PHILIPPINE SHIP SAFETY

RULES AND REGULATIONS

(PSSRR)

2018

BOOK I

GENERAL PROVISIONS

SUBJECT FOR FINAL REVIEW

CONTENTS

FOREWORD –

TO BE PROVIDED

Chapter I
Scope and Coverage

1 Unless expressly provided elsewhere the present Regulations apply to new ships for which the provisions of the Conventions listed in the following paragraph do not apply.

2 Where the provisions in force of:

.1 The International Convention for the Safety of Life at Sea (SOLAS), 1974, as modified by its Protocol of 1988;

.2 The International Convention on Load Lines (LL), 1966, as modified by its Protocol of 1988;

.3 The International Convention on Standards of Training, Certification and Watchkeeping (STCW), 1978, as amended;

.4 The International Convention for the Prevention of Pollution from Ships (MARPOL), 1973/78; and

.5 International Regulations for Preventing Collisions at Sea (COLREG), 1972,

apply to the ships subject to the present Regulations, those provisions shall be considered to be part of the present Regulations and shall consequently apply.

3 Ships of 500 GT and above and passenger ships of 24 meter in length and above carrying 200 hundred passengers or more shall comply with the Conventions enumerated above.

4 Ships engaged in international trade, regardless of type and size, shall comply with the above-mentioned Conventions.

5 Existing ships which is covered under the PMMRR, 97 shall continue to comply with the requirement thereof unless expressly provided elsewhere or the ship undergoes alteration/conversion which affect the affect the dimension of the ship or its cargo capacity, significantly increase the ship's life, the load line, change the ship's functionality, in which case such ship shall comply with the present regulation.

6 Existing ships registered in foreign country shall be regarded as a new ship when it registers in the Philippines.

Regulation 1
Definitions

"Smoke-Tight" or "Capable of Preventing the Passage of Smoke" - refers to a division made of non-combustible or fire-restricting materials is capable of preventing the passage of smoke.

"Steel or Other Equivalent Material" occur, "Equivalent Material" - refers to any non-combustible material which, by itself or due to insulation provided, has structural and integrity properties equivalent to steel at the end of the applicable exposure to the standard fire test (e.g., aluminum alloy with appropriate insulation).

"A" Class Divisions - refers to defined in SOLAS regulation II-2/3.

"B" Class Divisions - refers to defined in SOLAS regulation II-2/3.

"C" Class Divisions - refers to defined in SOLAS regulation II-2/3.

"Steel Or Other Equivalent Material" Occur, "Equivalent Material" - refers to any non-combustible material which, by itself or due to insulation provided has structural and integrity properties equivalent to steel at the end of the applicable exposure to the standard fire test (e.g. aluminum alloy with appropriate insulation).

1988 LL Protocol - refers to the Protocol of 1988 relating to the International Convention on Load Lines, 1966, as amended.

A Standard Fire Test - refers to one in which specimens of the relevant bulkheads, decks or other constructions are exposed in a test furnace by a specified test method in accordance with the Fire Test Procedures Code.

Accommodation Spaces - refers those used for public spaces, corridors, lavatories, cabins, offices, hospitals, cinemas, games and hobbies rooms, pantries containing no cooking appliances and similar spaces. Public spaces are those portions of the accommodation which are used for halls, dining rooms, lounges and similar permanently enclosed spaces.

Acquisition - refers to importation (direct/outright purchase), bareboat charter (to include bareboat with lease irrevocable purchase or lease purchase clause) under PD 760 as amended, local construction and permanent conversion of ship's trading status from overseas operations to domestic operations as per MC 104.

Administration - refers to the Maritime Industry Authority (MARINA)

All-round light - refers a light showing an unbroken light over an arc of the horizon of 360 degrees.

Alteration - refers to the process of changing the configuration of ships or ships dimensions which affect the original approved plans; lengthening; and other similar process.

Amidships - refers in the vicinity of the middle portion of a ship as distinguished from her ends or midway between bow and stern or in the middle of the length L.

Ammunition - refers to all types of projectiles, cartridges, grenades, bombs, mines, torpedo warheads, propellant powder charges, pyrotechnics, rockets, missiles, special weapons, chemical smoke or incendiary ammunition or other fabricated explosive devices.

Anniversary Date - refers to the day and month of each year which will correspond to the date of expiry of the certificate.

Approved - refers approved by the Administration or refers to approved by the Administration in accordance with these rules and Regulations.

Assigning Authority - refers to the Maritime Industry Authority (MARINA) as the Administration.

Authentication - refers to the MARINA's attestation / validation / confirmation of certificates and documents issued by it.

Automatic Identification System (AIS) - refers to an automatic tracking system used on ships and by vessel traffic services (VTS) for identifying and locating vessels by electronically exchanging data with other nearby ships, AIS base stations, and satellites.

Auxiliary - refers of steering is the equipment other than any part of the main steering gear necessary to steer the ship in the event of failure of the main steering gear but not including the tiller, quadrant or components serving the same purpose.

Auxiliary Steering Gear - refers to the equipment which is provided for effecting movement of the rudder for the purpose of steering the unit in the event of failure of the main steering gear.

Bottom Forward Plating - refers to in rake end barges, the Bottom Forward Plating is the bottom plating of the forward rake from the forward headlog to the lower turn of the rake or to the collision bulkhead, if located aft of the lower turn of the rake; or refers to the flat of bottom plating forward of 0.3L from amid ships.

Bottom Shell Plating Amidships - refers to the plating of the bottom shell from the keel to the upper turn of the bilge between 0.2L forward and 0.2L aft of amidships.

Breadth (B) - refers to the maximum breadth of the ship, measured amidships to the moulded line of the frame in a ship with a metal shell and to the outer surface of the hull in a ship with a shell of any other material. The breadth (B) should be measured in meters; or refers to the extreme breadth, in meters, measured between the outer sides of the hull, excluding rubbing strakes or other projections.

Bridge-to-Bridge Communications - refers to safety communications between ships from the position from which the ships are normally navigated.

Bulkhead - refers to transverse watertight subdivision of boat

Bulkhead Deck - refers to the upper most deck to which watertight bulkheads and the watertight shell extends.

Cargo - refers to merchandise/goods conveyed on a ship.

Cargo Area - refers to that part of the ship that contains cargo holds including ballast and void spaces and deck areas above said spaces; or it refers to that part of the vessel that includes the cargo tanks and other tanks into which cargo or cargo vapors are introduced.

Cargo Control Station - refers to a location that is manned during cargo transfer operations for the purpose of loading/unloading of cargo.

Cargo Ship - refers to any ship which is not a passenger ship.

Carriage - refers to the transportation of passenger and or goods/cargoes, which include the handling, and stowage of same.

Certificate of Authority to Undertake Classification Activities (CAUCA) - refers to the document issued by the Administration to qualified local classification societies to conduct classification work/services for ships in the domestic trade.

Chemical Tanker - refers to a ship constructed or adopted for the carriage in bulk of any liquid products listed in Chapter 17 of the International Bulk Chemical Code or its subsequent amendments.

Classification Society - refers to a non-stock, non-profit organization composed of committees represented by engine builders, shipowners, shipbuilders and underwriters.

Collision Bulkhead - refers to a watertight bulkhead fitted up to the freeboard deck. This is located at a distance from the forward perpendicular of not less than 5% and

not more than 8% of the length of the ship.

COLREG - refers to the International Regulations for Preventing Collisions at Sea, 1972, as amended.

Column-Stabilized Unit - refers to a unit with the main deck connected to the underwater hull or footings by columns or caissons.

Combination Carrier - refers to a ship designed to carry either oil or solid cargoes in bulk.

Company - refers to any shipowner/operator/manager, bareboat charterer and any other entity who has assumed the responsibility for the operation of a Philippine registered ship(s) and who on assuming such responsibility has agreed to take over all duties and responsibilities imposed by the ISM Code; or by this Authority.

Construction Certificate - refers to the certificate issued by the Administration up on completion of the periodic survey and issuance of Builder's Certificate by the Shipyard Shipbuilder.

Continuous "B" Class Ceilings or Linings - refers to those "B" class ceilings or linings which terminate only at an "A" or "B" class division.

Continuous Radio Watch - refers to the watch concerned which shall not be interrupted other than for brief intervals when the ship's receiving capability is impaired or blocked by its own communications or when the facilities are under the periodical maintenance or checks.

Control Stations - refers to those spaces in which the craft radio or navigating equipment or the emergency source of power and emergency switchboard are located, or where the fire recording or fire control equipment is centralized, or where other functions essential to the safe operations of the craft, such as propulsion control, public access, stabilization systems, etc., are located.

Load line Convention - refers to International Convention on Load lines (ICLL) 1966 as amended.

Corrosive - refers to any dangerous article which when in contact with living tissues will cause severe damage of such tissue by chemical action, or in case of leakage will materially damage or destroy other freight by chemical action with organic matter or with certain chemicals.

Crew - refers to all persons carried on board the units to provide navigation and maintenance of the unit, its machinery, systems, and arrangements essential for propulsion and safe navigation or to provide services for other persons on board.

Damage Stability - refers to a ship in the assessed "Worst Intact Condition", analytically damaged by opening various combinations of watertight compartments to the sea. The number of compartments and their location are prescribed by IMO regulations, SOLAS conventions, or other applicable rules. Typically these conditions are identified by the compartment(s) damaged.

Dangerous Cargo - refers to goods or merchandise in the form of solids, gases or liquids, which exhibit dangerous properties and are taken on-board a ship.

Dangerous Cargo Manifest - refers to information concerning marks and numbers on cargo packages. It also contains full particulars of ship, voyage, crew, passengers and cargo.

Date of Launching - refers to the date when a newly – built ship is released into the water.

Dead Ship Condition - refers to the condition under which the main propulsion plant, boilers and auxiliaries are not in operation due to the absence of power.

Deadweight - refers to the difference in tons between the displacement of a ship in water of a specific gravity of 1.025 at the load waterline corresponding to the assigned summer freeboard and the lightweight of the ship.

Deadweight (Dwt) - refers to use in these Rules, means the difference, in tonnes (tons), between the displacement of a barge in water of specific gravity 1.025 at the assigned summer load line and the lightweight of the barge.

Deck Officer - refers to a duly licensed officer in the deck department performing navigational watch; or refers to an officer qualified in accordance with the provisions of Chapter II of the STCW Convention.

Deck Planking - refers to the top water tight skin of the boat bounded by the side shell.

Deletion - refers to the cancellation of a ship's registry from the Register of Philippine Ships and termination of its trading status in the domestic shipping trade.

Depth - refers to the molded depth, in meters (feet), measured at amidships from the molded baseline to the molded line of the strength deck plating at the side of the ship.

Depth of Freeboard (D) - refers to:

the moulded depth amidships, plus the thickness of the freeboard deck stringer plate, where fitted, plus T IX (L-S) ÷ L if the exposed freeboard deck is sheathed, where:

- L-is the length as defined;
- T-is the mean thickness of the exposed sheathing clear of deck openings, and
- S-is the total length of superstructures as defined.

in a ship having a rounded gunwale with a radius greater than four percent of the breadth (B) or having topsides of unusual form is the depth for freeboard of a ship having mid-ship section with vertical topsides and with the same round of beam and area of topside section equal to that provided by the actual mid-ship section.

Depth, D - refers to the distance, in meters, at a midships, measured from the bottom of the keel, or ballast keel, if fitted, to the top of the upper deck or gunwale at side.

Detection - refers to the determination of the location of survivors or survival craft.

Diving System - refers to the plant and equipment necessary for the safe conduct of diving operations from a mobile offshore drilling unit.

Document of Compliance (DOC) - refers to the document issued to a company complying with the requirements of the ISM Code.

Domestic Operation - refers to the utilization of all types of ships within Philippine waters.

Double Bottom - refers to general term for all watertight spaces contained between the outside bottom plating, the tank top, and the margin plates. The double bottom is subdivided into number of compartments called “tanks” which may contain water ballast, oil fuel, boiler feed water or drinking water according to requirements; or refers to the space between the bottom of cargo tanks and the moulded line of the bottom shell plating.

Double Ended Rake Barge - refers to a barge with similar rakes at each end and fitted with towing bitts arranged in such a manner that the barge in normal circumstances may be towed from either end. Each end of barges with this configuration is to be considered as the forward end in the application of these Rules.

Double Hull - refers to a ship constructed with wing tanks or spaces that extend to the full depth of the ship or from the top of the double bottom to the uppermost deck, and arranged such that the cargo tanks are located inboard of the moulded line of the side shell plating and has a double bottom tank.

Down Flooding - refers to any flooding of the interior of any part of the buoyant structure of a unit through openings which cannot be closed watertight or weathertight, as appropriate, in order to meet the intact or damage stability criteria, or which are required for operational reasons to be left open.

Draft - refers to the molded draft, in meters (feet), from the molded baseline to the summer load line.

Dug-Out (Baul) - refers to the bottom structural member where frames, stem and the stern are fastened

Electrical Technician - refers to a person who is responsible for the maintenance of the electrical and electronic installations of the ship.

Electronic Copy of Ship's Plans and Specifications - refers to the digital document file of the approved ship's plans and specification by the Administration in file format supported by any marine software, AutoCAD or Adobe Portable Document, clear and readable store din CD or USB/flash drives.

Emergency Source of Electrical Power - refers to a source of electrical power, intended to supply the emergency switchboard in the event of failure of the supply from the main source of electrical power.

Emergency Switchboard - refers to a switchboard which, in the event of failure of the main system of electrical power supply, is directly supplied by the emergency source of electrical power and/or the transitional source of emergency power and is intended to distribute electrical energy to the emergency services.

Enclosed Spaces - refers to a spaces delineated by floors, bulkheads and/or decks which may have doors or windows.

Existing ship - refers to a ship which is not a new ship.

Fast Craft - refers to a craft other than Category HSC that is:

- capable of a maximum service speed below 25 knots;
- in the event of damage, disabling any essential machinery and safety systems in one compartment, the craft retains the capability to navigate safely;

Fire Safety Systems Code - refers to the International code for Fire Safety Systems as adopted by the Maritime Safety Committee of the Organization by resolution MSC. 98(73), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I thereof.

Fire-Resisting Divisions - refers to those divisions formed by bulkheads and decks which comply with the following:

- They shall be constructed of non-combustible or fire-restricting materials which by insulation or inherent fire-resisting properties satisfy the requirements.
- They shall be suitably stiffened.
- They shall be so constructed as to be capable of preventing the passage of smoke and flame up to the end of the appropriate fire protection time.
- Where required they shall maintain load-carrying capabilities up to the end of the appropriate fire protection time.
- They shall have thermal properties such that the average temperature on the unexposed side will not rise more than 140°C above the original temperature, nor will the temperature, at any one point, including any joint, rise more than 180°C above the original temperature during the appropriate fire protection time.
- A test of a prototype bulkhead or deck in accordance with the Fire Test Procedures Code shall be required to ensure that it meets the above requirements.

Fire-Restricting Materials **-** refers to those materials which have properties complying with the Fire Test Procedures Code.

Fishing Vessel **-** refers to a ship used for catching fish or other living resources of the sea, or other ships that assist in catching resources of the sea such as Sonar and Lighters excluding fish carriers, water and oil tankers and supply ships.

Flashing light - refers a light flashing at regular intervals at a frequencies of 120 flashes or more per minute.

Flashpoint - refers to the temperature in degrees Celsius (closed cup test) at which a product will give off enough flammable vapor to be ignited, as determined by an approved flashpoint apparatus.

Floater - refers to long thin floating canoes or cluster of bamboos or other similar buoyant materials held by outrigger used to prevent a boat from capsizing.

Float-Free - refers to launching is that method of launching a survival craft whereby the craft is automatically released from a sinking ship and is ready to use.

Forecastle Deck - refers to the deck above the freeboard deck forward to which the side shell plating extends.

Freeboard - refers to the distance measured vertically, downwards amidships from the upper edge of the deck line to the upper edge of the assigned maximum load marking.

Freeboard Deck - refers to the uppermost deck having permanent means for closing all

FSS Code - refers to the International Code for Fire Safety Systems, adopted by the Maritime Safety Committee of the Organization by resolution MSC.98 (73), as amended.

FTP Code - refers to the International Code for Application of Fire Test Procedures, adopted by the Maritime Safety Committee of the Organization by resolution MSC.61 (67), as amended.

Function - refers to a group of task, duties and responsibilities as specified in the STCW Code, necessary for ships operation, safety of life at sea or protection of the marine environment.

Gas Carrier - refers to a ship constructed or adopted for the carriage in bulk of any liquefied gas or other products listed in chapter 19 of the International Gas Carrier Code or its subsequent amendments.

Gastight Door - refers to a solid, close-fitting door designed to resist the passage of gas under normal atmospheric conditions.

Gross Tonnage - refers to the tonnage as measured in accordance with the International Tonnage Convention, 1969, and for ships of less than 24 m in length in accordance with these Rules and Regulations.

Hazardous Areas - refers to all those areas where, due to the possible presence of a flammable atmosphere arising from the drilling operations, the use without proper consideration of machinery or electrical equipment may lead to fire hazard or explosion.

Hazardous Cargo - refers to any harmful, noxious or other substance, goods or merchandize in the form of solids, gases or liquids which exhibit dangerous properties which, if introduced to the sea, may cause pollution; or can be used in lieu of Dangerous Cargo.

Heavy Grade Oil - refers to crude oils having a density at 15°C higher than 900kg/m³ fuel oils having either a density at 15°C higher than 900kg/ m³ or a kinematic viscosity at 50°C higher than 180 mm²/s; or bitumen, tar and their emulsions.

Height above the hull - refers to height above the upper most continuous deck. This height shall be measured from the position vertically beneath the location of the light.

Helideck - refers to a purpose-built helicopter landing platform located on a mobile offshore drilling unit (MODU).

High-Speed Craft Code, 2000 (2000 HSC Code) - refers to the International Code of Safety for High-Speed Craft, 2000, adopted by the Maritime Safety Committee of the Organization by resolution MSC.97(73), as may be amended by the Organization.

Homeport - refers to the port where the ship is registered.

High Speed Crafts (HSC) – is a craft capable of maximum speed in meters per second (m/s) equal to exceeding.

3.70 ▼ 0.1667

where ▼ = Displacement corresponding to the design water line in M3 The above definition notwithstanding the minimum service speed of the craft shall at least be 25 knots. Existing craft constructed under the DSC Code may qualify as a HSC upon satisfaction of the foregoing definition.

IACS - refers to International Association of Classification Societies.

IMDG Code - refers to the International Maritime Dangerous Goods Code, adopted by the Maritime Safety Committee by resolutions MSC.122 (75), as amended.

IMO - refers to the International Maritime Organization;

Industrial Machinery and Components - refers to the machinery and components which are used in connection with the drilling operation.

Inflammable/Flammable - refers to capable of being set on fire, easily kindled, combustible.

Inflatable Liferaft - refers to a life-saving appliance which depends upon non-rigid, gas-filled chambers for buoyancy and which is normally kept uninflated until ready for use.

International Bulk Chemical Code (IBC Code) - refers to the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

International Gas Carrier Code (IGC Code) - refers to the International Code for the Construction and Equipment of Ships Carrying Liquefied Gasses in Bulk

International Safety Management (ISM) Code - refers to the International Safety Management Code for the Safe Operation of Ships and for Pollution Prevention as adopted by the IMO in Resolution A.741 (18);

International Trade - refers to any operation of a ship outside Philippine waters.

International Voyages - refers to a voyage from a country, to which the International Convention on Safety of Life at Sea, 1974, as amended, applies, to a port outside such country or conversely.

ISM Code Certification - refers to the issuance of the Document of Compliance (DOC) to a company and the Safety Management Certificate (SMC) to a ship of the company which involves verification carried out at the request of the company to the Administration or the ROs;

Label - refers to the prescribed caution label required to be affixed to the containers of dangerous cargoes.

Launching Appliance or Arrangement - refers to a means of transferring a survival craft or rescue boat from its stowed position safely to the water.

Length (L) - refers to a measured in meter is 96% of the total length on a waterline at 85% of the least moulded depth measure from the top of the keel, or the length from the fore-side of the stern to the axis of the rudder stock on that waterline, if that be greater. In ships designed with a rake of keel the waterline on which this is measure shall be parallel to the designated waterline; or refers to the same meaning as defined in regulation 3 of the 1988 LL Protocol.

Length Overall (LOA) - refers to a distance, in meters, measured parallel to the static load waterline from the foreside of the stem to the after side of the stern or transom, excluding rubbing strakes and other projections.

Lightweight - refers to the displacement of a unit in tonnes without variable deck load, fuel, lubricating oil, ballast water, fresh water and feedwater in tanks, consumable stores, and personnel and their effects.

Load Line Certificate - refers to the Certificate issued by the Administration pursuant to these rules and regulations which indicate the assigned freeboards and load line marks.

Load line Assignor - refers to the Administration or its Recognized Organization to assign freeboard.

Locating - refers to the finding of ships, aircraft, units or persons in distress.

Low Flame Spread - refers to the surface thus described will adequately restrict the spread of flame, this being determined to the satisfaction of the Administration by an established test procedure, the Fire Test Procedures Code; or refers to the same meaning as defined in SOLAS regulation II-2/3.

LSA Code - refers to the International Life-Saving Appliance Code, adopted by the Maritime Safety Committee by resolution MSC.48 (66), as amended.

Machinery Space - refers to be taken as extending from the moulded base line to the margin line and between the extreme main transverse watertight bulkheads, bounding the spaces containing the main and auxiliary propulsion machinery, boilers serving the needs of propulsion, and all permanent bunker spaces; or refers to are all machinery spaces of category A and all other spaces containing propelling machinery, boilers and other fired processes, oil fuel units, steam and internal combustion engines, generators and major electrical machinery, oil filling stations, refrigerating, stabilizing, ventilation and air-conditioning machinery and similar spaces; and trunks to such spaces.

Machinery Spaces of Category A - refers to those spaces and trunks to such spaces which contain:

- internal combustion machinery used for main propulsion;
- internal combustion machinery used for purposes other than main propulsion where such machinery has in the aggregate a total power output of not less than 375 KW; or any oil-fired boiler or oil fuel unit.
- and trunks to such spaces.

Main Source of Electrical Power - refers to a source intended to supply electrical power to main switchboard for distribution to all services necessary for maintaining the ship in normal operational and habitable condition.

Main Steering Gear - refers to the machinery, rudder actuators, steering gear power units, if any, and ancillary equipment and the means of applying torque to the rudder stock (e.g. tiller or quadrant) necessary for effecting movement of the rudder for the purpose of steering the ship under normal service conditions.

Main Switch Board - refers to a switchboard which is directly supplied by the main source of electrical power and is intended to distribute electrical energy of the ship's services.

Maritime Safety Information - refers to navigational and meteorological warnings, meteorological forecasts and other urgent safety related messages broadcast to ships.

MARPOL 73/78 - refers to the International Convention for the Prevention of Pollution from Ships, 1973 and its Protocol of 1978, as amended.

Master - refers to the person having command of a ship.

Masthead light - refers to a white light placed over the fore and aft centerline of the vessel showing an unbroken light over an arc of the horizon of 225 degrees and so fixed as to show the light from right ahead to 225 degrees abaft the beam on either side of the vessel.

Maximum a Stern Speed - refers to the speed which it is estimated the ship can attain at the designated maximum astern power at deepest seagoing draught.

Maximum Ahead Service Speed - refers to the greatest speed which the ship is designed to maintain in service at sea at the deepest seagoing draught.

Medical Practitioner - refers to a registered Doctor of Medicine in charge of the medical department of a ship.

Miscellaneous Ship - refers to all other ships not falling under any classes of ship identified under Regulation I/5 paragraph 4.2 of the RPMMRR 1997 to include wing-in-ground (WIG) amphibian submarine hydrofoil hovercraft floating restaurants and tandem pushboat.

Mobile Offshore Drilling Unit (MODU) *or Unit* - refers to a vessel capable of engaging in drilling operations for the exploration for or exploitation of resources beneath the seabed such as liquid or gaseous hydrocarbons, sulphur or salt.

Mode of Operation - refers to a condition or manner in which a unit may operate or function while on location or in transit. The modes of operation of a unit include the following:

Modification - refers to the process of replacing major propulsion machinery to include major auxiliaries; modifying the superstructure such as construction of additional deck above main deck; and other similar process.

Molded Baseline - refers to a horizontal line extending through the upper surface of the bottom shell plating at the centerline, amidships.

Motor Boat - refers to watercraft with size up to 30 meters in length, propelled by mechanical means with or without outriggers.

Moulded Depth - refers to the vertical distance measure from the top of the keel to the top of the freeboard deck beam at side. In wood and composite ships the distance is measured from the lower edge of the keel rabbet. Where the form at the lower part of the midship section is of hollow character, or where thick garboards are fitted, the distance is measured from the point where the line of the flat of the bottom continued inwards cuts the side of the keel;

NAVTEX Service - refers to the coordinated broadcast and automatic reception on 518 KHz of maritime safety information by means of narrow-band direct-printing telegraphy using English language.

Near Coastal Voyage - refers to a short international voyage which covers a maximum distance of 200 nautical miles from the Philippine baseline on voyage

which by reciprocal agreement of the Philippines and another state is considered or treated as coastwise voyage.

New Ship - refers to:

- a ship the keel of which is laid down on or after the effectivity of these Rules and Regulations.
- a ship changing to Philippine registry.
- an existing ship which undergoes major conversion as to:
  - substantially alter the dimensions or carrying capacity of the ship; or
  - change the type of the ship; or
  - which in the opinion of the Administration is substantially to prolong its life; or
  - otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of these Rules and Regulations not applicable to it as an existing ship.

NLS tanker - refers to defined in Annex II of the present MARPOL Convention and any gas carrier as defined in Regulation 8.20 of Chapter II-1 of SOLAS '74 (as amended), when carrying a cargo or part cargo of oil in bulk.

Non-Combustible Material - refers to a material which neither burns nor gives off flammable vapors in sufficient quantity for self-ignition when heated to approximately 750°C, this being determined to the satisfaction of the Administration by an established test procedure. Any other material is a combustible material, Fire Test Procedures Code.

Non-Convention Sized Ships - refers to ships not covered by the International Convention for the Safety of Life at Sea, 1974, as amended.

Non-metallic Material Ships - refers to ships that are made of wood, FRP (Fiber Re-enforced Plastic), Ferro cement, or a combination of steel hull and other materials, if the steel hull is underwater.

Non-propelled Barge - refers to a ship not propelled by any mechanical means used to carry dry cargoes such as steel billets, pipes, industrial machineries and equipment, electrical cables, etc. and/ or dry solid bulk cargoes such as grains, wheat, coal, gravel, silica, etc.

Normal Operational and Habitable Conditions - refers to conditions under which the unit as a whole, its machinery, services, means and aids ensuring safe navigation when underway, safety when in the industrial mode, fire and flooding safety, internal and external communications and signals, means of escape and winches for rescue boats, as well as the means of ensuring the minimum comfortable conditions of habitability, are in working order and functioning normally; and drilling operations.

Officer - refers to a member of the crew, other than the master, who has been designated as such national law or section or, in the absence of such designation, by collective agreement or custom.

Oil Fuel Unit - refers to the equipment used for the preparation of oil fuel for

delivery to an oil-fired boiler, or equipment used for the preparation for delivery of heated oil to an internal combustion engine, and includes any oil pressure pumps, filters and heaters dealing with oil at a pressure more than 0.18 N/m^2. Oil transfer pumps are not considered oil fuel units.

Oil Tanker - refers to a ship constructed or adapted primarily to carry oil in bulk in its cargo spaces and includes combination carriers, any "NLS tanker" as defined in Annex II of the present MARPOL Convention and any gas carrier as defined in Regulation 8.20 of Chapter II-1 of SOLAS '74 (as amended), when carrying a cargo or part cargo of oil in bulk.

Operating Conditions - refers to conditions wherein a unit is on location for the purpose of conducting drilling operations, and combined environmental and operational loadings are within the appropriate design limits established for such operations. The unit may be either afloat or supported on the seabed, as applicable.

Operating Stations - refers to a confined area of the operating compartment equipped with necessary means for navigation, maneuvering, and communication, and from where the functions of navigating, maneuvering, communication, commanding, conning and lookout are carried out.

Operational Level - refers to the responsibility associated with:

- officer-in-charge of a navigational or engineering watch or as designated duty engineer for periodically unmanned machinery spaces or as radio operators on board a seagoing Tugboat; and
- maintaining direct control over the performance of all functions within the designated area of responsibility in accordance with proper procedures and under the direction of an individual serving in the management level for that area of responsibility

Operational Speed - refers to 90% of the maximum speed;

Organization - refers to the International Maritime Organization (IMO).

Outrigger - refers to a beam projected outward from the side of a boat to secure the masts, sailor hold a floater.

Oxidizing - refers to the conversion into an oxide, to change as a compound so that the valence of the positive element is made higher.

Package Form - refers to the forms of containment specified for harmful substances in the IMDG Code.

Packaging - refers to the assembly of components necessary to enclose the contents completely. It may, in particular, consist of one or more receptacles, absorbent materials, spacing structures, radiation shielding and service equipment for filling emptying, venting and pressure relief; devices for cooling, absorbing mechanical shocks, handling and tie-down, thermal insulation; and service devices integral to the package. The packaging may be a box, drum or similar receptacles, or may also be a freight container, tank or intermediate bulk container.

Paramedic - refers to a person trained to assist medical professional and give emergency medical treatment; or refers to are auxiliary medical personnel such as midwives, or nurses with special training on administering first aid.

Passenger - refers to any person carried on board a ship except:

- the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship;
- a person on board and carried either because of the obligation laid upon the master to carry shipwrecked, distressed or other person by reason of force majeure;
- a child under one year of age.

Passenger Ship - refers to any ship authorized by the Administration to carry passengers.

Periodic Survey - refers to the complete examination of the hull structure, machinery, among others during the different stages of construction, conversion, alteration, modification or re-building of ship to as certain that the ship is constructed, converted, altered or modified in accordance with the approved plans.

Permeability - refers to a space is the ratio of the volume within that space which is assumed to be occupied by water to the total volume of that space.

Perpendiculars - refers to the forward and after perpendiculars taken at the forward and after ends of the length (L). The forward perpendicular shall coincide with foreside of the stem on the waterline on which the length is measured.

Place of Refuge - refers to any naturally or artificially sheltered area which may be used as a shelter; by a craft under conditions likely to endanger its safety.

Plank Sheer (Sintas) - refers to longitudinal upper structural member of the boat.

Plans and Specifications - refers to plans showing the detailed drawings of each specific plan of the ship.

Public Spaces - refers to those spaces allocated for the passengers and include bars, kiosks, smoke rooms, main seating areas, lounges, dining rooms, recreation rooms, lobbies, lavatories and similar permanently enclosed spaces allocated for passengers.

Radio Officer - refers to a person holding an appropriate license issued by the National Telecommunications (NTC) or issued and recognized by the Administration under the provisions of the Radio Regulations Act.

Radio Regulations - refers to the Radio Regulations annexed to, or regarded as being annexed to, the most recent National Regulations and International Telecommunication Convention which is in force at any time.

Radioactive material - refers to any material the specific gravity of which is greater that of 0.002 micro curie per gram.

Radiotelephone Auto Alarm - refers to an approved automatic alarm receiving apparatus which responds to the radiotelephone alarm signal.

Radiotelephone Station and Radiotelephone Installation - refers to be considered as relating to the medium frequency band, unless expressly provided otherwise.

Rating - refers to a member of the ship's crew other than the master or an officer performing deck or engine watchkeeping duties.

Re-building - refers to an existing ship subjected to changes specifically there-plating of its hull/superstructure and replacement of its main engine in order to

substantially prolong its operating life to such an extent of at least 85% of its total hull has been replaced including its main engine.

Recognized Organization- refers to the organization recognized by the Administration.

Rescue Boat - refers to a boat designed to rescue persons in distress and to marshal survival craft; or refers to the same meaning as defined in SOLAS regulation III/3.

Retro-Reflective Material **-** refers to a material which reflects in the opposite direction a beam of light directed on it.

Ro-Ro Cargo Ships - refers to ships specifically designed to carry wheeled and tracked vehicles and all or most of its cargo. Vehicles are driven or towed on and off the ship excluding passenger buses by means of either the ship's own ramps or shore base ramps.

Ro-Ro Cargo Spaces - refers to spaces not normally subdivided in any way and normally extending to either a substantial length or the entire length of the ship in which motor vehicles with fuel in their tanks for their own propulsion and/or goods can be loaded and unloaded normally in a horizontal direction.

Ro-Ro Passenger Ship - refers to a passenger ship with ro-ro cargo spaces or special category spaces are ships specifically designed to carry passengers and wheeled or tracked vehicles below 4 hours travel time. Vehicles are driven or towed on and off the ship to include passenger buses by means of either the ships owned ramps or shore base ramps.

Safe Manning **-** refers to the number of qualified, competent, and certificated officers and ratings on-board a ship who can safely operate her at all times.

Safety Certificate - refers to a certificate issued after inspection and survey by the Administration to ships engaged in voyages in Philippines waters complying with these Rules and Regulations.

Safety Management Certificate (SMC) - refers to the document issued to a ship after verification that the company and its shipboard management operate in accordance with the approved SMS.

Safety Management System (SMS) - refers to a structured and documented system enabling company personnel to effectively implement the company's safety and environmental protection policy.

Satisfaction of the Administration - refers to clarification or explanation concerning technical or other matters elaborated by an independent committee created by the Administration.

Self-Elevating Unit - refers to a unit with movable legs capable of raising its hull above the surface of the sea and lowering it back into the sea.

Self-Propelled Barge **-** refers to a ship which has its own mechanical means of propulsion.

Semi-Enclosed Locations - refers to locations where natural conditions of ventilation are notably different from those on open decks due to the presence of structures such as roofs, windbreaks and bulkheads and which are so arranged that dispersion of gas may not occur.

Service Spaces - refers to those used for galleys, pantries containing cooking appliances, lockers and store-rooms, workshops other than those forming part of the machinery spaces, and similar spaces and trunks to such spaces.

Severe Storm Conditions - refers to conditions wherein a unit may be subjected to the most severe environmental loading for which the unit is designed. Drilling operations are assumed to have been discontinued due to the severity of the environmental loading. The unit may be either afloat or supported on the seabed, as applicable.

Ship Construction - refers to a process of shipbuilding using modular block system, tradition method and other methods accepted for shipbuilding for new ships.

Ship Conversion - refers to the process of changing ship type and service; increasing maximum allowable draft; and other similar process.

Ship or Vessel - may be used interchangeably and shall mean any kind, class or type of craft or artificial contrivance capable of floating in water, designed to be used, or capable of being used, as a means of floating in water transport in the domestic trade for the carriage of passengers or cargo, or both, utilizing its own motive power or that of another.

Ship Plans Approval - refers to the process of reviewing and evaluating the plans based on the applicable rules and regulations by the Administration.

Ship Radar Reflector (SRR) - refers to a device that enables detection of ships navigating by radar on 9GHz and 3GHz bands.

Short International voyage - refers to an international voyage in the course of which a vessel is not more than 200 nautical miles from a port or place where the passengers and crew could be landed safely, and which does not exceed 600 nautical miles in distance between the last port call in the country in which the voyage begins and the final port of destination.

Side Shell - refers to the watertight skin of the boat supported by stiffeners and frames.

Side Shell Plating Amidships - refers to the plating of the side shell from the upper turn of the bilge to the deck at the side between 0.2L forward and 0.2L aft of amidships.

Sidelights - refers to a green light on the star board side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on its respective side. In a vessel of less than 20 meters in length the side lights may be combined in one lantern carried on the fore and aft centerline of the vessel. (On the star board side a light fixture showing GREEN, and on the port side showing RED).

Single Bottom - refers to vessel which has no inner bottom or tank top.

Single Hull - refers to a vessel with no wing tanks and/or no double bottom tanks.

SOLAS 1974 - refers to the International Convention for the Safety of Life at Sea, 1974, as amended.

Special Category Spaces - refers to those enclosed vehicle spaces above and below the bulkhead deck, into and from which vehicles can be driven and to which passengers have access. Special category spaces may be accommodated on more

than one deck provided that the total overall clear height for vehicles does not exceed 10 m.

Special Personnel - refers to all persons who are not special purpose ships or members of the crew or children of under one year of age and who are carried on board in connection with the special purpose of that ship or because of special work being carried out aboard that ship. Wherever in this Rules and Regulations the number of special personnel appears as parameter, it should include the number of special purpose ships carried on board which may not exceed 12; or refers to be able bodied with fair knowledge of the layout of the ship and to have received some training in safety procedures and the handling of the ship's safety equipment before leaving port and include the following:

- scientists, technicians and expeditionary on ship engaged in research, non-commercial expeditions and survey;
- personnel engaging in training and practical marine experience to develop seafaring skills suitable for a professional career at sea. Such training should be in accordance with a training program approved by the Administration;
- personnel who process the catch of fish, whales or other living resources of the sea on factory ships not engage on catching.
- salvage personnel on salvage ships, cable-laying personnel on cable-laying ships, seismic personnel on seismic survey ships, diving personnel on diving support ships, pipe-laying personnel on pipe-layers and crane operating personnel on floating cranes; and
- other personnel similar to those referred to in .1 to .4 who, in the opinion of the Administration, may be referred to this group.

Special Purpose Ship - refers to a mechanically self-propelled ship which by reason of its function carries on board more than 12 special personnel including passengers. Special purpose ships to which these Rules and Regulation apply to type of ships mentioned in the said regulation to include Power Barges and Mobile Offshore Drilling Unit (MODU); or refers to every person other than:

- the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship; and
- a child under one year of age.

Stability Booklet - refers to the booklet of stability information for intact and damage conditions provided onboard to enable the master obtain accurate data as to the stability of the ship under varying conditions of service.

Standard Fire Test - refers to the same meaning as defined in SOLAS regulation II-2/3.

STCW Code - refers to the Seafarer's Training Certification and Watch keeping (SCTW) Code as adopted by the 1978 STCW Convention, as amended.

STCW Convention - refers to the International Convention on Standards of Training, Certification and Watch keeping of Seafarers, 1978/95.

Steel or Equivalent Material - refers to the same meaning as defined in SOLAS

regulation II-2/3.

Steering Gear Power Unit - refers to the case of:

- electric steering gear, an electric motor and its associated electrical equipment;
- electro hydraulic steering gear, an electric motor and its associated electrical equipment and connected pump;
- other hydraulic gear, a driving engine and connected pump.

Stern light - refers to a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of135degree and so fixed as to show the light 67.5 degrees from right aft on each side of the vessel.

Superstructure - refers to a decked structure on the freeboard deck, extending from side to side of the ship or with the side plating not being inboard of the shell plating more than four percent of the breadth (B). A raised quarter deck is regarded as a superstructure.

Surface Unit - refers to a unit with a ship- or barge-type displacement hull of single or multiple hull construction intended for operation in the floating condition.

Survival Craft - refers to a craft provided for accommodating the persons on board in the event of abandonment of the ship and includes lifeboats, liferafts and any other craft approved as suitable for the protection and preservation of persons in such circumstances; or refers to the same meaning as defined in SOLAS regulation III/3.

Tampering or Alteration of Load Line Marks - refers to no deck line, line indicating a load line, load line mark or the identifying letter marked on a ship has been concealed, defaced/obliterated, altered or removed.

Tanker - refers to ship constructed or adopted for the carriage in bulk of liquid cargoes of an inflammable nature; or refers to ships design to carry liquid cargoes in bulk, flammable liquid or liquefied flammable gas unless otherwise stated.

Tanker Barge - refers to the general name given to a flat-bottomed, propelled or non-propelled, rigged or unrigged craft of full body and heavy construction especially adapted for the transport and/or storage of oil, chemical, noxious liquid substance (nls), gasses and other inflammable, hazardous and pollutant cargo.

Ton - refers to the term Ton (Lt), as contained within these Rules, refers to a long ton of 2240 lbs.

Towing light - refers to a yellow light having the same characteristics as the "stern light" defined

T*raining Program* - refers to a defined course of instruction and practical experience in all aspects of ship operations, similar to the basic safety training as offered by the various maritime institutions in the country.

Truss - refers to a system of internal framing members comprised of top and bottom chords extending either fore and aft or athwartships in association with regularly spaced stanchions and diagonals. The spacing of the stanchions generally is not to exceed the depth of the truss so that the diagonal members will not have angles of inclination with the horizontal less than approximately 45°. A single-laced truss is one

having diagonal bracing in only one direction in each space between stanchions; a double-laced truss in one having diagonal bracing in both directions in each space.

Tugboat - refers to mechanically propelled vessel of small tonnage with little or no cargo capacity, used for towing or assisting vessels at sea, in or out of harbors, rivers, and docks, also for coastal or harbor towage or barges, lighters, and other small craft. Also called towboat, tug.

Vehicle Spaces - refers to cargo spaces intended for carriage of motor vehicles with fuel in their tanks for their own propulsion.

Verification of Compliance with the ISM Code - refers to the systematic and independent examination of the safety management system of a company and its ships to determine whether the policy, procedures and instructions are carried out effectively.

Vessel Age - refers to the age of the vessel reckoned from ship's date of launching based on the Builder's Certificate or Certificate of Vessel Registry.

Visitors - refers to personnel not regularly assigned to the unit.

Waterline Length (LWL) - refers to the distance, in meters, measured on the static load waterline from the foreside of the stem to the after side of the stern or transom.

Watertight - refers to capable of preventing the passage of water through the structure in any direction under a head of water for which the surrounding structure is designed.

Weather deck - refers to the uppermost complete weathertight deck fitted as an integral part of the yacht's structure and which is exposed to the sea and weather.

Weathertight - refers to that in any sea condition water will not penetrate into the ship.

Working spaces - refers to those open or enclosed spaces containing equipment and processes, associated with drilling operations, which are not included in hazardous areas and machinery spaces.

Yield Point - refers to the first stress in a material, less than the maximum obtainable stress, at which an increase in strain occurs without an increase in stress. Yield point may be determined by the halt of the pointer or autographic diagram. The 0.5% total extension under load method will also be considered acceptable.

Yield Strength - refers to the stress at which a material exhibits a specified limiting deviation from the proportionality of stress to strain. Yield strength is to be determined by the 0.2% offset method. Alternatively, for material whose stress-strain characteristics are well known from previous tests in which stress-strain diagrams were plotted, the 0.5% extension under load method may be used.

Chapter II

SHIP SURVEYS AND CERTIFICATIONS

Regulation 1

General Aspects of Surveys/Inspections

1 The inspection and survey of ships, so far as regards the enforcement of the provisions of the present regulations and the granting of exemptions therefrom, shall be carried out by the Administration. The Administration may, however, entrust the inspections and surveys either to a surveyor nominated for the purpose or to a recognized organization.

2 The inspection, surveys and issuance of certificates for Philippine registered ships engage in international trade shall be in accordance with the inspection, survey and certification regime with applicable international Convention.

3 When the nominated surveyor or recognized organization determines that the condition of the ship or its equipment does not correspond substantially with the particulars of the ship safety certificates, or is such that the ship is not fit to proceed to sea without danger to the ship, or persons on board, such surveyor or organization shall immediately ensure that corrective action is taken and should, in due course, notify the Administration. If such corrective action is not taken, the relevant certificate shall be withdrawn immediately.

4 In any case, the Administration shall fully guarantee the completeness and efficiency of the inspections and surveys and shall undertake to ensure that necessary arrangements to satisfy this obligation are established.

Regulation 2

Surveys/Inspections

1 Ships to which these Rules and Regulations apply shall be subject to surveys. The general nature and the frequency of such surveys shall be as specified below.

.1 an initial survey, including an inspection of the outside of the ship's bottom, before the ship is put in service;

.2 an annual survey within three months before or after each anniversary date of the Certificate;

.3 an occasional survey as the occasion arises;

.4 two inspections of the ship's hull, including an inspection of the outside of the ship's bottom, within a five-year period.

.5 periodical survey;

.6 intermediate survey.

2 The surveys referred to in paragraph 1 shall be carried out as follows:

.1 the initial survey before the ship is put into service shall be such as to ensure that arrangements, equipment and systems specified below comply fully with the requirements of these Rules and Regulations and the workmanship of all such parts and equipment is in all respects satisfactory:

.1 the arrangements, materials and scantlings of the structure;

.2 boilers and other pressure vessels;

.3 main and auxiliary machinery;

.4 fire safety systems and appliances and arrangements, navigational equipment, nautical publications, means of embarkation for pilots;

.5 radio installations including those used in life-saving appliances;

.6 arrangements for the control of discharge of oil and for the retention of oil on board;

.7 provision of the lights, shapes, means of making sound signals and distress signals as required by the provisions of COLREG;

.8 the arrangements, materials and scantlings fully comply with the requirements of Chapters III relating to the conditions for assignments of load lines;

.2 the renewal survey shall include an inspection of the equipment referred to in paragraph 2.1 to ensure that it complies with the relevant requirements of these Rules and Regulations and COLREG;

.3 the periodical survey shall include an inspection with tests where necessary of the equipment to ensure that the requirements relating to the life-saving appliances, fire appliances and the light and sound signals are complied with and that they are in satisfactory condition and are fit for the service for which the ship is intended. All certificates, record books, operating manuals and other instructions and documents specified shall be checked for their adequacy.

.4 the intermediate survey shall include an inspection of items relating to the following:

.1 Construction and Equipment
.2 Stability Requirements
.3 Machinery Installation
.4 Electrical Installation
.5 Fire Protection and Fire Extinction
.6 Fire Safety Measures
.7 Life Saving Appliances
.8 Prevention of Marine Pollution

of these Rules and Regulations to ensure that they are in satisfactory condition and fit for the service for which the ship is intended. When inspecting items of hull and machinery for detailed examination, due account shall be taken of any continuous survey schemes adopted;

.5 the annual survey shall include an inspection to ensure that:

.1 the equipment referred to in paragraph 2.1 remains satisfactory for the service for which the ship is intended;

.2 alterations have not been made to the hull or superstructures which would affect the calculations determining the position of the load lines;

.3 the fittings and appliances for the protection of openings, guard rails, freeing ports and means of access to crew's quarters are maintained in an effective condition;

.6 an occasional survey either general or partial, according to the circumstances, shall be made after a repair resulting from investigations whenever an accident occurs to a ship or a defect is discovered, either of which affects the safety of the ship or whenever any important repair or renewals are effectively made;

.7 a minimum of two inspections of the outside of the ship's bottom during any five-year period except where so authorized by the Administration. The interval between any two such inspections shall not exceed 36 months. The inspection of the outside of the ship's bottom and the survey of related items inspected at the same time shall be such as to ensure they remain satisfactory for the service for which the ship is intended. Preferably the inspection shall coincide with the renewal survey.

3 The periodical/intermediate and the annual surveys referred to in this Regulation shall be endorsed on the Certificate.

4 Where a ship complies with this Regulation partially and complies with the relevant provisions of the international conventions specified in Regulation II/1, the Administration shall ensure that prior to issue of any certificate under this Regulation, compliance with such provisions of the other Conventions is assured.

Regulation 3
Maintenance of Condition after Survey

1 The condition of the ship and its equipment shall be maintained by the master and company to conform with the provisions of these Rules and Regulations to ensure that the ship in all respects will remain fit to proceed to sea without danger to the ship, persons on and board or the marine environment.

2 After any survey of the ship under this Chapter is completed, no change shall be made in the structural arrangements, machinery, equipment and other items covered by the survey, without the sanction of the Administration.

3 Whenever an accident occurs to the ship or a defect is discovered, either of which affects the safety of the ship or the efficiency or completeness of its life-saving appliances or other equipment, the owner or the master shall immediately request Administration or the nominated surveyor or recognized organization for additional survey.

Regulation 4
Conversion, Alteration, Modification and Re-Building

1 Ships plans and specifications shall be submitted for approval by the Administration prior construction, conversion, alteration, modifications and re-building. Said Ship Plans shall be signed and sealed by Philippine Registered Naval Architect and Marine Engineer (RENAMARE) and Professional Electrical Engineer (PEE) for electrical plans and must be submitted in three (3) copies (blue or white print copy including electronic copy).

2 As-built Plans shall be submitted to the Administration after completion of construction, conversion, alteration or modification of ships for approval. Any conversion, alteration, modification or re-building of ship shall be subjected to re-admeasurement, re-inclining Experiment Test, re-calculation of freeboard and other re-issuances as required by the Administration.

3 The Administration shall witness the sea trial of the ship after construction, conversion, alteration, modification or re-building that will be supervised and certified by the shipyard.

4 The ships plan and or proposed conversion, alteration, modification or re-building plans of all cargo ships intended to be acquired for importation shall be subjected to pre-evaluation by the Administration prior to the issuance of the Authority to Import. Pre-evaluation shall be governed by a checklist to be formulated by MARINA.

Regulation 5
Issuance or Endorsements of Certificates

1 Subject to the provisions of Regulation II/2, a Ship Safety Certificate, hereinafter called the Certificate, shall be issued after an initial or renewal survey, and specified in Regulation II/2.1.1-4, to a ship which complies with relevant requirements of these Rules and Regulations. In any case the Administration shall ensure the completeness of the inspections prior to the issue of any certificates.

2 The Certificate issued under the provisions of paragraph 1 shall be supplemented by a Record of Equipment.

3 When an exemption is granted by the Administration to a ship under and in accordance with the provisions of these Rules and Regulations, an Exemption Certificate shall be issued in addition to the Certificate prescribed in this Regulation. The Exemption Certificate shall be attached to the certificate to which it refers.

Regulation 6
Duration and Validity of Certificates

1 A passenger ship safety certificate shall be issued for a period not exceeding 12 months. A cargo ship safety construction certificate, cargo ship safety equipment certificate or cargo ship safety certificate shall be issued for a period specified by the administration which shall not exceed five years. An exemption certificate shall not be valid for longer than the period of the certificate to which it refers.

2 Notwithstanding the requirements of paragraph 1, when the renewal survey is completed within three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to:

.1 For a passenger ship, a date not exceeding 12 months from the date of expiry of the existing certificate;

.2 For a cargo ship, a date not exceeding five years from the date of expiry of the existing certificate;

3 When the renewal survey is completed after the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to:

.1 For a passenger ship, a date not exceeding 12 months from the date of expiry of the existing certificate;

.2 For a cargo ship, a date not exceeding five years from the date of expiry of the existing certificate;

4 When the renewal survey is completed more than three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to:

.1 For a passenger ship, a renewal survey, a date not exceeding 12 months from the date of completion of the renewal survey;

.2 For cargo ship, a date not exceeding five years from the date of completion of the renewal survey.

5 If a certificate other than a passenger ship safety certificate is issued for a period of less than five years, the administration may extend the validity of the certificate beyond the expiry date to the maximum period specified in paragraph 1, provided that the surveys referred to in regulations II/2 applicable when a certificate is issued for a period of 5 years are carried out, as appropriate.

6 If a renewal survey has been completed and the new certificate cannot be issued or placed on board the ship before the expiry date of the existing certificate, the person or the organization authorized by the Administration may endorse the existing certificate and such certificate shall be accepted as valid for a further period which shall not exceed one month from the expiry date.

7 If an annual, intermediate or periodical survey is completed before the period specified in the relevant regulations then:

.1 the anniversary date shown on the relevant certificate shall be amended by endorsement to a date which shall not be more than three months later than the date on which the survey was completed.

.2 the subsequent annual or periodical survey required by the relevant regulations shall be completed at the intervals prescribed by these Rules and Regulations using the new anniversary date;

.3 the expiry date may remain unchanged provided one or more annual or periodical surveys, as appropriate, are carried out so that the maximum intervals between the surveys prescribed by the relevant regulations are not exceeded.

8 A certificate issued under this Chapter shall cease to be valid in any of the following cases:

.1 if the relevant surveys and inspection are not completed within the periods specified in this Chapter;

.2 if the certificate is not endorsed in accordance with this Chapter;

.3 upon transfer of the ship to the flag of another State.

9 Upon transfer of a ship to Philippine flag, a new certificate shall only be issued when the Administration is fully satisfied that the ship is in compliance with the requirements of these Rules and Regulations.

10 In case of transfer of ownership to new owner domiciled in the Philippines a new certificate shall be issued under the name of the new owner valid up to the unexpired portion of the existing certificate subject to the required surveys and endorsement.

Regulation 7
Availability of Certificates

The certificates issued under this Chapter shall be readily available on board for examination at all times.

Chapter III

Assignment of Load Line

Regulation 1
General

1 The International Convention on Load Lines (ICLL) 1966, Protocol of 1988, as amended, are hereby adopted to apply to Philippine-registered international or domestic ships 15 meters and above in length. The value of 200 mm in the Convention's tabular freeboard for 24 meters in length shall also be adopted down to 15 meters in length.

2 Ships and barges between 15 m and 24 m in length, to which this Chapter applies, shall not proceed to sea unless surveyed, marked and certified in accordance with the provisions of these Rules and Regulations

3 No domestic ship shall proceed to sea on domestic trading unless it has been surveyed and marked, and issued a Load Line Certificate by the MARINA.

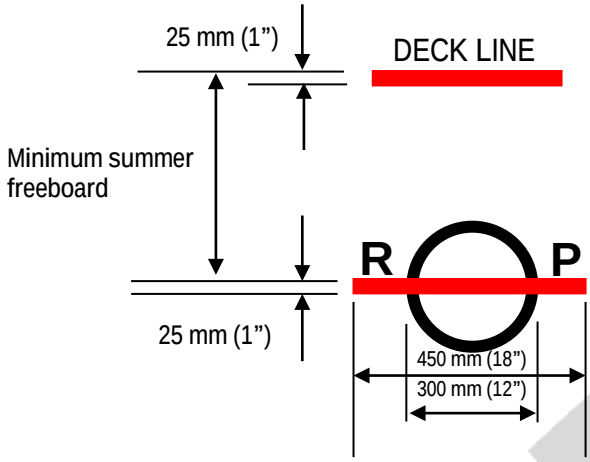
4 Details of Load Line Markings

.1 Deck Line – it is a horizontal line 300mm (12 inches) in length and 25mm (1 inch) in breadth. It shall be marked amidships on each side of the ship, and each upper edge shall normally pass through the point where the continuation outwards of the upper surface of the freeboard deck intersects the outer surface of the shell, provided that the deck line may be placed with reference to another fixed point on the ship on condition that the freeboard is correspondingly corrected. The location of the reference point and the identification of the freeboard deck shall in all cases be indicated on the Load Line Certificate. The ring, lines and letters shall be painted in white or yellow on a dark ground or in black on a light ground. They shall also be permanently marked on the sides of the ships to the satisfaction of the Administration. The marks shall be plainly visible and, if necessary, special arrangements shall be made for this purpose.

.2 Load Line Mark – The load line mark shall consist of a ring 300mm (12 inches) in outside diameter and 25mm (1 inch) wide which is intersected by a horizontal line 450mm (18 inches) in length and 25mm (1 inch) in breadth, the upper edge of which passes through the center of the ring. The center of the ring shall be placed amidships and at a distance equal to the assigned summer freeboard measured vertically below the upper edge of the deck line.

.3 The Ring – The ring, lines and letters shall be painted in white or yellow on a dark background or in black on a light background. They shall also be permanently marked on the sides of the ships to the satisfaction of the Administration. The marks shall be plainly visible and, if necessary, special arrangements shall be made for this purpose.

.4 Load Line Mark Illustration :



5 In cases where a MARINA authorized Load Line Assignor or Recognized Organization undertake the survey, assignment and marking of load line, it shall guarantee the completeness and efficiency of the survey, inspection and marking, subject to the verification and approval by the Administration. A MARINA Surveyor shall be present during the conduct of the survey by the authorized load line assignor/recognized organization to ensure compliance with the ILCC and this Circular, with the concerned load line assignor/recognized organization assuming the responsibility to ensure strict observance of this requirement.

6 A new Load Line Certificate shall be issued if there are changes in the ship's name, distinctive numbers or letters and homeport.

7 A Load Line Certificate shall be valid for a period not exceeding five (5) years from the date of issue. It shall be endorsed annually by the MARINA, and ceases to be valid if no endorsement has been made. A Load Line Certificate issued upon recommendation of a recognized organization shall likewise be endorsed by the Administration.

8 A Certificate not endorsed after three (3) months of its anniversary date of issuance shall cease to be valid, in which case, a new Certificate will need to be issued upon application and completion of an afloat survey, and the new Certificate to be issued shall have the same expiry as the previous Certificate.

9 Other Safety Certificate(s) shall not be issued/ renewed if the ship has no Load Line Certificate or if the Load Line Certificate ceases to be valid.

10 If the Load Line Certificate ceases to be valid or cancelled by virtue of Article 19, Sec. 3 of the ILLC, as officially ordered by the Administration, the other Safety Certificate(s) issued to the ship is/are deemed automatically suspended and the ship is under a "no sail condition". The cessation of validity of the Load Line Certificate and suspension of other Safety Certificate(s) is effected by the issuance of an Order by the MARINA, based on the report and recommendation of the Shipyard Regulation Office/Maritime Regional Offices or the Enforcement Office, as indorsed by the former.

11 The Master of the ship under a "no sail condition" is under obligation to warrant that such ship shall not proceed to voyage.

Regulation 2
Submersion

1 Except as provided in Regulation 1.5, the appropriate load lines on the sides of the ship corresponding to the season of the year and the zone or area in which the ship may be, shall not be submerged at any time when the ship is put to sea, during the voyage or on arrival.

2 When a ship is in fresh water of unit density, the appropriate load line may be submerged by the amount of fresh water allowance shown on the appropriate certificate issued under the provision of these Rules and Regulations. Where the density is other than unity, an allowance shall be made proportional to the difference between 1.025 and the actual density.

3 When a ship departs from a port situated on a river or inland waters, deeper loading shall be permitted corresponding to the weight of fuel and all other materials required for consumption between the point of departure and the sea.

Regulation 3
Survey and Certification

1 The Administration shall henceforth principally undertake the conduct of survey/inspection, assignment and marking of load lines and issuance of Load Line Certificates, through its Registered Naval Architect (RENA).

2 The MARINA and its duly- authorized entities shall ensure that ships holding a valid Load Line Certificate is not loaded beyond the limit allowed in the Certificate, and the position of the Load Line of the ship also corresponds with the specification in the Certificate.

3 MARINA or the accredited Load Line Assignor shall survey the ship to ascertain the following:

.1 Whether the ship complies with the requirements as applicable to the ship, as well as such other data as may be necessary for assignment of freeboard to the ship in accordance with freeboard requirement per International Convention on Load Line, 1966 as modified by the Protocol of 1988.

.2 In the course of the survey to be carried out, the ship and any of its fittings or equipment shall be subjected to such tests if necessary in the opinion of the MARINA RENA or Load Line Assignor.

.3 Test carried out as to stability shall be subject to the requirements of Regulation 10 of ICLL 1966 as modified by the Protocol of 1988.

.4 A ship shall be subjected to survey/inspection as specified below;

.1 A survey before the ship is put to service to ensure that the arrangements, materials and scantlings fully comply with the requirements of the ICLL 1966 as amended;

.2 A periodical inspection within three (3) months before and after the annual anniversary date of the Load Line Certificate to verify marking and ensure that alterations have not been made to the hull or superstructure of the ship which would affect the calculations determining the position of the Load Line marking.

.1 The annual survey shall be such as to ensure:

.1 that the condition of the ship and the conditions under which it is operated have not been altered in such as way as to affect the calculations determining the position of the load line;

.2 that the maintenance in an effective condition of watertight compartments, fittings and appliances for the protection of openings, guardrails, freeing ports and means of access to crew's quarters.

.3 Survey also includes the effective maintenance conditions of fittings and appliance for;

.1 Protection of openings

.2 Freeing ports

.3 Other openings

.4 Guard rails

.5 Means of access going to deck below main deck.

.4 After completion of the survey, the load line certificate shall either be endorsed by the authority responsible for its renewal or withdrawn where alterations have been made that affect the calculations determining the position of the load line or when fittings and appliances have not been maintained in an effective condition to provide the safety that they gave when the load line certificate was issued.

.5 During the inspection of the outside of the ship's bottom, the inlets, rudder, propulsion shaft openings and anchor chains shall be subject to particular examination.

Regulation 4
Draught Marks and Scales

All ships shall show on the bow and the stern, on each side, engraved or welded for steel ships, carved in the planking to a depth of at least 3 mm for wooden ships, shown in an equivalent manner for structures of materials other than steel and wood, painted in black on a light background, or in white or yellow on a dark background a draught scale, with ten-centimetre intervals, with figures of a height such that their complete submersion means an increase in draught of 10 cm.

Regulation 5
Strength of the Ship

The general structural strength of the ship shall be sufficient for the draught corresponding to the freeboard assigned to the satisfaction of the Administration. Ships built and maintained in conformity with the requirements of a classification society accredited by the Administration, may be considered to possess adequate strength.

Regulation 6
Assumptions

This Chapter assumes that the nature and stowage of the cargo, ballast, etc. are such as to; secure sufficient stability of the ship and the avoidance of excessive structural stress and that applicable international requirements relating to stability or subdivision, are complied with.

Regulation 7
Marks of Assigning Authority

The mark of the authority by whom the load lines are assigned may be indicated alongside the load line ring above the horizontal line which passes through the center of the ring, or above and below it. This mark shall consist of two initials consist of letters R and P to identify the authority's name, each measuring approximately 115 mm in height and 75 mm in width.

Regulation 8
Verification of Marks

The Load Line Certificate shall not be issued to the ship until the MARINA Surveyor has certified that the marks are correctly and permanently indicated on the ship's sides.

Regulation 9
Information to be Supplied to the Master

1 The master of each new ship which is not already provided with stability information, shall be supplied with sufficient information, in an approved form, to enable him to arrange for the loading and ballasting of his ship in such a way as to avoid the creation of any unacceptable stresses in the ship's structure, provided that this requirement need not apply to any particular length, design or class of ship where the Administration considers it to be unnecessary.

2 Stability information approved by the Administration shall be supplied to ships to enable the master to assess with ease and certainty the stability of the ship under various operating conditions. Such information shall include specific instructions to the master warning him of those operating conditions which could adversely affect either stability or the trim of the ship. In particular, the information recommended in the Code shall be included as appropriate.

3 The approved stability information shall be kept on board, readily accessible at all times and inspected at the periodical surveys of the ship to ensure that it has been approved.

Regulation 10
Superstructure End Bulkheads

Bulkheads at exposed ends of the enclosed superstructures shall be of substantial construction and shall be to the satisfaction of the Administration.

Regulation 11
Doors

1 All access openings in bulkheads at ends of enclosed superstructures shall be fitted with doors of steel or other equivalent material, permanently and strongly attached to bulkhead, and framed, stiffened and fitted so that the whole structure is of equivalent strength to the unpierced bulkhead and weathertight when closed. The means for securing these doors weathertight shall consist of gaskets and clamping devices or equivalent means and shall be permanently attached to the bulkheads or

to the doors themselves. The doors shall be so arranged that they can be operated from both sides of the bulkhead.

2 Except as otherwise provided, the height of the sill of access openings in bulkheads at ends of enclosed superstructures shall be at least 300 mm above the deck.

Regulation 12
Position of Hatchways, Doorways and Ventilators

For the purpose of this Chapter, two positions of hatchways, doorways and ventilators are defined as follows:

1 Position 1 - Upon exposed freeboard and raised quarter decks, and upon exposed superstructure decks situated forward of a point located a quarter of the ship's length from the forward perpendicular.

2 Position 2 - Upon exposed superstructure decks situated abaft a quarter of the ship's length from the forward perpendicular.

Regulation 13
Cargo and Other Hatchways

1 The construction and the means for securing the weather-tightness of cargo and other hatchways in positions 1 and 2 shall be at least equivalent to the requirements of these Regulations.

2 Coamings and hatchway covers to exposed hatchways on decks above the superstructure deck shall comply with the requirements of the Administration.

Regulation 14
Hatchways Closed by Portable Covers and Secured Weathertight by Tarpaulins and Battening Devices

1 The coamings of hatchways closed by portable covers secured weathertight by tarpaulins and battening devices shall be of substantial construction, and their height above the deck shall be at least as follows:

.1 450 mm if in position 1;

.2 300 mm if in position 2.

2 The width of each bearing surface for hatchway covers shall be at least 65 mm.

3 Where covers are made of wood, the finished thickness shall be at least 60 mm in association with a span of not more than 1.5 m.

4 Where covers are made of mild steel the strength shall be calculated with assumed loads of not less than 1 metric tons per square meter on hatchways in position 1, and not less than 0.75 metric tons per square meter on hatchways in position 2, and the product of the maximum stress thus calculated and the factor 4.25 shall not exceed the minimum ultimate strength of the material. They shall be so designed as to limit the deflection to not more than 0.0028 times the span under these loads.

5 Cleats shall be set to fit the taper of the wedges. They shall be at least 65 mm wide and spaced not more than 600 mm center to center, the cleats along each side or end shall be not more than 150 mm from the hatch comers.

6 Battens and wedges shall be efficient and in good condition. Wedges shall be of tough wood or other equivalent material. They shall have a taper of not more than 1 in 6 and shall be not less map 13 mm thick at the toes.

7 At least two layers of tarpaulin in good condition shall be provided for each hatchway in position 1 or 2. The tarpaulins shall be of waterproof and of ample strength. They shall be of a material of at least an approved standard weight and quality.

8 For all hatchways in position 1 or 2, steel bars or other equivalent means shall be provided in order to secure efficiently and independently each section of hatchway covers after the tarpaulins are battened down. Hatchway covers of more than 1.5 m in length shall be secured by at least two such securing appliances.

Regulation 15
Hatchways Closed by Weathertight Covers of Steel or Other Equivalent Material Fitted with Gaskets and Clamping Devices

1 At positions 1 and 2, the height above the deck of hatchway coamings fitted with weathertight hatch covers of steel or other equivalent material fitted with gaskets and clamping devices shall be as specified. The height of these coamings may be reduced, or the coamings omitted entirely, on condition that the safety of the ship is not thereby impaired in any sea conditions to the satisfaction of the Administration. Where coamings are provided they shall be of substantial construction.

2 Where weathertight covers are of mild steel, the strength shall be calculated as provided.

3 The strength and stiffness of covers made of materials other than mild steel shall be equivalent to those of mild steel to the satisfaction of the Administration.

4 The means for securing and maintaining weather-tightness shall be to the satisfaction of the Administration. The arrangements shall ensure that the tightness can be maintained in any sea condition, and for this purpose, tests for tightness shall be required at the initial survey, and may be required at periodical surveys and at annual inspections or at more frequent intervals.

Regulation 16
Machinery Space Openings

1 Machinery space openings in positions 1 and 2 shall be properly framed and efficiently enclosed by steel casings of any ample strength. Access openings in such casings shall be fitted with doors complying with the requirements, the sills of which shall be at least 450 mm above the deck if in position 1, and at least 300 mm above the deck if in position 2. Other openings in such casings shall be fitted with equivalent covers, permanently attached in their proper positions.

2 Coamings of any fiddley, funnel, or machinery space ventilator in an exposed position on the freeboard or superstructure deck shall be as high above the deck as is reasonable and practicable. Fiddley openings shall be fitted with strong covers of steel or other equivalent material permanently attached in their proper positions and capable of being secured weathertight.

Regulation 17
Openings in Freeboard and Superstructure Decks

1 Manholes and flush scuttles in position 1 or 2 or within superstructures other than enclosed superstructures shall be closed by substantial covers capable of being made watertight. Unless secured by closely spaced bolts, the covers shall be permanently attached.

2 Openings in freeboard decks other than hatchways, machinery space openings, manholes and flush scuttles shall be protected by an enclosed superstructure, or by a deckhouse or companionway of equivalent strength and weather-tightness. Any such opening in an exposed superstructure deck or in the top of a deckhouse on the freeboard deck which gives access to a space below the freeboard deck or a space within an enclosed superstructure shall be protected by an efficient deckhouse or companionway. Doorways in such deckhouses or companionways shall be fitted with doors complying with the requirements.

3 In position 1, the height above the deck of sills to the doorways in companionways shall be at least 450 mm. In position 2, it shall be at least 300 mm.

Regulation 18
Ventilators

1 Ventilators in position 1 or 2 to spaces below freeboard decks or decks of enclosed superstructures shall have coamings of steel or other equivalent material, substantially constructed and efficiently connected to the deck. Where the coaming of any ventilator exceeds 760 mm in height it shall be specially supported.

2 Ventilators passing through superstructures other than enclosed superstructures shall have substantially constructed coamings of steel or other equivalent material at the freeboard deck.

3 Ventilators in position 1 of the coamings of which extend to more than 2.5 m above the deck; and in position 2 the coamings of which extend to more than 1.0 m above the deck, need not be fitted with closing arrangements unless specifically required by the Administration.

4 Ventilators in position 1 shall have coamings of a height of at least 600 mm above the deck; in position 2 of the coaming shall be of a height at least 300 mm above the deck. They shall be provided with efficient weathertight closing appliances which shall be conveniently stowed near the ventilators to which they are to be fitted.

5 In exposed position, the height of coamings may be required to be increased to the satisfaction of the Administration.

Regulation 19
Air Pipes

Where air pipes to ballast and other tanks extend above the freeboard or superstructure decks, the exposed parts of the pipes shall be of substantial construction; the height from the deck to the point where water may have access below shall be at least 600 mm on the freeboard deck and 300 mm on the superstructure deck. Where these heights may interfere with the working of the ship, a lower height may be approved, provided the Administration is satisfied that the closing arrangements and other circumstances justify a lower height. Satisfactory means permanently attached shall be provided for closing the openings of the air pipes.

Regulation 20

Cargo Ports and Other Similar Openings

1 Cargo ports and other similar openings in the sides of ships below the freeboard deck shall be fitted with doors so designed as to ensure watertightness and structural integrity commensurate with the surrounding shell plating. The number of such openings shall be the minimum compatible with the design and proper working of the ship.

2 Unless permitted by the Administration, the lower edge of such openings shall not be below a line drawn parallel to the freeboard deck at side, which has at its lowest point the upper edge of the uppermost load line.

Regulation 21
Scuppers, Inlets and Discharges

1 Discharges led through the shell either from spaces below the freeboard deck or from within superstructures and deckhouses on the freeboard deck fitted with doors complying with the requirements shall be fitted with efficient and accessible means for preventing water from passing inboard. Normally each separate discharge shall have one automatic non-return valve with a positive means of closing it from a position above the freeboard deck. The means for operating the positive action valve shall be readily accessible and be provided with an indicator showing whether the valve is open or closed. The open inboard end of any discharge system shall be above the deepest operating waterline at an angle of heel satisfactory to the Administration.

2 In manned machinery spaces, main and auxiliary sea inlets and discharges in connection with the operation of machinery may be controlled locally. The controls shall be readily accessible and shall be provided with indicators showing whether the valves are open or closed.

3 Scuppers and discharge pipes originating at any level and penetrating the shell either more than 450 mm below the freeboard deck or less than 600 mm above the summer load waterlines shall be provided with a non-return valve at the shell. This valve, unless required in paragraph 1, may be omitted if the piping is of substantial thickness.

4 Scuppers leading from superstructures or deckhouses not fitted with doors complying with the requirements shall be led overboard.

5 All valves and shell fittings required by this Regulation shall be of steel, bronze or other approved ductile material. Valves of ordinary cast iron or similar material are not acceptable. All pipes to which this Regulation refers shall be of steel or other equivalent material to the satisfaction of the Administration.

Regulation 22
Side Scuttles, Windows and Other Openings

1 Side scuttles to spaces below the freeboard deck or to spaces within enclosed superstructures shall be fitted with efficient hinged inboard deadlights arranged so that they can be effectively closed and secured watertight.

2 No side scuttle shall be fitted in a position so that its sill is below a line drawn parallel to the freeboard deck at side and having its lowest point 500 mm above the load waterline.

3 The side scuttles, together with their glasses, if fitted, and deadlights shall be of substantial and approved construction.

4 The Administration may accept side scuttles and windows without deadlights in side or aft bulkheads of superstructures located on or above the freeboard deck if satisfied that the safety of the ship will not be impaired.

5 The number of openings in the side of the ship below the freeboard deck shall be the minimum compatible with the design and proper working of the ship and such openings shall be provided with closing arrangement of adequate strength to ensure water-tightness and the structural integrity of the surrounding structure.

Regulation 23
Freeing Ports

1 Where bulwarks on the weather portions of freeboard or superstructure decks form wells, ample provision shall be made for rapidly freeing the decks of water and for draining them. Except as provided in this Regulation, the minimum freeing port area (A) on each side of the ship for each well on the freeboard deck shall be that given by the following formula in cases where the sheer in way of the well is standard or greater than standard. The minimum area of each well on superstructure decks shall be one-half of the area given by the formula:

Where the length of bulwark (1) in the well is 20 m or less:

A = 0.75 + (0.7 + 0.035l) square meters

where exceeds 20 m:

A = 0.07 (1) square meters.

(1) need in no case be taken as greater than 0.7 L.

If the bulwark is more than 1.2 m in average height, the required area shall be increased by 0.004 square meters per meter of length of well for each 0.1 m difference in height. If the bulwark is less than 0.9 m in average height, the required area may be decreased by 0.004 square meters per meter of length of well for each 0.1 difference in height.

2 In ships with no sheer, the area calculated according to paragraph 1 shall be increased by fifty percent (50%). Where the sheer is less than the standard, the percentage shall be obtained by interpolation.

3 Where a ship is fitted with a trunk and open rails are not fitted on the weather part of the freeboard deck in way of the trunk for at least half their length or where continuous or substantially continuous hatchway side coamings are fitted between detached superstructures, the minimum area of the freeing port openings shall be calculated from the following table:

BREADTH OF HATCHWAY OR TRUNK IN REALATION TO THE BREADTH OF SHIP	AREA OF FREEING PORTS IN RELATION TO THE TOTAL AREA OF THE BULWARKS

40 percent or less	20 percent
75 percent or more	10 percent

The area of freeing ports at intermediate breadths shall be obtained by linear interpolation.

4 In ships having superstructures which are open at either or both ends, adequate provision for freeing the space within such superstructures shall be provided to the satisfaction of the Administration.

5 The lower edges of the freeing ports shall be as near the deck as practicable. Two-thirds of the freeing port area required shall be provided in the half of the well nearest the lowest point of the sheer curve.

6 All such openings in bulwarks shall be protected by rails or bars spaced approximately 230 mm apart. If shutters are fitted to freeing ports, ample clearance shall be provided to prevent jamming. Hinges shall have pins or bearings of non-corrosive material. If shutters are fitted with securing appliances, these appliances shall be of approved construction.

Regulation 24
Protection of the Crew and Passengers

1 The strength of the deckhouses used for the accommodations shall be to the satisfaction of the Administration.

2 Efficient guard rails or bulwarks shall be fitted on all exposed parts of the freeboard and superstructure decks. The height of the bulwarks or guard rails shall be at least 1m from the deck, provided that where this height would interfere with the normal operation of the ship, a lesser height may be approved if the Administration is satisfied that adequate protection is provided but in no case a height of less than 600 mm shall be permitted.

3 The opening below the lowest course of the guard rails shall not exceed 230 mm. The other courses shall be not more than 380 mm apart. In the case of ships with rounded gunwales the guard rail supports shall be placed on the flat of the deck.

4 Satisfactory means (in the form of guard rails, life lines, gangways or underdeck passages etc.) shall be provided for the protection of the crew in getting to and from their quarters, the machinery space and all other parts used in the necessary work of the ship.

5 Deck cargo carried on any ship shall be so stowed that any opening which is in way of the cargo and which gives access to and from the crew's quarters, the machinery space and all other parts used in the necessary work of the ship, can be properly closed and secured against the admission of water. Effective protection for the crew in the form of guard rails or life lines shall be provided above the deck cargo if there is no convenient passage on or below the deck of the ship.

Regulation 25
Special Condition of Assignment for Tankers

1 Tankers of less than 24 m in length shall comply with the provisions of this Regulation.

2 Machinery casings shall be protected by an enclosed poop or bridge of at least standard height, or by a deckhouse of equal height and equivalent strength, provided that machinery casings may be exposed if there are no openings giving direct access from the freeboard deck to the machinery space. A door complying with the requirements may be permitted in the machinery casing, provided that it leads to a space separated from the stairway to the engine room by a second weathertight door of steel or other equivalent material.

3 An efficiently constructed fore and aft permanent gangway of sufficient strength shall be fitted on tankers at the level of the superstructure deck between the poop and the midship bridge or deckhouse where fitted or equivalent means of access shall be provided to carry out the purpose of gangway, such as passages below deck. Elsewhere, and on tankers without a midship bridge, arrangements to the satisfaction of the Administration shall be provided to safeguard the crew in reaching all parts used in the necessary work of the ship.

4 Safe and satisfactory access from the gangway level shall be available between separate crew accommodations and also between crew accommodations and the machinery space.

5 Exposed hatchways on the freeboard and forecastle decks or on the tops of expansion trunks on tankers shall be provided with efficient watertight covers of steel or other equivalent material.

6 Tankers with bulwarks shall have open rails fitted for at least half the length of the exposed parts of the weather deck or other effective freeing arrangements. The upper edge of the sheer strake shall be kept as low as practicable.

7 Where superstructures are connected by trunks, open rails shall be fitted for the whole length of the exposed parts of the freeboard deck.

Regulation 26
Cancellations

The Administration may cancel a load line certificate if any of the circumstances cited under the Convention exist including the tampering of load line marks.

Chapter IV
STABILITY REQUIREMENTS

Regulation 1
Intact Stability

1 The Code on Intact Stability and its amendments, as well as definition of the terms used herein and subsequent MARINA Circulars, are hereby adopted.

2 Every Philippine-registered ship covered shall undergo an inclining test and must have in possession on board a valid Certificate of Stability issued by the MARINA for those engaged in domestic operations, or an Intact Stability Booklet issued by a MARINA recognized organization for those engaged in international operations.

3 All domestic passenger ships regardless of size, except those ships that rely on outriggers for their stability, and passenger ships carrying 12 passengers and below and other domestic ships 24 meters and above in length, shall be subjected to, and be in compliance with standards, requirements and criteria provided under the Code on Intact Stability as amended, in order to be issued the Certificate of Stability. The Certificates to be issued, or those previously issued, are subject to endorsement every five (5) years from the last inclining test conducted on the ship.

4 Domestic ships other than passenger ships below 24 meters, except those ships that rely on outriggers for their stability, and passenger ships carrying 12 passengers and below, shall still be subjected to evaluation using the applicable provisions of the Code on Intact Stability as amended, with the results thereof to serve as basis whether to issue the Certificate of Stability without restrictions in area of operation, if in compliance with the Code's standards, requirements and criteria, or, issue a Certificate of Stability with restrictions in the area of operation, due to limitations in stability based on the Code's standards.

Regulation 2
Inclining Tests and Stability Information

1 Domestic ships shall be subjected to an inclining test to be conducted by a duly licensed Naval Architect (RENA) or other qualified/trained technical personnel from the MARINA, with the needed notification and preparations to be made by the company/shipyard Naval Architect. If the inclining test for domestic ships is to be conducted by a recognized organization or accredited marine surveying company, it shall be undertaken under the supervision of a MARINA (RENA) or other qualified/ trained technical personnel, pursuant to Chapter 7, Sec. 7.3.1 of the Code on Intact Stability, to ensure compliance with the Code, with the concerned organization/company assuming the responsibility to ensure strict observance of this requirement.

2 Domestic ships covered and found to be in compliance with these rules and regulations, based on the result of the inclining test, together with the supporting plans, calculations, etc. shall be issued the required Certificate of Stability by the MARINA, with effectivity reckoned from the date the test/survey was conducted. If the test, calculations and evaluation of a domestic ship is undertaken by an accredited/recognized organization, the results thereof shall be submitted to the MARINA for validation, approval and subsequent issuance by the MARINA of the

required Certificate of Stability valid for five (5) years reckoned from the date the test/ survey was conducted.

3 Ships not covered shall be issued by the MARINA an Exemption Certificate.

4 In the case of a ship already issued with a Certificate of Stability, where alterations are made affecting its light condition or the position of the center of gravity, or both, such ship shall be subjected to re-inclining test and its stability information amended.

5 The MARINA may allow the inclining test of a ship to be dispensed with, provided that reliable stability information for such ship can be obtained from a basic data available, or there are available reference to existing data for similar class of ships/sister ships and it is shown to the satisfaction of the Administration that reliable stability information for the exempted ship can be obtained from such basic data. In the case of ships especially designed for the carriage of liquids or ore in bulk, the required inclining test may be dispensed with by the MARINA when reference to existing data for similar ships clearly indicates that, due to the ship's proportions and arrangements, more than sufficient transverse metacentric height will be available in all probable loading conditions.

6 Intact Stability Booklets approved by the MARINA shall be supplied to the concerned ship to enable its Master to assess with ease and certainty the stability of the ship under various operating conditions, warning him of those operating conditions that could adversely affect either stability or the trim of the ship.

Regulation 3
Subdivision and Damage Stability

1 The requirements under Resolution MSC.216 (82) and MSC.281 (85), adopting the regulations on subdivision and damage stability as contained in SOLAS Chapter II-1 which are based on the probabilistic concept, using the probability of survival as a measure of ships' safety in a damaged condition, and subsequent MARINA circulars, are hereby adopted.

2 All ships covered shall be subjected to, and be in compliance with standards, requirements and criteria provided under the Damage Stability Regulation (SOLAS Chapter II-1).

3 In the case of a ship with approved Damage Stability Booklet, where conversion, modifications and alterations are made affecting its righting moment of the ship, such ship shall be subjected to recalculation of damage stability.

4 All ships shall keep a copy of the approved Damage Stability Booklet on board at all times.

Regulation 4
Bilge Pumping Arrangements

1 An efficient bilge pumping arrangement shall be provided which under all practical conditions shall be 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 cargoes for which other efficient means for pumping are provided. Where the Administration is satisfied that the safety of the ship is not impaired, the bilge pumping arrangements may be dispensed with in any

particular compartment and unmanned barges without machinery spaces. Bilge pumping arrangement shall be of a type approved by the administration.

2 The arrangement of the bilge and ballast pumping system shall be such as to prevent possibility of water passing from the sea and from water ballast spaces into the cargo and machinery spaces, or from one compartment to another.

3 All distribution boxes and manually operated valves in connection with bilge pumping arrangements shall be in positions which are accessible under ordinary circumstances.

4 At least two bilge pumps connected to the main bilge system shall be provided, one of which may be driven by the propulsion machinery. The total capacity of the required bilge pumps shall not be less than 125 percent of the total capacity of the required main fire pump referred to these Rules and Regulations.

5 Sanitary, ballast and general services pumps provided with suitable connections for bilge suction may be accepted as independent power bilge pumps.

6 A bilge ejector in combination with an independently driven high pressure sea-water pump may be installed, provided this arrangement is to the satisfaction of the Administration. Bilge pipes shall not be led through fuel oil, ballast or double bottom tanks, unless pipes are of heavy gauge steel construction.

Chapter V

Trainings

Regulation 1
Application

All seafarers onboard Philippine registered ships shall be required to undertake relevant/appropriate training/seminars in relation to the types of ships they are employed.

Regulation 2
Training Manuals

1 All ships must have onboard Training Manuals and Training Aids as approved by the Administration.

2 A training manual complying with the requirements of paragraph 3 shall be provided in each crew mess room and recreation room or in each crew cabin.

3 The training manual, which may comprise several volumes, shall contain instructions and information, in easily understood terms illustrated wherever possible, on the life-saving appliances provided in the ship and on the best methods of survival. Any part of such information may be provided in the form of audio-visual aids in lieu of the manual. The following shall be explained in detail:

.1 donning of lifejackets;

.2 muster at the assigned stations;

.3 boarding, launching, and clearing the survival craft and rescue boats, including, where applicable, use of marine evacuation systems;

.4 method of launching from within the survival craft;

.5 release from launching appliances;

.6 methods and use of devices for protection in launching areas, where appropriate;

.7 illumination in launching areas;

.8 use of all survival equipment;

.9 use of all detection equipment;

.10 with the assistance of illustrations, the use of radio life-saving appliances;

.11 use of engine and accessories;

.12 recovery of survival craft and rescue boats including stowage and securing

.13 best use of the survival craft facilities in order to survive;

.14 methods of retrieval, breeches-buoy and shore life-saving apparatus and ship's line-throwing apparatus; whenever applicable

.15 all other functions contained in the muster list and emergency instructions; and

.16 instructions for emergency repair of the life-saving appliances.

4 The training manual shall be written in the working language of the ship.

Chapter VI

Collision Regulations

1 All Philippine-registered ships shall at all times adhere to the rules and regulations of the International Regulations for Preventing Collision at Sea (COLREG), 1972 as amended.

2 All vessels shall observed and comply with the traffic separations scheme implemented by concerned agencies in their area of operation.

Chapter VII
Safety Management System

Regulation 1
General

1 Every company operating any of the ships covered by these rules and regulations shall develop, adopt and implement a Safety Management System (SMS) compliant with the International Safety Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code), as amended.

2 The company in implementing the ISM Code shall take into consideration the guidelines set by the International Maritime Organization (IMO) and existing MARINA Regulations and its future amendments.

3 No company/ship shall operate without a valid DOC/SMC.

4 Where another company/entity other than the registered owner/disponent owner has assumed operational control' and responsibility over a ship covered under this Regulation, the registered/disponent owner shall communicate to the Administration the company/entity which shall assume responsibility for compliance with this Circular.

5 Ships of foreign registry temporarily used in the Philippine waters on Special Permits issued by the Administration are required to have a SMS compliant with the ISM Code.

6 All companies and ships commencing operations and which are covered herein, are given twelve (12) months from date of accreditation or registration under Philippine flag, to have the required DOC and SMC.

7 The companies and ships as provided in the preceding paragraph 6 shall submit for approval a safety management system and shall be issued interim DOC and interim SMC with validity as follows

.1 Interim DOC - not more than 12 months; and

.2 Interim SMC – valid for 6 months and can be extended another 6 months

Regulation 2
Application

This Chapter shall apply to new and existing ships, enumerated below:

1 passenger high speed crafts;

2 fast crafts;

3 passenger ships above 100 GT; and passenger ships below 100 GT carrying 50 passengers and above;

4 oil tankers, chemical tankers and gas carriers;

5 bulk carriers;

6 cargo ships above 100 GT;

7 tugboats, whenever pulling/pushing non-propelled tanker barges carrying oil products;

8 submersible crafts;

9 mobile offshore drilling units (MODUs); and

10 floating production storage and offloading facilities / floating storage units (FPSOs/FSUs).

Regulation 3
Exemption

This Chapter shall not apply to the following ships:

1 ships of primitive built;

2 warships and naval ships;

3 government-owned ships not engaged in commerce;

4 ships below 100 GT and carrying not more than fifty (50) passengers;

5 non-propelled barges and dredgers;

6 sailing ships; and

7 pleasure crafts not engaged in commercial trading

8 motorbancas with outriggers

Regulation 4
Implementation

The implementation of this Chapter shall conform to the existing MARINA Memorandum Circular and its future amendments.

Chapter VIII
Health, Safety and Crew Accommodation

Regulation 1
General

1 Before the construction of a ship, and before the crew accommodation of an existing ship is substantially altered or reconstructed, detailed plans of, and information concerning, the accommodation shall be submitted to the Administration for approval.

2 Location, structure and arrangement of crew accommodation spaces and means of access thereto shall be such as to ensure adequate security, protection against weather and sea and insulate from heat and cold, condensation, undue noise, vibration or effluvia from other spaces. In particular, the insulation material to be applied to bulkheads and deckheads of machinery spaces adjacent to crew accommodation shall be of a type approved by the Administration. Sleeping rooms shall be placed aft the collision bulkhead.

3 Where practical, noise measurements may be taken by the Administration on completion of construction of a new vessel. Similar measurements may also be taken following a refit or major alterations to an existing ship if it is considered that noise levels might have been influenced. (see MSC.337(91) – Noise Level Code)[1]

4 Where practical, taking into account the size and type of the vessel, resolution A.468(XII) may be used as a point of reference

5 Bulkheads and decks between accommodation spaces and machinery spaces, fuel tanks, galleys, engine, deck and other store rooms, drying rooms, communal wash-places or water closets shall be so constructed as to prevent the infiltration of fumes and odours. Direct openings into sleeping rooms from such places shall be avoided whenever reasonable or practicable.

6 Where passageways are provided in crew accommodation these shall be as wide as possible, but the clear width shall not be less than 700 mm. Where doors open outwards into a passageway, there shall be sufficient space to pass the door when it is open at a right angle to the passageway.

7 Accommodation spaces shall be adequately insulated to prevent loss of heat, condensation or overheating.

8 In the choice of materials used for construction of accommodation spaces, account shall be taken of properties potentially harmful to the health of personnel or likely to harbour vermin and mould. Surfaces, including decks, of accommodation and furnishings shall be of a kind easily kept clean and hygienic, as well impervious to damp. Bulkhead and deckhead surfaces, if painted, shall be light in colour and the paint specification shall be to the approval of the Administration. Other surface coverings, such as lime wash, shall not be used.

9 Where appropriate, access to ordinary exits and emergency exits shall be marked with direction indicators. Exits shall be marked in a conspicuous manner above or beside the door.

[1] [1] Where practical, taking into account the size and type of the vessel, resolution A.468(XII) may be used as a point of reference

10 Where the deck covering is of composition material, the connection to the side of the ship, bulkheads and partitions shall be rounded to avoid crevices.

11 All practical measures shall be taken to protect crew accommodation and furnishings against the admission of insects and other pests.

12 Overhead exposed decks over crew accommodation shall be sheathed with wood or equivalent insulation.

13 The electrical switchboard shall be so arranged that when the shore power connection is made, power would be available for crew accommodation lighting, ventilation systems and, where applicable, heating and cooking facilities.

Regulation 2
Lighting, Heating and Ventilation

1 All crew accommodation spaces shall be adequately lighted, as far as possible, by natural lighting. Such spaces shall also be equipped with adequate artificial light. Artificial light shall be in accordance with accepted standards of visual comfort in living spaces. The minimum standards for natural lighting in crew accommodation shall be such as to permit a person with normal vision to read an ordinary newspaper on a clear day.

2 If there are no two independent sources of electricity for lighting, additional lighting shall be provided by properly constructed lamps or lighting apparatus for emergency use.

3 Methods of lighting shall not endanger the health or safety of the crew or the safety of the ship.

4 Adequate heating facilities in crew accommodation spaces shall be provided as required by climatic conditions. Heating facilities shall be capable of maintaining a satisfactory air temperature in crew accommodation under normal conditions of service. The accommodation shall be capable of being heated sufficiently to maintain a minimum temperature of +22°C in all day rooms at an outside temperature of -15°C.

5 Facilities for heating shall be designed so as not to endanger health or safety of the crew or safety of the ship.

6 Heating by means of open fires shall be prohibited.

7 Accommodation spaces shall be adequately ventilated at all times when the crew is expected to remain on board. Ventilation systems shall be capable of control so as to maintain the air in a satisfactory condition and to ensure a sufficiency of air movement in all conditions of weather and climate. The ventilation of galleys and sanitary spaces shall be to the open air and, unless fitted with a mechanical ventilation system, be independent from that for other crew accommodation.

8 Accommodation spaces of ships regularly engaged on voyages in the tropics and under similar conditions, except in deckhouses with satisfactory natural ventilation, shall be equipped with mechanical ventilation and, if necessary, with additional electric fans or air conditioning, in particular, mess rooms and sleeping quarters.

9 Drying rooms or lockers for working clothes and oilskin lockers shall have adequate ventilation that is separate from other spaces. The exhaust from such

spaces shall be well clear of the air intakes of the ventilation systems for other spaces.

Regulation 3
Sleeping Rooms

1 Sleeping rooms shall be so planned and equipped as to ensure reasonable comfort for the occupants and to facilitate tidiness. The clear headroom shall, whenever possible, be not less than 2 m.

2 Wherever reasonable and practical, the floor area of sleeping rooms per person accommodated therein, excluding space occupied by berths and lockers, shall not be less than 1 m^2.

3 Each member of the crew shall be provided with an individual berth, the inside dimensions of which shall be not less than 1.9 m by 700 mm.

4 Berths shall not be placed side by side in such a way that access to one berth can he obtained only over another. Berths shall not normally be arranged in tiers of more than two. The lower berth in a double tier shall be not less than 300 mm above the deck; the upper berth shall he paced approximately midway between the bottom of the lower berth and the lower side of the deck head beams.

5 Where the upper berth in a tier overlaps a lower berth, the underside of the upper berth shall be fitted with a dust proof bottom of wood, canvas or other material.

6 If tubular frames are used for the construction of berths, they shall be completely sealed and without perforations that would give access to vermin.

7 Suitable bedding shall be provided for the crew. Mattresses shall not be of a type that is liable to develop toxic fumes in cases of fire nor of a type that will attract pests or insects. Mattresses shall be provided with a cover of fire retardant material.

8 Whenever reasonable and practicable, having regard to the size, type or intended service of the ship, the furnishings of sleeping rooms shall include both a fitted cupboard preferably with an integral lock and a drawer for each occupant. A table or desk, adequate seating, a mirror, cabinet for toilet requisites, a book rack and coat hooks shall also be provided. Where fitted, tables or desks of the pull-out type shall be to the approval by the Administration.

9 The maximum number of persons to be accommodated in any sleeping room shall be clearly and indelibly marked in the room where it can be conveniently seen.

Regulation 4
Mess Rooms

1 Wherever reasonable and practicable, mess room accommodation separate from sleeping quarters shall be provided.

2 The mess room shall be as close as practicable to the galley.

3 The dimensions and equipment of each mess room shall be sufficient for the number of persons likely to use it at any one time.

4 The furnishings of mess rooms shall include tables and approved seats sufficient for the number of persons likely to use them at any one time. The tops of tables and seats shall be free of sharp edges and shall be of damp resisting material without cracks and easily kept clean.

5 Where pantries are not accessible from mess rooms, adequate lockers for mess utensils and proper facilities for washing shall be provided.

6 Mess rooms shall be planned, furnished and equipped to provide appropriate facilities for recreation.

Regulation 5
Sanitary Facilities

1 Sufficient sanitary facilities, including wash-basins, shower-baths and water-closets, shall be provided to the satisfaction of the Administration, having due regard to the intended service of the ship

2 Soil and waste discharge pipes shall not pass through fresh water or drinking water tanks or, where practicable, provision stores. Neither shall they, where practicable, pass overhead in mess rooms or sleeping accommodation. Such pipes shall be fitted with anti-syphon closures.

3 In general, water-closets shall be situated convenient to, but separate from, sleeping rooms, mess rooms and wash-rooms.

4 The deck area of wash places shall have a covering of durable material, easily cleaned, impervious to damp and properly drained. The deck covering shall be carried up the sides of the compartment to a height of not less than 0.2 m and be adequately sealed at all joints to prevent the ingress of water and damp.

5 The bulkheads shall be of steel or other approved material and shall be watertight to a height of at least 0.25 m above the deck to allow for effective sealing of the deck covering where it meets the bulkheads.

6 Facilities for washing and drying clothes shall be provided on a scale appropriate to the number of the crew and the duration of intended voyages.

Regulation 6
Potable Water Facilities

Filling, storage and distribution arrangements for potable water shall be designed to preclude any possibility of water contamination or overheating. Tanks shall be designed to allow internal cleaning.

Regulation 7
Provision Stores

Having regard to the intended service of the ship, store rooms of adequate capacity shall be provided which can be kept cool, dry and well ventilated in order to avoid deterioration of the stores. Where possible, refrigerators or other low-temperature storage shall be provided, to the satisfaction of the Administration. Where refrigerating or freezing rooms are fitted, the access doors shall be capable of being opened from either side. An alarm system shall be arranged from the refrigerating and freezing room to the galley or other appropriate location if such rooms are large enough for personnel to enter them.

Regulation 8
Cooking Facilities

1 Having regard to the intended service of the ship, satisfactory cooking appliances and equipment shall be provided and shall, wherever practicable, be fitted in a separate galley.

2 Galleys shall be of adequate dimensions for the purpose and have sufficient storage space and satisfactory drainage.

3 The galley shall be provided with cooking utensils, the necessary number of cupboards, shelves, sinks and dish racks of rustproof material and with satisfactory drainage. Drinking water shall be supplied to the galley by means of pipes. Where it is supplied under pressure, the system shall be protected against backflow. Where hot water is not supplied to the galley, a water heater shall be fitted.

4 The galley shall be fitted with suitable facilities for the preparation of hot drinks for the crew at all times.

5 Cooking appliances shall be fitted with fail-safe devices in the event of failure of the power source or fuel. Supplies of fuel in the form of gas or oil shall not be stored in the galley.

6 Galleys shall be provided with guard rails and hand rails.

7 Cooking stoves shall be fitted with guards to retain cooking utensils.

8 Where food processing equipment is installed, dangerous parts shall be fitted with permanent safety guards.

Regulation 9
Medicine Chest, Radio-Medical Services and Hospital Accommodation

1 First aid equipment and instructions as required by the competent authorities shall be provided in ships.

2 Ships shall carry an appropriate medical guide or instructions. The medical guide or instructions, shall be illustrated, shall explain how the medical supplies are to be used and shall be designed to enable persons other than a doctor to care for the sick or injured on board both with and, if necessary, without medical advice by radio or satellite communication.

3 The medicine chest shall contain equipment and medical supplies suitable for the expected service of the ship (e.g., unlimited trips; trips of less than a certain distance from the nearest port with adequate medical equipment; service in harbours and very close to shore).

4 The Administration shall establish requirements for the periodic replacement of medicines to ensure they are not outdated and appropriate to any changes in the operational requirements of the vessel (e.g., change in geographic location).

5 Appropriate instructions and equipment shall be provided to enable appropriate personnel to consult effectively with radio-medical services ashore.

6 Appropriate hospital accommodation shall be provided in accordance with international instruments.

7 Instructions and equipment necessary for safe medical evacuation by vessel, helicopter or other means shall be carried on board.

8 Generally, all instructions shall be in a language understood by the crew. Where possible, illustrations shall be used to facilitate ease of understanding and communication.

PART 2
OCCUPATIONAL SAFETY

Regulation 10
Accident Prevention

1 Appropriate provisions shall be taken in view of the prevention of occupational accidents or diseases, covering in particular the following matters:

.1 machinery;

.2 special safety measures on and below deck;

.3 loading and unloading equipment;

.4 fire prevention and fire-fighting;

.5 anchors, chains and lines;

.6 dangerous cargo and ballast;

.7 personal protective equipment for seafarers.

2 Any obligation on the shipowner to provide protective equipment or other accident prevention safeguards shall be accompanied by written instructions posted in the appropriate locations, to the effect that such equipment and safeguards are actually used by seafarers when exposed at specific risk.

Regulation 11
Safety of Movement on Board

1 Ships shall be so fitted out that the crew can move about and work easily. Where necessary, moving parts and openings in the deck shall be protected by safety devices, plating, guard rails and handrails. Winches and towing hooks shall be designed to ensure safety at work. All installations required for work on board shall be so designed, sited and protected as to make on-board manoeuvres, maintenance and repairs safe and easy.

2 Decks in the vicinity of winches and bollards, as well as side-decks, engine-room floors, landings, companionways and the top of the side-deck bollards shall be non-slip.

3 The tops of side-deck bollards and any obstacles in areas where crew move about (e.g., the treads of companionways), shall be marked by light-coloured paint.

4 Appropriate devices shall be provided for anchoring stacked hatch covers.

5 The size and arrangement of passageways, accesses and corridors for the movement of persons and cargo shall be such that they may be negotiated without risk of accident.

6 The design and layout of doors shall be such as not to endanger the persons opening or closing them.

7 Structures for passage from one level to another, particularly companionways, ladders and rungs shall be such that their use is free of hazard.

Regulation 12
Safety of Working Stations

1 Working stations shall be readily and safely accessible.

2 Companionways, ladders, rungs or similar devices shall be provided where there is a difference of over 500 mm in the levels of accesses, exits and passageways.

3 Companionways shall be provided where the level of permanently manned working stations differs by more than 1m from the levels from which access is to be gained.

4 Emergency exits shall be clearly marked as such.

5 Closed spaces in which work is carried out, with the exception of storerooms, shall be ventilated. The ventilation devices shall be arranged so as not to cause draughts and shall provide an adequate and regularly renewed supply of air to the working stations for the persons in them. Where the natural rate of air renewed is inadequate, mechanical ventilation shall be provided. The rate of renewal may be considered adequate if it is carried out at least five times per hour.

6 Working stations close to the water or in positions involving differences in level of more than 1m shall be equipped so as to prevent crew slipping or falling.

Regulation 13
Dimensions of Working Stations

1 Working stations shall be of dimensions such that each crew member working in them has adequate freedom of movement.

2 Permanently manned working stations shall be of sufficient dimensions to ensure:

.1 a net volume of air not less than 7 m3, except for the wheelhouse of vessels of 40 m in length and less;

.2 a free floor area and headroom for each working station that gives adequate freedom of movement for operation and inspection and for ordinary maintenance and repair work.

3 The clear width of side-decks shall be not less than 600 mm; except that this width may be reduced around mooring bollards.

Regulation 14
Lighting in Working Spaces and Areas

1 All companion-ways, doors or other means of access shall be illuminated on both sides of the opening to facilitate safe passage.

2 All passageways and working spaces and areas shall be provided with artificial lighting. Particular attention shall be paid to Rule 20 (b) of the International Regulations for Preventing Collisions at Sea, 1972.

3 Glare, dazzle or sudden contrasts of illumination shall be eliminated to the extent possible taking into consideration the need for effective lighting for the safety of the crew on the working deck.

4 Provision shall be made for some form of emergency lighting, which is independent of the normal supply.

5 Portable watertight lights shall be provided as necessary and fitted with heavy-duty cables, bulb guards and lanyards. Such lights for use in spaces, which

may contain explosive gases, shall be either explosive proof or otherwise intrinsically safe.

6 Where necessary to prevent danger, electric lamps shall be protected by guards.

7 In order to avoid the stroboscopic effect of fluorescent lighting, double tube lamps shall be used to illuminate working spaces with revolving machinery.

Chapter IX
Prevention of Marine Pollution

Regulation 1
Coverage

1 The provisions of the International Convention for the Prevention of Pollution from Ships 1973 and its 1978 Protocol including its future amendments, and national legislations and issuances to implement thereto, shall apply to ships covered by these Rules and Regulations. Where the Administration considers the provisions relating to construction and equipment unreasonable or impracticable, it may exempt such ships from such provisions, provided that the construction and equipment of that ship provides equivalent protection against pollution of the marine environment, having regard to the service for which the ship is intended.

The following MARPOL Annexes shall be applied to ships as covered by the Convention;

.1 Annex I of MARPOL73/78 – Regulation for the Prevention of Pollution by Oil

.2 Annex II of MARPOL73/78 – Regulation for the Pollution by Noxious Liquid

.3 Annex III of MARPOL73/78 – Regulation for the Prevention of Pollution by Harmful substances carried by sea in Packaged Form

.4 Annex IV of MARPOL73/78 – Regulation for the Prevention of Pollution by Sewage

.5 Annex V of MARPOL73/78 – Regulation for the Prevention of Pollution by Garbage from Ships

.6 Annex VI of MARPOL73/78 – Regulation for the Prevention of Air Pollution from Ships

Hence, ships which are not covered by the Annexes must have an appropriate measure to prevent marine pollution and environmental protection.

Chapter X

Ship Security Regulations

Regulation 1
Application

1 These Rules and Regulations shall apply to ships covered by the provisions of the International Ship and Port Facility Security Code (ISPS Code). Where the Administration considers this Regulation unreasonable or impracticable, it may exempt such ships from such provisions, provided that the ship has equivalent protection against threaten security in the maritime transport sector.

2 All Philippine-registered domestic ships regardless of size, that have ship-to-ship interface with international ships or with an ISPS port facility, must comply with the minimum requirement of the ISPS Code and the National Transport and Maritime Security (NTMS) as implemented by the designated Authority.

3 All Philippine-registered domestic ships that will engage in the overseas trade shall comply with the requirements of the ISPS Code.

Chapter XI

Fire Safety Measures

Regulation 1
Application to Existing Ships

The provisions of the present chapter shall apply to existing ships, within a period not exceeding two years from the date of entry into force of the present Regulations, where they are regarded by the Administration as necessary and reasonable.

Regulation 2
General

1 Unless it is provided otherwise under the present chapter, the provisions on fire protection shall comply with the Fire Safety System Code, as amended, adopted by the IMO Maritime Safety Committee in Resolution MSC.98 (73).

2 When the nature and conditions of the voyage are such that the application of the present Regulations is neither necessary nor reasonable, the Administration may allow alternative arrangements if it is satisfied that they are as effective as the measures set out in the present chapter.

3 This Regulation applies to all ship as appropriate and practical, unless otherwise specified for each type of vessel.

Regulation 3
Types of Bulkhead

1 Wherever the words "steel or other equivalent material" occur, "equivalent material" means any non-combustible material which, by itself or due to insulation provided, has structural and integrity properties equivalent to steel at the end of the applicable exposure to the standard fire test (e.g. aluminium alloy with appropriate insulation).

2 "A 30" class divisions are those divisions formed by bulkheads and decks which comply with the following:

.1 they shall be constructed of steel or other equivalent material;

.2 they shall be suitably stiffened;

.3 they shall be so constructed as to be capable of preventing the passage of smoke and flame to the end of the one-hour standard fire test;

.4 they shall be insulated with approved non-combustible materials such that the average temperature of the unexposed side will not rise more than 139°C above the original temperature, nor will the temperature, at any one point, including any joint, rise more than 180°C above the original temperature, within a period of 30 minutes.

3 "F" class divisions are those divisions formed by bulkheads, decks, ceilings and linings which comply with the following:

.1 they shall be so constructed as to be capable of preventing the passage of flame to the end of the first half-hour of the standard fire test;

.2 they shall have an insulation value such that the average temperature of the unexposed side will not rise more than 139°C above the original temperature, nor will the temperature, at any one point, including any joint, rise more than 225°C above the original temperature, to the end of the first half-hour of the standard fire test;

Regulation 4
Fire Prevention

1 Paints, varnishes or other substances with a nitro-cellulose or toxic base, or highly flammable products shall not be used.

2 Precautions shall be taken to avoid combustible substances or vapours coming into contact with parts reaching elevated temperatures. In particular:

.1 arrangements shall be made to ensure that sparks or flames from smoke ducts such as those of cooking or heating appliances cannot penetrate ventilation ducts;

.2 thermal insulation shall be provided in cargo spaces, fuel bunkers, control stations, accommodation and service areas for walls reaching high temperatures such as boilers, smoke ducts, extraction ducts or galley chimneys;

.3 appliances with naked flames or unprotected resistors for lighting and heating of accommodation shall be prohibited.

3 Insulation materials shall be approved by the appropriate authority.

4 The fixing of combustible parts less than 60 cm from appliances such as ovens and furnaces shall be prohibited unless special precautions are taken to insulate them.

5 Materials readily rendered ineffective by heat shall not be used for overboard scuppers, discharges which are close to the water line or for accessories whose destruction in the event of fire would give rise to a risk of flooding.

6 Oil or oil fuel pipes shall be of steel or other authorized materials taking into account the risk of fire.

7 Air extraction ducts from bunkers and tanks containing combustible liquids shall be fitted with an effective fire-screen capable of being easily cleaned and which shall not significantly reduce the effective diameter of the air duct and shall comply with the provisions of paragraph 6.

8 Mechanical ventilation of closed ro-ro cargo spaces carrying motor vehicles with fuel in their tanks for their own propulsion and machinery spaces, if any, shall be capable of being stopped from a point easily accessible and identifiable located outside such spaces.

9 Ventilation ducts serving cargo spaces, closed ro-ro cargo spaces and machinery spaces shall be provided on their upper parts with non-combustible means of closing.

10 Other openings in machinery spaces shall be capable of being closed from outside those spaces.

11 Divisions

.1 Divisions (decks and bulkheads) which separate machinery spaces of category A from cargo spaces, accommodation, service areas, control stations on ships of 24 metres in length (L) or more, shall be:

.1 of A.30 class for ships constructed of steel or equivalent material including aluminium alloys;

.2 of F class for ships constructed of combustible materials.

.2 Decks and bulkheads which separate ro-ro cargo spaces from accommodation spaces or control stations shall be of A.30 class for ships built of steel, and of F class for ships built of flammable materials.

.3 A subdivision may be accepted as equivalent to an A class division if it consists of:

.1 a steel panel coated with 50 mm of mineral wool; or

.2 an aluminium panel coated with 80 mm or two separate layers of 40 mm of mineral wool.

A subdivision may be accepted as equivalent to an F class division if it consists of a combustible wall coated with a layer of 100 mm or two separate layers of 50 mm of mineral wool.

The mineral wool shall have a voluminal mass of at least 96 kg/m3.

The external surface of the mineral wool shall be suitably protected against splashes of oil and other flammable liquids.

.4 The insulation shall extend downwards from the deck, over the hull, to a depth of 500 mm for a ship of steel and to the lightship water line for a ship constructed of another material.

Stairways which serve several decks shall be encased in bulkheads of steel or equivalent materials or F class materials.

.5 In the case of F class bulkheading, the bulkheading around machinery spaces in category A shall prevent the passage of smoke.

.6 Bulkheading shall only possess the characteristics of A.30 or F class bulkheading, as appropriate in respect of a fire arising in the machinery space.

.7 Doors and hatches of other openings in bulkheads shall be constructed such as to maintain the integrity of the bulkheads in which they are located.

.8 Bulkheads around galleys shall be of steel or equivalent material or F class bulkheading.

.9 Stairways, escape companionways, etc., shall have a steel frame and, if they serve several decks, they shall be protected by a casing of steel or equivalent material or F class material. They shall have at least one closure as required by paragraph .5 to prevent fire spreading from one deck to another.

.10 Pipes, ducts and controls which pass through a fire-resistant bulkhead shall not reduce its resistance to fire.

.11 The Administration may exempt ships less than 24 metres in length (L) which do not sail more than 12 miles from the nearest land from any requirement of the present Regulation, if it considers that such requirement is neither reasonable nor necessary taking into account the navigation in which such ships engage.

Regulation 5

Arrangements for Combustible Fuel, Lubricating Oil and Other Flammable Oils

1 No combustible liquid shall be used as fuel whose flashpoint, determined by an approved test, is less than 60°C (closed crucible test), except in emergency generators, in which case the flashpoint shall be not less than 43°C.

2 Safe and efficient means of ascertaining the amount of fuel contained in any tank shall be provided. If such means consist of sounding pipes, their upper ends shall be located in safe positions and fitted with appropriate shutoff devices.

If an oil-level gauge is used, it shall be fitted with a self-closing control cock at each end.

All cocks shall be fixed directly to the walls of the tank.

The use of plastics for oil-level gauges is prohibited.

The use of refracting glass oil-level gauges is permitted provided that a protection against shocks is installed. Tighteners shall be fitted to prevent disconnection of oil-level gauges.

3 Precautions shall be taken to prevent any overpressure on tanks or in any part of the fuel supply system, including filling pipes. Outlet valves and air or overflow pipes shall discharge the fuel into a safe place in such a way that it gives rise to no danger.

4 Subject to approval by the appropriate authority, fuel pipes which, if damaged, would allow oil to escape from storage, settling or daily service tank situated above the double bottom, shall be fitted with a cock or valve directly on the tank capable of being closed from a safe position outside the space concerned in the event of fire occurring in the space in which such tanks are situated. In the special case of deep tanks situated in any shaft or pipe tunnel or similar spaced, valves shall be fitted on the deep tanks but control in the event of fire shall be capable of being effected by means of an additional valve on the pipe or pipes outside the tunnel or similar space. If such additional valve is fitted in the machinery space it shall be operated from a position outside this space.

5 Pumps which form part of the oil fuel lines shall be separate from any other lines and the inversion of the flow of such pumps shall be fitted with an effective, closed circuit, outlet valve.

6 No oil fuel tank shall be situated where spillage or leakage therefrom can constitute a hazard by falling on heated surfaces. Precautions shall be taken to prevent any oil that may escape under pressure from any pump, filter or heater from coming into contact with heated surfaces.

7 Oil fuel pipes and their valves and fittings shall be of steel or other approved material, except that the restricted use of flexible pipes may be permitted by the appropriate authority. Such flexible pipes and end attachments shall be of approved

fire-resisting materials or coated with fire-resisting coatings, to the satisfaction of the appropriate authority.

8 When necessary, oil fuel lines shall be screened or otherwise suitably protected to avoid, as far as practicable, oil spray or oil leakages on to hot surfaces or into machinery air intakes. The number of joints in such piping systems shall be kept to a minimum.

9 As far as practicable, oil fuel tanks shall be part of the ship's structure and shall be located outside machinery spaces of category A. Where oil fuel tanks, other than double bottom tanks, are necessarily located adjacent to or within machinery spaces of category A, at least one of their vertical sides shall be contiguous to the machinery space boundaries, and shall preferably have a common boundary with the double bottom tanks, and the area of the tank boundary common with the machinery spaces shall be kept to a minimum. Where such tanks are situated within the boundaries of machinery spaces of category A they shall not contain oil fuel having a flashpoint of less than 60°C (closed crucible test). In general, the use of free-standing oil fuel tanks shall be avoided in areas where there is a risk of fire and especially in machinery spaces of category A. When free-standing are permitted, they shall be placed in an oil-tight spill tray of ample size having a suitable drain pipe leading to a suitably sized spill oil tank.

10 The arrangements for the storage, distribution and utilization of oil used in the pressure lubrication systems shall be considered satisfactory by the appropriate authority. The arrangements made in machinery spaces of category A, and whenever practicable in other machinery spaces, shall at least comply with the provisions of paragraphs 1, 3, 6 and 7 and, necessary, with the provisions of paragraphs 2 and 4. The use of sight-flow glasses in lubricating systems shall be permitted provided that they are shown by tests to have a suitable degree of fire resistance.

11 The arrangements for the storage, distribution and utilization of flammable oils other than those specified in paragraph 10 employed under pressure in power transmission systems, control and drive systems and heating systems shall be to the satisfaction of the Administration. In locations where means of ignition are present, such arrangements shall at least comply with the provisions of paragraphs 2 and 6, and with the provisions of paragraphs 3 and 7 in respect of strength and construction.

12 Oil fuels, lubricating oils and other flammable oils shall not be carried in forepeak tanks. Furthermore, oil fuels shall not be stored forward of the collision bulkhead or its extension.

Regulation 6
Storage and Use of Oil Fuels

1 Air outlet pipes in oil fuel compartments and tanks shall terminate with an S-bend with a close-mesh metal cowl and a detachable closing device. A hole of 5 to 6 mm in diameter shall be pierced in the closing device.

The closing device may be replaced by a system such as an automatic ball-valve if it provides equivalent safety.

2 Compartments intended to contain oil fuels with a flashpoint less than 60°C but not less than 43°C shall be insulated from continuous compartments intended for

liquids or oil fuels with different flashpoints by cofferdams with air pipes and sounding pipes.

3 Oil fuels with a flashpoint less than 60°C but not less than 43°C may be used subject to the agreement of the Administration to supply emergency fire-pump motors and auxiliary motors which are not situated in machinery spaces of category A.

Regulation 7
Pressurized Water Fire-Extinguishing Systems

1 Any pressurized water fire-extinguishing system, required to be installed by the present chapter, shall consist of pipes fed by one or more pumps and serving nozzles through hydrants and hoses.

2 Fire pumps

.1 Except as otherwise provided in the present chapter, fire pumps shall be mechanically driven by motors independent of the propulsion machinery.

.2 Sanitary, ballast and bilge pumps, as well as general service pumps may be regarded as fire pumps, provided that they are not normally used for extraction of oil fuel.

.3 Fire pumps shall be fitted with safety valves if they are capable of operating at a pressure exceeding that for which the pipes and their attachments have been calculated and tested.

.4 Each mechanically powered pump, where required to be fitted by the present chapter, shall be capable of delivering for fire-fighting purposes a quantity of water, at the pressure specified in paragraph 3.2, not less than two-thirds of the quantity required to be dealt with by a bilge pump under the provisions of Regulation IV/4.

3 Fire mains

.1 The diameter of the fire main shall be sufficient for the effective distribution of the maximum discharge of one fire pump.

.2 Where a fire pump delivers the quantity of water specified in subparagraph 3.1 above through any adjacent fire hydrants, a pressure of at least 0.2 N/mm^2 shall be maintained at all hydrants affected.

.3 The arrangement of the fire main shall be such that it is capable of delivering water very rapidly. The controls shall be easy to operate and readily accessible.

4 Pipes and hydrants

.1 The number and position of hydrants shall be such that at least one jet of water may reach any part of the ship normally accessible to the crew while the ship is being navigated and any part of any cargo space, ro-ro cargo space when empty.

.2 Pipes and hydrants shall be so placed that the fire hoses may be easily coupled to them. In ships where deck cargo may be carried, the positions of the hydrants shall be such that they are readily accessible

and the pipes shall be arranged as far as practicable to avoid risk of damage by such cargo.

.3 Cocks or valves shall be fitted to pipes such that any of the hydrants may be shut off while the pumps are in operation and continue to supply other hoses connected to other hydrants.

.4 Fire hoses of materials readily affected by heat shall not be used unless suitably protected.

5 Hoses and nozzles

.1 Fire hoses shall be of approved materials. They shall not exceed 20 metres in length. In addition, they shall not exceed half the length (L) of the ship, except that they shall not be required to be less than 10 metres in length. Hoses shall be fitted with the necessary couplings and attachments.

.2 In accommodation, service and machinery spaces in ships of 24 metres or more in length (L), a fire hose shall be provided for each fire hydrant installed in compliance with the present chapter and shall be permanently coupled. On open decks, a hose shall not be required for each hydrant, but the number of hoses installed shall be sufficient, in the area concerned, such that the jet required by the present Regulation can be delivered in all circumstances.

.3 Fire hoses and their attachments shall be maintained in a permanently serviceable condition.

.4 The diameter of nozzles (full jet) shall be not less than 12 mm for ships of 24 metres or more in length (L) and not less than 10 mm for other ships.

.5 All nozzles shall be fitted with a shutoff device.

6 Fire cocks, hoses, nozzles and couplings, and sprinkler jets shall be of a type approved by the Administration.

Regulation 8
Gas Fire-Extinguishing Systems

1 The use of a fire-extinguishing medium which, in the opinion of the Administration, under expected conditions of use gives off toxic gases in such quantities as to endanger persons on board shall not be permitted.

The fire extinguishing systems shall be started by a deliberate manual operation.

2 The pipes for conveying the fire-extinguishing medium into protected spaces shall be provided with control valves:

.1 for which the spaces to which the pipes are led are clearly indicated;

.2 where the open or closed position may be readily checked; and

.3 which can only be operated locally (no remote control).

3 Means of manually activating chambers by percussion. In such case, the control shall be exercised from the spaces where the extinguishing medium is placed, except when it is placed in a protected space.

4 The piping shall be so positioned as to ensure efficient distribution of the gas. It shall be tested according to the regulations of a recognized classification society

5 Means shall be provided to close all openings which may admit air or allow gas to escape from a protected space. The ventilation of the protected space shall be shut off automatically before the discharge of the extinguishing medium. For ships of less than 24 metres in length (L), such ventilation may be shut off manually.

6 Verification

.1 The operation of percussion devices and valves shall be periodically checked, as well as the quantity of gas available and the general state of the system.

.2 Means shall be provided for safe blowing of the pipes leading from the control valves, one by one.

.3 Means shall be provided for the crew to safely check the quantity of gas in the chambers.

7 Quantity of gas

To determine the quantity of gas, in cases where the safety valves or other safety devices on the air chambers to start the motors discharge within machinery spaces, the gross volume taken into account in calculating the minimum concentration of gas shall be increased by the volume of free air relating to such chambers.

8 Alarm

.1 An sound and luminous signal shall announce the release of the extinguishing medium in any space in which personnel normally work or to which they have access.

.2 They shall be supplied by the emergency source of power and shall be distinct from any other alarm.

.3 The time between the giving of the alarm and the arrival of the gas in the protected space shall be such as to allow people to escape from the protected space. The system should be checked periodically to ensure that it is in good working order. For ships of a length (L) less than 24 metres, the visual signal shall not be required.

9 The means of control of any fixed gas fire-extinguishing system shall be readily accessible, simple to operate and shall be grouped together at positions where they are not likely to be cut off by a fire in the protected space and shall have clear instructions relating to the operation of the system having regard to the safety of personnel.

10 Where several locations are protected by the same system, the quantity of gas shall be sufficient for the largest of those locations. Several locations which are not completely separate from each other shall be regarded as forming a single location.

11 Pressurized gas fire-extinguisher chambers shall be approved by the appropriate authority and tested every ten years.

12 Pressurized gas fire-extinguisher chambers shall not be positioned forward of the collision bulkhead.

They shall be kept in locations reserved exclusively for that purpose, situated in a safe readily accessible and well ventilated position. Any entrance to such locations shall preferably be from the open deck and in any case shall be separate from the entrance to the protected space. Access doors shall open outwards. Bulkheads, decks and doors which form the boundaries between such places and adjoining closed spaces shall be of steel or equivalent material or F class except on ships of a length (L) less than 35 metres when such chambers are installed above the freeboard deck.

All access doors to the locations of chambers shall carry a sign clearly showing the type of extinguishing medium and the notice "Danger".

13 The air in the protected place shall be changed, after extinction of the fire, within a period compatible with the safety of the ship.

14 Carbon dioxide systems

.1 For machinery spaces the quantity of carbon dioxide delivered by the piping shall be sufficient to give a minimum volume of free gas equal to 30% of the gross volume of the largest machinery space so protected, including the housing.

The volume of free carbon dioxide shall be calculated as 0.56 m^3/kg.

The fixed piping shall be such that 85% of the gas can be discharged into the space within 2 minutes.

.2 For closed ro-ro cargo spaces for motor transport with fuel in their tanks for their own propulsion, the quantity of carbon dioxide delivered by the piping shall be sufficient to give a minimum volume of free gas equal to 45% of the gross volume of the largest cargo space of that type capable of being made gastight.

The arrangements shall be such that they ensure the delivery of at least two thirds of the required gas into the location concerned within 10 minutes.

Regulation 9
Fixed High-Expansion Foam Fire-Extinguishing Systems in Machinery Spaces

1 Any required fixed high-expansion fire extinguishing systems in machinery spaces shall be capable of rapidly discharging through fixed discharge outlets a quantity of foam sufficient to fill the greatest space to be protected at a rate of at least 1 m in depth per minute, after deducting the volumes of the plant or equipment, or 1.5 m in depth if such volumes are not deducted.

The quantity of foam-forming liquid available shall be sufficient to produce a volume of foam equal to five times the volume of the largest space to be protected. The expansion ratio of the foam shall not exceed 1,000 to 1.
The Administration may permit alternative arrangements and discharge rates provided that it is satisfied that equivalent protection is achieved.

2 Supply ducts for delivering foam, intakes to the foam generator and the number of foam-producing units shall be such as will provide effective foam production and distribution.

Foam-producing units shall be of an approved type.

3 The arrangement of the foam generator delivery ducting shall be such that a fire in the protected space will not affect the foam generating equipment.

4 The foam generator, its sources of power supply, foam-forming liquid and means of controlling the system shall be readily accessible and simple to operate and shall be grouped in as few locations as possible at positions not likely to be cut off by a fire in the protected spaced.

Regulation 10
Fixed Pressure Water-Spraying Fire-Extinguishing Systems in Machinery Spaces

1 Machinery spaces

.1 Any required fixed pressure water-spraying fire-extinguishing system in machinery spaces shall be provided with sprinkler jets of an approved type.

.2 The number and arrangement of the sprinkler jets shall be to the satisfaction of the appropriate authority and shall be such as to ensure an effective average distribution of water of at least 5 litres per square metre per minute in the spaces to be protected. This distribution may be reduced to 3.5 litres per square metre per minute when the ceiling height of the space to be protected is less than 2.5 metres.

.3 The system may be divided into sections, the distribution valves of which shall be operated from easily accessible positions outside the spaces to be protected and not likely to be rapidly cut off by a fire in the protected space.

.4 The pump shall be capable of simultaneously supplying at the necessary pressure all sections of the system in any one space to be protected. The pump and its controls shall be installed outside the space or spaces to be protected. It shall not be possible for a fire in the space or spaces protected by the water-spraying system to put the system out of action.

.5 The pump may be driven by an independent internal combustion engine. If, however, it is dependent upon power being supplied from the emergency generator fitted in compliance with the provisions of Chapter 7, that source shall be readily accessible and simple to operate in the event of failure of the main source of electrical power. When the pump is driven by an independent internal combustion engine it shall be so situated that a fire in the protected space will not affect the air supply to the engine.

.6 Precautions shall be taken to prevent the sprinkler jets from becoming clogged by impurities in the water or corrosion of piping, jets, valves and pump.

2 Closed ro-ro cargo spaces carrying motor vehicles with fuel in their tanks for their own propulsion.

Such spaces shall comply with the following provisions:

.1 The sprinkler jets shall be of an approved single aperture type. They shall be arranged such as to ensure an effective distribution of water in the spaces to be protected. For this purpose, the system shall be

capable of delivering at least 3.5 litres of water per square metre per minute in the spaces with a height of 2.5 metres or less, and 5 litres per square metre per minute in spaces of a greater height;

.2 The sections of the system shall be situated in an easily accessible position adjacent to but outside the space to be protected, which is not likely to be rapidly cut off by a fire in the protected space;

.3 The water supply to the system shall be from the fire main.

The output from each approved fire pump shall be sufficient to supply all the sprinklers in the system and a fire hose with nozzle at the required pressure; and

.4 The main fire pump or pumps shall be capable of being started by remote control (which may be hand-operated) from the location of the section valves.

Regulation 11
Fire Protection

1 Pressurized water extinguishing systems

.1 A fire main shall be provided in compliance with the requirements of Regulation 6.

.2 The fire system shall be supplied by a main pump situated in the propulsion machinery space and an independent emergency pump. Such pumps shall comply with the requirements of Regulation 6.

.3 In ships of less than 35 metres in length (L), the main pump may be coupled to the propulsion machinery, in which case it shall have a clutch mechanism.

.4 In the case of multi-hulled ships with two independent propulsion spaces, the main pump and emergency pump referred to in paragraph 1.2 may be replaced by two fire pumps with a clutch mechanism coupled to each propulsion engine and supplying the same fire main.

.5 In addition to the hose and nozzle referred to in paragraph 6, the following shall be provided:

.1 in ships of 24 metres or more in length (L), at least three hoses with nozzles;

.2 in ships of least than 24 metres in length (L), at least two hoses with nozzles.

.6 The following shall be installed in the propulsion space:

.1 a fire hydrant permanently coupled to a hose with a nozzle; and

.2 a receptacle containing a powdery material such as sand or sawdust impregnated with caustic soda and a shovel. A portable extinguisher of an approved type may be accepted as an equivalent.

2 Machinery spaces

In addition to the provisions of paragraph 1, machinery spaces containing oil-fired fuel, oil fuel units or internal combustion machinery for the purposes of propulsion of ships of over 24 metres in length (L) shall be provided, to the satisfaction of the Administration, with any one of the following fixed fire-extinguishing systems:

.1 a gas system complying with the provisions of Regulation 7;

.2 a high-expansion foam system complying with the provisions of Regulation 8; or

.3 a pressure water-spraying system complying with the provisions of Regulation 9.1.

3 Closed ro-ro cargo spaces carrying motor vehicles with fuel in their tanks for their own propulsion

In addition to the provisions in paragraph 1, such spaces shall be provided, to the satisfaction of the appropriate authority, with any one of the following fixed fire-extinguishing systems:

.1 a gas system complying with the provisions of Regulation 7.14.2; or

.2 a pressure water-spraying system complying with the provisions of Regulation 9.2.

Regulation 12
Fixed Fire Detection and Alarm Systems in Propulsion Machinery Spaces

1 A fixed fire detection system of an approved type shall be installed in spaces containing internal combustion machinery used for the main propulsion of ships of over 24 metres in length (L).

2 The detectors shall be operated by smoke or other products of combustion and initiate an audible and visual alarm, distinct from any other device that does not indicate a fire, to the wheelhouse.

3 The system shall be tested to the satisfaction of the Administration

Regulation 13
Fire Extinguishers

1 All fire extinguishers shall be of an approved type.

2 A portable foam applicator unit shall consist of an air-foam nozzle of an inductor-type capable of being connected to the main by a fire hose, together with a portable tank containing at least 20 litres of foam-making liquid and one spare tank. The nozzle shall be capable of producing effective foam suitable for extinguishing an oil fire, at the rate of 1.5 m^3/min.

3 One of the portable fire extinguishers intended for use in any space shall be stowed near the entrance to that space, preferably outside.

4 The number of spare charges shall be determined by the Administration to the extent that recharging of used extinguishers may be effected.

5 The number and distribution of portable extinguishers shall comply with the following requirements:

.1 Ships sailing more than 12 miles from the nearest land:

.1 In all machinery spaces of category A, at least two portable extinguishers capable of extinguishing an oil fire shall be provided. When such spaces contain machinery whose total power is at least 250kW or oil-fired boilers, at least one additional extinguisher shall be provided or the portable foam extinguisher specified in paragraph 2 above;

.2 All control stations, accommodation and service spaces shall be provided with a sufficient number of portable fire extinguishers such that at least one extinguisher of an appropriate type is ready for use in any part of such spaces. At least three such extinguishers shall be provided.

.2 Ships sailing not more than 12 miles from the nearest land shall be provided with an appropriate number of portable extinguishers, at least one of which shall be appropriate to extinguish an oil fire. At least three portable extinguishers shall be provided.

Regulation 14
Fireman's Outfit

1 On board ships of 35 metres in length (L) or over, two fireman's outfits shall be provided in compliance with the requirements of paragraph 2.

2 A fireman's outfit shall consist of:

.1 Personal equipment of an approved type comprising:

.1 Protective clothing of material to protect the skin from the heat radiating from the fire and from burns and scalding by steam. The outfit shall be water-resistant,

.2 Boots and gloves of rubber or other electrically non-conducting material,

.3 A rigid helmet providing effective protection against impact;

.4 An electric safety lamp (hand lantern) of an approved type with a minimum burning period of 3 hours, and

.5 An axe considered satisfactory by the Administration; and

.2 A breathing apparatus of an approved type which may be a self-contained compressed-air-operated apparatus, the volume of air contained in the cylinders of which shall be at least 1,200 litres, or other self-contained breathing apparatus which shall be capable of functioning for at least 30 minutes. A number of spare cylinders, suitable for use with the apparatus provided, shall be available on board as considered sufficient by the Administration.

The spare cylinders shall be such as to allow a period of working of three hours. If there is a plant for recharging compressed air bottles on board, this period may be reduced to two hours.

3 For each breathing apparatus a fireproof lifeline of sufficient length and strength shall be provided capable of being attached by means of a snaphook to the harness of the apparatus or to a separate belt in order to prevent the breathing apparatus becoming detached when the lifeline is operated.

4 The fireman's outfits or sets of personal equipment shall be so stored as to be easily accessible and ready for use and, where the ship carries more than one fireman's outfit or more than one set of personal equipment, they shall be stored in widely separated positions.

5 On ships of between 24 and 35 metres in length (L), the following equipment shall be provided:

.1 a hose-type breathing apparatus with an external air intake on the deck, fitted with a fire-resisting tube and of sufficient length,

.2 a torch,

.3 a pair of rubber gloves in fire-resisting material,

.4 a fireman's line,

.5 a pick, and

.6 a safety helmet.

Regulation 15
Emergency Escape Breathing Devices

Ships of more than 35 m in length shall carry at least two emergency escape breathing devices (EEBD) within accommodation spaces.

Regulation 16
Fire Muster Lists. Fire Patrols. Fire Drills

1 Ships of 24 metres or more in length (L) shall have a fire roster, drawn up and updated before sailing. The muster lists shall contain all specific tasks. In particular, it shall show call signals and the station to which each man shall report and the tasks he shall perform in the event of fire. It shall be permanently displayed in several parts of the ships, especially in places used by the crew.

2 An efficient system of fire patrols, including ro-ro cargo spaces, shall be organized at sea and in port such as to ensure rapid detection of any fire hazard.

3 Fire drills shall be conducted under the same conditions as those required by Chapter XI, in order to check the condition of fire-fighting equipment and train the crew in its use.

Regulation 17
Fire Control Plans

Ships of 24 metres or more in length (L) shall have a fire control plan permanently exhibited to the satisfaction of the Administration.

Regulation 18
Ready Availability of Fire-Extinguishing Appliances

1 Fire-extinguishing appliances shall be kept in good order and be available for immediate use at all times.

2 Equipment and systems shall be subject to periodic tests to ensure that they are in good working order or special checks depending on their nature, at least once a year. The date and purpose of such inspections shall be recorded in a maintenance and test log, and noted in the ship's log.

Regulation 19

Substitutes

Where in this chapter any special type of appliance, apparatus, extinguishing medium or arrangement is specified, any other type of appliance, etc., may be allowed if the Administration is satisfied that it is not less effective.

Chapter XII
Carriage of Dangerous Goods

Regulation 1
General

1 Ships engaged in the carriage of dangerous goods in package form shall comply with MARPOL III and the International Maritime Dangerous Goods (IMDG Code).

2 Ships engaged in the carriage of dangerous goods in solid form in bulk shall comply with MARPOL III and the International Maritime Solid Bulk Cargoes (IMSBC Code).

3 Chemical tankers shall comply with the requirements of the International Bulk Chemical Code (IBC Code) and the Bulk Chemical Code (BC Code) as appropriate, and Part B of Chapter VII of the Safety of Life at Sea (SOLAS), 1974 and its amendment.

4 Gas Carrier shall comply with the requirements of the International Gas Carrier Code (IGC Code) and Part C of Chapter VII of the Safety of Life at Sea (SOLAS), 1974 and its amendment.

5 The Company and the Master shall ensure that all dangerous and/or hazardous cargoes or goods on board the ship are carried in compliance with the existing MARINA rules and regulations and its future amendments and shall be jointly responsible for the safe carriage of such.

6 The Master shall ensure that all dangerous cargo/es carried on board are protected from any unauthorized access and that such spaces where these cargoes are carried are properly marked (i.e. black and yellow stripes, no smoking, others, as applicable).

7 Dangerous goods liable to spontaneous combustion shall not be carried on board unless added precautions are taken for the carriage of such items.

8 Only personnel with training in handling, carriage and stowage of dangerous goods shall be allowed to handle dangerous goods.

.1 All personnel shall be adequately trained in the use of protective equipment and have basic training in the procedures appropriate to their duties necessary under emergency conditions.

.2 Personnel involved in cargo operations shall be adequately trained in handling procedures.

.3 Officers shall be trained in emergency procedures to deal with conditions of leakage, spillage or fire involving the cargo and sufficient number of them shall be instructed and trained in essential first aid for cargoes carried, based on the guidelines developed by the Organization.

9 The Company shall ensure that designated crew properly trained in handling accidents involving dangerous goods is readily available.

10 The Company shall ensure that materials/equipment, to include medical first aid, to address accidents involving dangerous goods are readily available.

Chapter XIII
Minimum Safe Manning

Regulation 1
General Provisions

1 All Philippine-registered ships shall be manned by a sufficient number of qualified, competent and certificated officers and ratings who can safely operate the ships at all times in accordance with International Convention on Standards of Training Certification and Watchkeeping for Seafarers (STCW) 1978, as amended and the International Maritime Organization Resolution A 1047(27) on the Principles of Safe Manning

2 Philippine-registered ships shall have onboard and displayed in conspicuous place a MARINA Certified True Copy of the Minimum Safe Manning Certificate indicating therein the BASIC safe manning complement and their corresponding licenses and qualification requirements. In addition, a Crew List, indicating the Officer's and/or Crew's positions and licenses/qualifications, must be attached to the Minimum Safe Manning Certificate.

3 Issuance of Minimum Safe Manning Certificate shall conform to the requirements of the existing MARINA Memorandum Circular and its future amendments.

4 Masters, officers and ratings performing watchkeeping shall meet the certification requirements of MARINA Memorandum Circular 2012 - 04 and, where applicable, by the certification requirements of the 1978 STCW Convention, as amended.