiliary equipment should be capable of operating in safety under sailing conditions, rolling of at least + - 10° and pitching of at least + - 5°. The manufacturer should certify the unfavorable conditions of rolling and pitching under which the elevator can

operate.

- (2) Apart from the above operating limits, the elevator and its auxiliary equipment should be capable of resistance without wear when not in operation, in unfavorable weather conditions movement of the ship. The operating systems should be manufactured and operate satisfactorily under the ship's vibrations, speed changes and frequencies. All the equipment should be able to withstand corrosion due to marine environment. The elevator operation speed should not normally exceed 61m/min. Elevators with speeds exceeding 61m/min, will be examined separately. The nominated load of the elevators is their lifting capability and this should be calculated in relation with the inside net platform area.

The nominated load should not be less than those noted in the following table:

Inside net platform area m <sup>2</sup>	Elevator Weight Kg.
1.25	450
1.50	550
1.75	680
2.00	820
2.25	905
2.70	1135
3.15	1360
3.50	1590
3.90	1815
4.30	2040
4.65	2270

### Submission of Drawings and Design Calculations

- 21.\_(1) Plans, specifications and design calculations should be submitted in triplicate for approval as referred to below. These will show analytically, the following:
- (a) The construction and arrangements of the hoistway, including its size and the position of the manufacturing data, the base of the elevator mechanism, supports, fire extinguishers, rails and arms etc. together with the dynamo-indicator diagram in which the size, direction and origin point of forces implementation which appear in the installation of the elevator during its operation, including cases of high speed or free falling.
  - (b) The construction of the hoistway, the entrance, doors, control and blocking system, safety lighting provisions, ventilation and internal communications.
  - (c) Electrical installation including the motor of the elevator wheel facility, the electro-generator, the wiring and protection provisions.
  - (d) The control of hydraulic systems, cylinders, hydraulic pumps and motors, as required in hydraulic installations.

### Hoistways

- 22.\_(1) Each elevator should operate within a special hoistway. The hoistway supports should be sufficiently resistant to cope with all loads during its operation or ship's movements. The hoistways should be constituted of a steel diaphragm. Additionally on passenger vessels the surrounding construction should be Class A fireproof as foreseen in SOLAS 74 as amended, so as to obstruct the spread of flame or smoke from one deck to the other.
- (2) Elevator hoistways which serve one or more levels and do not go through adjoining decks (such as engine rooms, cargo holds) are allowed to be of an open type (e.g. suitably closed with a metal grid or sheeting).
  - (3) Hoistway openings should be protected by doors of the same construction as the hoistway and be fire resistant. When two elevators work in hoistways which are adjacent, the joint dividing area does not need to be insulated. The hoistway interior should be constructed, and



in such a position, so as to obstruct water, while the hoistway doors should not be exposed to open decks.

- (4) The only parts allowed to be in the interior of the hoistway, are those which are part of the elevator installation (guide rails and jaws, stairs, balance weights, rails etc., hoistway electrical supply, inspection provisions etc.).

### **Guide Rails**

- 23.\_(1) Elevators should be fitted with guide rails – guides to the chamber and guide rails guides to the balance weight (pull mechanism) which should not extend so that it will not be possible for the guided parts to be found further than the edges of the guide of the guide rails, when the chamber is at its terminal stage of passage.
  - (2) The guide rails, brackets, connection coverings etc.) should be made of steel. The guide rails supports should be suitably fitted and the distance between them not greater than 2.5m.
  - (3) The guide rails of the chamber and the balance weights, should be suitable to cope with the load which they will carry during the operation of safety provisions of the chamber or the balance weights, under trial conditions or by loads which will be arisen by the ship's movements as described in paragraph 24, without provoking permanent distortion.

### **Hoistway Doors**

- 24.\_(1) The hoistway doors consist of two horizontal moving sheets, which leave openings in the middle and can be operated either mechanically or manually. Other types of hoistway doors (plain horizontally moving sheets or revolving round one side, double revolving, vertical sliding etc.) are accepted on condition that their design and installation are equally successful. The doors should have guides on the top and bottom parts and should completely cover the hoistway opening. Safety systems should be installed in the doors by which they may be fixed closed or open ( according to circumstance) when the rolling conditions of the ship are unfavorable and exceed the limits referred to in paragraph 24 of this Regulation.
  - (2) Further, the doors must be in accordance with the following requirements:
    - (a) Capable of working from the inside of the hoistway without the use of special tools.
    - (b) In the event of the elevator stopping in an abnormal position, that they work outside of the hoistway, only with special tools.
    - (c) They should close automatically, when the chamber for whatsoever reason leaves its boarding level.
    - (d) To be combined with the safety system so as to avoid movement of the chamber, in the event that the doors are not closed.
  - (3) Each door which is operated manually, should be fitted with a control window made of clear glass with a wire grid of an area from 160 up to 320 cm<sup>2</sup>.
  - (4) The emergency doors or accesses for inspection and maintenance, should be of a type revolving around the vertical axle, so that they should open outwards. All these doors should be made of steel and be connected to an elevator control system so that the operation of the elevator is possible only when the doors are closed.

### **Chamber Skeleton and Casing**

- 25.\_(1) The chamber skeleton, the platform and casing should be of metal construction, designed to withstand the applied forces of the nominated load and the chamber movement in normal operation, as well as the operation of safety systems. The chamber skeleton should lead to the guide rails with slides or cylinders attached to the top and bottom parts of the skeleton. The slides or cylinders should be suitably designed, fitted and strengthened so as to withstand the strain brought about by the ship's movements. The platform and casing of the chamber should be of non-perforated material, strengthened and fitted to the chamber skeleton.

- (2) When the chamber is used for the transfer of people with special needs, it should be designed and constructed for this use.
- (3) The chamber doors should be horizontally sliding, with an opening in the center of a construction similar to that described in paragraph 28, for the hoistway doors, including immobilization systems, safety, control windows for manually operated doors, excepting the requirements for fire resistance.
- (4) Every mechanical door must be fitted a protection appliance on each side, which will re-open, in the event of jamming. The operation of this appliance should apply to the whole length of the door.
- (5) The ceiling or the sides of the chamber and in places so as to ensure ease of escape, there should be escape hatch of suitable size. The cover of the escape opening should open outwards with a handle on both sides only for crew elevators and should be fitted with a system for total switching off of electrical supply to the elevator mechanism but not to the lighting system, so that the elevator ceases operation when the doors are open. This system should be armed manually and its arming only possible when the cover is closed and secured. Further, there should be a handrail around the perimeter of the interior chamber, apart from the entrance area.
- (6) Damper springs, hydraulic or other type, should be fitted under all elevators' chambers.
- (7) Suitable openings to ensure ventilation of the chamber.
- (8) In every elevator chamber there should be a fixed metal panel in bas-relief wording, depicting the safety load of the elevator in kg and number of persons. On the chamber skeleton there should a metal panel firmly fixed, with bas-relief depicting the following information:
  - (a) Weight of the whole chamber, including the grips and all auxiliary equipment which are installed in the chamber.
  - (b) Nominated load and speed.
  - (c) The wire rope specifications, as referred to in paragraph 31. The name of the manufacturer and date of installation.

### **Elevator Safety**

26. (1) For every chamber is required a braking system fitted to the skeleton, which should activate automatically in the event of overspeed or free falling, by putting pressure mechanically on the guide rails. It should not be necessary to use electrical or hydraulic or pneumatic power to activate the brake. The brake will be de-activated, only with an upward movement of the elevator, and generally should work according to the following chart:

Nominated speed	Operating Speed	
	Active brake	Brake length
m/min	m/min	mm
38.0	53	380
45.5	64	410
53.5	76	480
61.0	85	560

- (2) Also, it is required the existence of a system for checking overloading which will exclude movement of the chamber when it is overloaded by 5% more than that foreseen.

### **Balance Weights**

27. The balance weights in elevators with sheave bearing should be fitted with a solid skeleton, designed so that the weights will remain safe in their positions and be seated in a suitable form on the ship.

The balance weights should lead to each guide rail, with sliding or wheeled impedance to the top and bottom part of the skeleton. A brake similar at operation to that specified for the elevators' chambers, should be fitted to the skeleton of every balance weight. The corridor of the balance weights should be protected with wire mesh with removable pieces, so that they are accessible for inspection.

**Lower Hoistway Area**

28. Every elevator should be equipped with a lower hoistway section, which will consist of the section of the hoistway which extends from the lower disembarkation level to the bottom of the hoistway. The depth of this section should be enough for installation and access to all parts of the elevator which are fitted there, and for excessive descent and compression of the elevator. Access to the elevator area is allowed from the lower door or by a special door constructed for the purpose. This section should be fitted with a permanent light fixture and safety facilities for when the elevator is not in operation.

**Engine Room**

29. The existence of an engine room is required for each elevator for housing of the lifting mechanism, other equipment and control instruments necessary for its operation. The engine room should be of steel construction, with permanent safe approaches to it and permanent lighting. In the engine room parts immediately connected with the operation of the elevator are allowed to be installed.

**Lifting Mechanism**

30. (1) Lifting mechanisms should be of a sheave bearing type and the nominated speed should not exceed 61 meters per minute. Each lifting mechanism should be fitted with brake bearings which will be operated by springs which should be capable of controlling the maximum allowable load (nominated load and chamber weight) plus 25% of the nominated load. The brakes should be released by electrical or hydraulic power (in each case) of the lifting mechanism.

(2) The mechanism should be housed in an anti-vibratory base, so as not to transfer vibrations to the ship.

**Wire Rope Suspension**

31. (1) Wire rope suspension should be constructed of steel wire and be certified by the manufacturer as being suitable for use in elevators. The minimum number of wire ropes to be used are three (3). The minimum diameter of wire rope suspension is 12.7 mm. The minimum safety co-efficient should be in accordance with the following chart:

Wire Rope Speed m/min	Minimum safety co-efficient
15.0	7.60
22.5	7.75
30.0	7.95
37.5	8.10
45.0	8.25
52.5	8.40
60.0	8.60

(2) On the ceiling of the elevator skeleton there should be a specification panel with the following information:

- (a) Number of wire ropes
- (b) Diameter of wire ropes.
- (c) Wire rope resistance

(d) Wire rope breaking load

- (3) A specification card should be provided for each set of wire ropes, with the following information:
- (a) Wire rope diameter
  - (b) Wire rope type
  - (c) Month and year of installation
  - (d) Name of wire rope manufacturer

This card should be secured to one of the wire rope base supports and a new card should be attached to every wire rope replacement.

The wire ropes are not allowed to be repaired or elongated with tangled rope. When replacement is required of one or more ropes, the total should be replaced together.

### **Inspection and operation of the Elevator**

- 32.\_(1) To control safe and reliable operation of the elevator, there should be a system designed for this purpose. The control system should be adjustable, so that it will stop the chamber automatically, at its highest and lowest levels of disembarkation and obstruct operation from these points.
- (2) The elevator control instruments which are provided for use by un-accompanied persons with special needs, should be designed accordingly and available.
  - (3) The operation of the control instruments should be clearly marked.
  - (4) All the hoistway doors, access openings, the chamber doors and the escape covering of the chamber should be latched into the control system, so that operation of the elevator will not be possible when the corresponding switch units are in the open position. For elevators supplied by multiphase alternator electricity there should be a facility which will obstruct their operation in the event of a defective succession of phases or supply to only one phase.
  - (5) There should be terminal switches or other appliances suitable to cut off the supply to the motor mechanism (brake) in the event that the chamber moves further than the higher or lower boarding levels.
  - (6) In elevators with drum installation, there should be manual reinstatement switches, which in the event of slackening of wire ropes will disconnect the supply to the mechanism motor and the brake.
  - (7) At every boarding level, there should be a light, which will show if the elevator is being used or not. There should also be a key (pin) at the side of the exterior of the hoist-way door. There should also be lighted indications showing the upward or downward path of the elevator and its position.
  - (8) In every elevator chamber, there should be a switch to stop its operation in an emergency. The operation of the switch will result in cutting off the supply to the lifting mechanism and the brake.
  - (9) The control facilities for the manual operation of the elevator should be of a continual pressure type.
  - (10) In each hoist-way of elevator there should be a steel vertical stair permanently fitted in such a manner as to cover the whole height of the hoist-way, which should be approachable from the escape doors of the hoist-way. This stair should be also approachable from the escape door of the chamber. The cover of the escape doors of the chamber should open only on its exterior side for passenger elevators while for crew elevators on its interior and exterior sides of chambers. The chamber interior should be fitted with facilities, which will allow approach to the escape door. Further to the above, there should be a system for manual raising

and lowering of the chamber, in the engine room. This system, during its use, should work independently as it disconnects the power supply to the elevator motor. The operation should be done with a hand wheel or other suitable way. In the elevator engine room, there should be a firmly affixed panel with instructions for use of the hand wheel lifting system.

### **Electrical supply, Lighting, Internal Communications**

- 33.\_(1) The electrical supply, lighting and internal communications must comply with SOLAS 74 as amended.
- (2) The chamber lighting should come from at least two lamps of parallel connection. The light intensity on the chamber platform should not be less than 50 Lux/m<sup>2</sup>. The lighting components platforms should withstand vibrations and be of a type suitable for use in elevators, protected by glass covers.
  - (3) The engine room should normally be lighted by at least two lamps of a total light intensity not less than 50 Lux/m<sup>2</sup>.
  - (4) The hoist-way and each emergency exit should have suitable permanent lighting installed. The embarkation levels should be lighted by a total light intensity not less than 50 Lux/m<sup>2</sup>.
  - (5) There should be an emergency light in the chamber supplied by an emergency source and from the emergency supply transformer.
  - (6) The movable cables for electrical power, control and internal communications in the chamber should be fitted with covering of slow-burning type, damp resistant and to be flexible and suitable for this use. Further, they should be surrounded with a metal clip so designed as to avoid their fouling.
  - (7) Further, there should be a disposition which will activate a sound alarm and give a visual indication to a central manned control, which will be independent from the power supply system and control. Moreover, in the chamber there should be a telephone for communication with the above-mentioned control center.
  - (8) Finally, there should be a mechanical ventilation system capable of producing 5 (five) air exchanges per hour in the hoistway in the considered empty space.

### **Operational Inspections and Tests**

- 34.\_(1) Immediately after installation of the elevators, and prior to commencement of their operation, they should undergo tests and performance inspections on board ship, to ascertain that the installation fulfills the requirements of this Regulation.
- (2) Similar tests and inspections should be carried out at every major modification , on an existing installation.
  - (3) The testing programmed includes the following:
    - (a) Test of the chamber with its nominated load.
    - (b) Test of balance weight safety
    - (c) Test of activation of the speed adjuster
    - (d) Test of the hoistway door blocking system, chamber doors, covers of chamber escape exits.
    - (e) Test of the operation of the whole installation including a check on the indicated positions of the chamber at disembarkation levels.
    - (f) Test of operation of the hand wheel lifting system.
    - (g) Test of the brake with the maximum permissible load, increased by 25% of the nominated load.

- (h) Test of fire extinguishers
- (i) Test of slackening switches of the wire ropes.
- (j) Test of the sound system.
- (k) Test of the internal communications system.
- (l) Test of the ventilation air exchange system.
- (m) Test of the chamber and balance weight safety catches.

### **Periodical Operational Inspections and Tests**

35.\_(1) In every new or existing elevator installation, periodical tests and inspections must be carried at intervals not exceeding one year. During those inspections, a representative of the competent authority should be present for the following tests:

- (a) Operation of the chamber and balance weight safety catches.
- (b) Activation of the speed adjuster
- (c) Operation of the lifting mechanism brake
- (d) Operation of the blocking system for hoistway doors, chamber and door cover for the chamber escape exit.
- (e) Operation of the chamber with its nominated load.
- (f) Operation of the hand wheel chamber lifting system.

(2) Also, during the time these above tests and inspections are being carried out, an inspection should be carried out of the whole installation and particular attention should be paid to the following parts:

- (a) Wire Rope suspension
- (b) Mechanism motor brake
- (c) Catches (carry pawl).
- (d) Guide rails and sliding pedal or cylinder guides.

(3) Prior to carrying out the above inspections a declaration should be submitted by the ship relating to completion of the installation maintenance, carrying out checks recommended by the manufacturer and the safe operation capability of the elevators.

### **Inspection and Issuance of Certificates by Recognized Organizations**

36.\_(1) The Recognized Organizations (classification societies) in accordance with the Directive 94/57 of European Union (EU) which has been embodied in the Cyprus National Legislation by the Law 46 (I) of 2001 may if they got relative authorization by the Cyprus Government carry out inspections on Cyprus flag vessels in order to ascertain whether these vessels comply with the provisions of this regulation as well as the provisions referred to the verification, tests, inspections and in general the safe installation and operation of vessel's lifting appliances and elevator and regulations which have been approved in accordance with the international conventions of the International Labor Organization (ILO) and issue the relative certificates and books.

(2) The above-mentioned certificates and books are issued in the Greek and English language and record that their issue is carried out on behalf of the Cyprus Government.

37. The following Annex I, II and III comprise and integral part of this Regulation.

## ΠΑΡΑΡΤΗΜΑ Ι - ANNEX I

### ΠΙΣΤΟΠΟΙΗΤΙΚΟ ΚΑΤΑΛΛΗΛΟΤΗΤΑΣ ΑΝΥΨΩΤΙΚΩΝ ΜΕΣΩΝ ΚΑΙ ΑΝΕΛΚΥΣΤΗΡΩΝ ΕΠΙΒΑΤΗΓΩΝ ΠΛΟΙΩΝ CERTIFICATE OF FITNESS OF LIFTING APPLIANCES AND ELEVATORS OF PASSENGER SHIPS

Εκδόθηκε σύμφωνα με τις διατάξεις του Κανονισμού επιθεώρησης των ανυψωτικών μέσων και ανελκυστήρων των πλοίων κατ' εξουσιοδότηση της Κυπριακής Δημοκρατίας  
Issued under the provisions of Inspection Regulation for ship's lifting appliances and elevators and under the authorization of the Republic of Cyprus

ΟΝΟΜΑ ΠΛΟΙΟΥ NAME OF SHIP	Ολική Χωρητικότητα Gross Tonnage	ΔΙΑΚΡΙΤΙΚΟΣ ΑΡΙΘΜΟΣ CALL SIGN	ΛΙΜΕΝΑΣ ΝΗΟΛΟΓΙΟΥ PORT OF REGISTRY	ΑΡΙΘΜΟΣ ΔΝΟ IMO NO			
<b>ΜΕΡΟΣ Α. ΑΝΥΨΩΤΙΚΑ ΜΕΣΑ / PART A. LIFTING APPLIANCES</b>							
Α/Α	Θέση και περιγραφή του ανυψωτικού μηχανήματος και χαρακτηριστικός αριθμός αυτού Situation and description of cargo gear with characteristic number	Γωνία ως προς το οριζόντιο του φορτωτήρος με το φορτίο δοκιμής (Μοίρες) Angle to the horizontal of the derrick boom while the proof load is applied. (Degrees)	Φορτίο δοκιμής (μετρικοί τόνοι) Proof load (metric tons)	Φορτίο ασφαλείας στην γωνία δοκιμής (μετρικοί τόνοι) Safe working load at the proof angle (metric tons)			
<b>ΜΕΡΟΣ Β. ΑΝΕΛΚΥΣΤΗΡΕΣ / PART B. ELEVATORS</b>							
Α/Α	Θέση (νομέας) Position (frame)	Ονομαστικό φορτίο Maximum load	Αριθμός ατόμων No of persons	Αριθμός σειράς Serial No.	Είδος κινητήρα Motor type	Χρήση Use	Κατασκευαστής Manufacturer

Πιστοποιείται με το παρόν ότι κατά την αρχική / περιοδική επιθεώρηση τα ανωτέρω ανυψωτικά μέσα και ανελκυστήρες του πλοίου καθώς και τα συσπώντα μέρη αυτών, δοκιμάστηκαν, επιθεωρήθηκαν και βρέθηκαν να πληρούν τις διατάξεις του Κανονισμού.

This is to certify that an initial / periodical survey the above lifting appliances and elevators of the ship with their accessories has been tested and surveyed and found to comply with the provisions of Regulation.

Ημερομηνία της αρχικής / περιοδικής επιθεώρησης .....  
Date of initial / periodical survey .....

Το παρόν πιστοποιητικό ισχύει μέχρι την ..... και υπόκειται σε περιοδικές επιθεωρήσεις σύμφωνα με τον Κανονισμό.  
This certificate is valid until ..... subject to periodical surveys according to the Regulation.

Τόπος και ημερομηνία έκδοσης .....  
Place and date of issue .....

.....  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized person)

Πιστοποιείται με το παρόν ότι κατά την αρχική / περιοδική επιθεώρηση τα ανωτέρων ανυψωτικά μέσα και οι ανελκυστήρες του πλοίου, καθώς και τα συνιστώσα μέρη αυτών, δοκιμάσθηκαν, επιθεωρήθηκαν και βρέθηκαν να πληρούν τις διατάξεις του Κανονισμού.

This is to certify that at initial / periodical survey the above lifting appliances and elevators of the ship with their accessories have been tested and surveyed and found to comply with the provision of Regulation.

1<sup>ος</sup> ΕΤΗΣΙΟΣ ΕΛΕΓΧΟΣ / 1<sup>st</sup> ANNUAL VERIFICATION Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized official)

Τόπος \_\_\_\_\_  
Place

Ημερομηνία \_\_\_\_\_  
Date

2<sup>ος</sup> ΕΤΗΣΙΟΣ ΕΛΕΓΧΟΣ / 2<sup>nd</sup> ANNUAL VERIFICATION Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized official)

Τόπος \_\_\_\_\_  
Place

Ημερομηνία \_\_\_\_\_  
Date

3<sup>ος</sup> ΕΤΗΣΙΟΣ ΕΛΕΓΧΟΣ / 3<sup>rd</sup> ANNUAL VERIFICATION Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized official)

Τόπος \_\_\_\_\_  
Place

Ημερομηνία \_\_\_\_\_  
Date

4<sup>ος</sup> ΕΤΗΣΙΟΣ ΕΛΕΓΧΟΣ / 4<sup>th</sup> ANNUAL VERIFICATION Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized official)

Τόπος \_\_\_\_\_  
Place

Ημερομηνία \_\_\_\_\_  
Date

Με την προϋπόθεση ότι οι διατάξεις περί ανυψωτικών μέσων των πλοίων έχουν πλήρως τηρηθεί το παρόν πλοίο, η ισχύς του παρόντος πιστοποιητικού παρατείνεται μέχρι .....  
Provided that the provisions of the lifting appliances of ships are fully kept, the validity of this certificate is extended until.....

ΠΑΡΑΤΑΣΗ ΕΠΙΘΕΩΡΗΣΗΣ Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου / Signature of authorized officer)

EXTENTION SURVEY Ημερομηνία \_\_\_\_\_  
Date



## ΠΑΡΑΡΤΗΜΑ ΙΙ - ANNEX II

**ΒΙΒΛΙΟ ΕΠΙΘΕΩΡΗΣΗΣ ΑΝΥΨΩΤΙΚΩΝ ΜΕΣΩΝ  
ΦΟΡΤΗΓΩΝ ΠΛΟΙΩΝ ΑΝΩ ΤΩΝ 100 ΚΟΧ  
INSPECTION BOOK OF LIFTING APPLIANCES OF CARGO SHIPS OVER 100 G.T (CARGO GEAR BOOK)**

Εκδόθηκε σύμφωνα με τις διατάξεις του Κανονισμού επιθεώρησης των ανυψωτικών μέσων των πλοίων κατ' εξουσιοδότηση της Κυπριακής Δημοκρατίας  
Issued under the provisions of Inspection Regulation for ship's lifting appliances and under the authorization of the Republic of Cyprus

ΟΝΟΜΑ ΠΛΟΙΟΥ NAME OF SHIP	Ολική Χωρητικότητα Gross Tonnage	ΔΙΑΚΡΙΤΙΚΟΣ ΑΡΙΘΜΟΣ CALL SIGN	ΛΙΜΕΝΑΣ ΝΗΟΛΟΓΙΟΥ PORT OF REGISTRY	ΑΡΙΘΜΟΣ ΔΝΟ IMO NO

Πιστοποιείται με το παρόν ότι κατά την αρχική / περιοδική επιθεώρηση τα ανωτέρω ανυψωτικά μέσα του πλοίου, καθώς και τα συνιστώσα μέρη αυτών, δοκιμάσθηκαν, επιθεωρήθηκαν και βρέθηκαν να πληρών τις διατάξεις του Κανονισμού  
This is to certify that at initial / periodical survey the above cargo gear of the ship with their accessories has been tested and surveyed and found to comply with the provisions of Regulation

Ημερομηνία της αρχικής / περιοδικής επιθεώρησης .....  
Date of initial / periodical survey .....

Το παρόν πιστοποιητικό ισχύει μέχρι την ..... και υπόκειται σε περιοδικές επιθεωρήσεις σύμφωνα με τον Κανονισμό.  
This certificate is valid until ..... subject to periodical surveys according to the Regulation.

Εκδόθηκε στ. .... την .....  
Issued at ..... On the .....

Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized person)

**ΒΙΒΛΙΟ ΕΠΙΘΕΩΡΗΣΗΣ ΑΝΥΨΩΤΙΚΩΝ ΜΕΣΩΝ  
ΦΟΡΤΗΓΩΝ ΠΛΟΙΩΝ ΑΝΩ ΤΩΝ 100 ΚΟΧ  
INSPECTION BOOK OF LIFTING APPLIANCES OF CARGO SHIPS OVER 100 G.T (CARGO GEAR BOOK)**

ΣΗΜΕΙΩΣΗ

Οι Επιθεωρήσεις που θα αναγράφονται  
Στη στήλη 3 περιλαμβάνουν:

- Αρχική
- Ετήσια
- Περιοδική (ανά 5 έτη)
- Επισκευή / Ζημιά
- Άλλη

NOTE

the through examinations to be indicated  
in column 3 include:

- Initial
- 12 – monthly
- Five yearly
- Repair / Damage
- Other thorough examinations

1. Περιγραφή του ανυψωτικού μέσου που επιθεωρήθηκε (Αριθμοί ή σήμανση αν υπάρχουν).  Situation and description of Loose Gear (with distinguishing numbers or marks, if any) which have been thoroughly examined.	2. Αριθμοί πιστοποιητικών παρελκομένων.  Certificates Nos.	3. Διενεργήθηκε επιθεώρηση (βλ. Σημείωση)  Examination performed (see Note)	4. Βεβαιώνω ότι κατά την παρακάτω ημερομηνία, το ανυψωτικό μέσο στην στήλη 1. επιθεωρήθηκε και δε βρέθηκαν ελλείψεις ή αντικανονικότητες που να επηρεάζουν την ασφαλή λειτουργία του, εκτός από αυτά που αναφέρονται στην στήλη 5 (Ημερομηνία, υπογραφή και σφραγίδα) I certify that on the date to which I have appended by signature, the Lifting gear shown in column 1 were thoroughly examined and no defects affecting, its safe working condition were found other than those shown in column 5 (date, stamp and signature)	5. παρατηρήσεις (Ημερομηνία, υπογραφή)  Remarks (to be dated and signed)	6. Ημερομηνία επόμενης οφειλόμενης επιθεώρησης  Next examination due date

### ΠΑΡΑΡΤΗΜΑ ΙΙΙ - ANNEX ΙΙΙ

**ΠΙΣΤΟΠΟΙΗΤΙΚΟ ΚΑΤΑΛΛΗΛΟΤΗΤΑΣ ΑΝΥΨΩΤΙΚΩΝ ΜΕΣΩΝ (ΠΟΥ ΔΕΝ ΧΡΗΣΙΜΟΠΟΙΟΥΝΤΑΙ ΚΑΤΑ ΤΗ ΦΟΡΤΩΣΗ Ή ΕΚΦΟΡΤΩΣΗ ΤΟΥ ΦΟΡΤΙΟΥ) ΚΑΙ ΑΝΕΛΚΥΣΤΗΡΩΝ ΦΟΡΤΗΓΩΝ ΠΛΟΙΩΝ ΑΝΩ ΤΩΝ 100 ΚΟΧ  
CERTIFICATE OF FITNESS OF LIFTING APPLIANCES (FOR NON CARGO HANDLING ITEM) AND ELEVATORS OF CARGO SHIPS OVER 100 GT**

Εκδόθηκε σύμφωνα με τις διατάξεις του Κανονισμού επιθεώρησης των ανυψωτικών μέσων και ανελκυστήρων των πλοίων κατ' εξουσιοδότηση της Κυπριακής Δημοκρατίας  
Issued under the provisions of Inspection Regulation for ship's lifting appliances and elevators and under the authorization of the Republic of Cyprus

ΟΝΟΜΑ ΠΛΟΙΟΥ NAME OF SHIP	Ολική Χωρητικότητα Gross Tonnage	ΔΙΑΚΡΙΤΙΚΟΣ ΑΡΙΘΜΟΣ CALL SIGN	ΛΙΜΕΝΑΣ ΝΗΟΛΟΓΙΟΥ PORT OF REGISTRY	ΑΡΙΘΜΟΣ ΔΝΟ IMO NO			
<b>ΜΕΡΟΣ Α. ΑΝΥΨΩΤΙΚΑ ΜΕΣΑ / PART A. LIFTING APPLIANCES</b>							
Α/Α	Θέση και περιγραφή του ανυψωτικού μηχανήματος και χαρακτηριστικός αριθμός αυτού Situation and description of cargo gear with characteristic number	Γωνία ως προς το οριζόντιο του φορτωτήρος με το φορτίο δοκιμής (Μοίρες) Angle to the horizontal of the derrick boom while the proof load is applied. (Degrees)	Φορτίο δοκιμής (μετρικοί τόνοι) Proof load (metric tons)	Φορτίο ασφαλείας στην γωνία δοκιμής (μετρικοί τόνοι) Safe working load at the proof angle (metric tons)			
<b>ΜΕΡΟΣ Β. ΑΝΕΛΚΥΣΤΗΡΕΣ / PART B. ELEVATORS</b>							
Α/Α	Θέση (νομέας) Position (frame)	Ονομαστικό φορτίο Maximum load	Αριθμός ατόμων No of persons	Αριθμός σειράς Serial No.	Είδος κινητήρα Motor type	Χρήση Use	Κατασκευαστής Manufacturer

Πιστοποιείται με το παρόν ότι κατά την αρχική / περιοδική επιθεώρηση τα ανωτέρω ανυψωτικά μέσα και ανελκυστήρες του πλοίου καθώς και τα συνιστώσα μέρη αυτών, δοκιμάσθηκαν, επιθεωρήθηκαν και βρέθηκαν να πληρούν τις διατάξεις του Κανονισμού.  
This is to certify that an initial / periodical survey the above lifting appliances and elevators of the ship with their accessories has been tested and surveyed and found to comply with the provisions of Regulation.

Ημερομηνία της αρχικής / περιοδικής επιθεώρησης .....  
Date of initial / periodical survey .....

Το παρόν πιστοποιητικό ισχύει μέχρι την ..... και υπόκειται σε περιοδικές επιθεωρήσεις σύμφωνα με τον Κανονισμό.  
This certificate is valid until ..... subject to periodical surveys according to the Regulation.

Τόπος και ημερομηνία έκδοσης .....  
Place and date of issue .....

.....  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized person)



Πιστοποιείται με το παρόν ότι κατά την αρχική / περιοδική επιθεώρηση τα ανωτέρων ανυψωτικά μέσα και οι ανελκυστήρες του πλοίου, καθώς και τα συνιστώμενα μέρη αυτών, δοκιμάσθηκαν, επιθεωρήθηκαν και βρέθηκαν να πληρούν τις διατάξεις του Κανονισμού.  
This is to certify that at initial / periodical survey the above lifting appliances and elevators of the ship with their accessories have been tested and surveyed and found to comply with the provision of Regulation.

1<sup>ος</sup> ΕΤΗΣΙΟΣ ΕΛΕΓΧΟΣ / 1<sup>st</sup> ANNUAL VERIFICATION Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized official)  
Τόπος \_\_\_\_\_  
Place  
Ημερομηνία \_\_\_\_\_  
Date

2<sup>ος</sup> ΕΤΗΣΙΟΣ ΕΛΕΓΧΟΣ / 2<sup>nd</sup> ANNUAL VERIFICATION Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized official)  
Τόπος \_\_\_\_\_  
Place  
Ημερομηνία \_\_\_\_\_  
Date

3<sup>ος</sup> ΕΤΗΣΙΟΣ ΕΛΕΓΧΟΣ / 3<sup>rd</sup> ANNUAL VERIFICATION Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized official)  
Τόπος \_\_\_\_\_  
Place  
Ημερομηνία \_\_\_\_\_  
Date

4<sup>ος</sup> ΕΤΗΣΙΟΣ ΕΛΕΓΧΟΣ / 4<sup>th</sup> ANNUAL VERIFICATION Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου  
signature of authorized official)  
Τόπος \_\_\_\_\_  
Place  
Ημερομηνία \_\_\_\_\_  
Date

Με την προϋπόθεση ότι οι διατάξεις περί ανυψωτικών μέσων των πλοίων έχουν πλήρως τηρηθεί το παρόν πλοίο, η ισχύς του παρόντος πιστοποιητικού παρατείνεται μέχρι .....

Provided that the provisions of the lifting appliances of ships are fully kept, the validity of this certificate is extended until.....

ΠΑΡΑΤΑΣΗ ΕΠΙΘΕΩΡΗΣΗΣ Υπογραφή \_\_\_\_\_  
Signature  
(υπογραφή εξουσιοδοτημένου οργάνου / Signature of authorized officer)

EXTENTION SURVEY Ημερομηνία \_\_\_\_\_  
Date