

## B63B

**SHIPS OR OTHER WATERBORNE VESSELS; EQUIPMENT FOR SHIPPING**  
 ({amphibious vehicles [B60F 3/00](#); } air-cushion vehicles [B60V](#); arrangements of vessel ventilation, heating, cooling or air conditioning [B63J 2/00](#))

### Definition statement

*This place covers:*

Details of hulls, hydrofoils and keels:

- Hydrodynamic or hydrostatic features of hulls or of hydrofoils
- Constructions of hulls
- Hulls characterised by their construction of non-metallic material
- Collapsible, foldable, inflatable, or like vessels
- Interior subdivision of hulls
- Hull protection peculiar to vessels
- Drop keels, e.g. centre boards, side boards.

Other structural parts of ships or other waterborne vessels:

- Superstructures
- Arrangements or adaptations of masts
- Arrangements or adaptations of ports, doors, windows, port-holes, or other openings or covers
- Vessels parts, details, or accessories, not otherwise provided for.

Docking, moving and anchoring equipment::

- Tying-up
- Shifting, towing, or pushing equipment
- Anchoring.

Equipment for navigation, position-marking, signalling, or lighting:

- Arrangement or adaptation of signalling or lighting devices
- Arrangements of nautical instruments or navigational aids
- Marking of navigational route
- Buoys for marking a navigational route.

Equipment for controlling and indication vessel attitude:

- Equipment to decrease pitch, roll, or like unwanted vessel movements
- Apparatus for indicating vessel attitude.

Onboard safety features:

- Improving safety of vessels, e.g. damage control, not otherwise provided for
- Equipment for handling lifeboats or the like
- Fenders.

Cleaning of ships or other waterborne vessels:

- Tank or cargo hold cleaning specially adapted for vessels
- Cleaning devices peculiar to vessels.

Means for controlling ballast water or for removing unwanted onboard water:

- Conduits for emptying or ballasting
- Self-bailing equipment
- Scuppers.

Loading equipment or accommodation for cargo or passengers:

- Load-accommodating arrangements, e.g. stowing, trimming; Vessels characterised thereby
- Arrangement of ship-based loading or unloading equipment for cargo or passengers
- Accommodation for crew or passengers not otherwise provided for.

Other:

- Vessels or like floating structures adapted for special purposes
- Vessels or like floating structures not otherwise provided for
- Methods of designing, building, maintaining, converting, refitting, repairing, or determining properties of vessels, not otherwise provided for
- Equipment for shipping not otherwise provided for, whereby shipping is interpreted in its broadest sense within the naval context.

## Relationships with other classification places

[B63B](#) is the general home for ships or other waterborne vessels, and covers in particular their hydrostatic, hydrodynamic, structural and design features. It is also the place for equipment adapted for use on ships, and onboard arrangements thereof. Further it provides a residual place for equipment for shipping, wherein 'shipping' is interpreted in its broadest sense within the naval context.

Whilst methods of designing, building, maintaining, converting, repairing of vessels are classified in [B63B](#), subclass [B63C](#) covers the storing and handling of ships or other waterborne vessels to and from a non-floating position, e.g. launching, hauling-out, dry-docking, as well as equipment usable both on slipways and dry docks. [B63C](#) also covers salvaging of disabled, stranded or sunken vessels.

[B63B](#) covers onboard safety equipment and handling of lifeboats, yet devices for life-saving in water are classified in [B63C](#).

Whilst vessels or floating structures for aircraft are classified in [B63B](#), military aircraft carriers and other vessels characterised by their offensive or defensive capabilities, such as surface warships or submarines, are classified in [B63G](#).

Whilst [B63B](#) provides for the hydrodynamic and hydrostatic features of ships and other waterborne vessels (e.g. hulls, hydrofoils, keels), details of marine propulsion and steering (e.g. propellers or paddle wheels and their arrangement on vessels, sails, jets propulsion, oars, rudders) are classified in [B63H](#).

Whilst [B63B 17/06](#) provides for refuse discharge, e.g. ash, the arrangements of installations for treating waste water or sewage are classified in [B63J 4/00](#).

[B63B 29/00](#) provides for crew or passenger accommodation, yet [B63J](#) covers all other auxiliary equipment designed to render vessels habitable or operative (e.g. fresh water production, ventilation, heating and cooling arrangements).

## References

### Limiting references

*This place does not cover:*

Launching, hauling-out, or dry-docking of vessels; Life-saving in water; Equipment for dwelling or working under water; Means for salvaging; Means for searching for underwater objects	<a href="#">B63C</a>
Offensive or defensive arrangements on vessels; Mine-laying; Mine-sweeping; Submarines; Aircraft carriers	<a href="#">B63G</a>
Marine propulsion, steering or dynamic positioning	<a href="#">B63H</a>

Arrangements on vessels of installations for producing fresh water; Arrangements on vessels of ventilation, heating, cooling, or air-conditioning; Driving of vessel auxiliaries; Arrangements on vessels of installations for treating waste-water or sewage; Vessel auxiliaries not otherwise provided for	<a href="#">B63J</a>
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### **Application-oriented references**

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Fire-fighting vessels	<a href="#">A62C 29/00</a>
Convertible vehicles, i.e. vehicles capable of travelling in or on different media, e.g. amphibious vehicles;	<a href="#">B60F</a>
Arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general	<a href="#">B60Q</a>
Water flotation gear for lighter-than-air aircraft	<a href="#">B64B 1/68</a>
Aircraft alighting gear comprising floats	<a href="#">B64C 25/54</a>
Flying-boats; Flying boat hulls; Seaplanes	<a href="#">B64C 35/00</a>
Emergency flotation gear for aircraft	<a href="#">B64D 25/18</a>
Floating bridges	<a href="#">E01D 15/14</a>
Floating substructures as supports of dredgers or soil-shifting machines	<a href="#">E02F 9/06</a>
Shuttering for building concrete vessels	<a href="#">E04G</a>

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Fishing	<a href="#">A01K 69/00</a> - <a href="#">A01K 97/00</a>
Fire-fighting in ships	<a href="#">A62C 3/10</a>
Non-fixed roofs for vehicles or coverings for vehicles when not in use in general	<a href="#">B60J</a>
Fuel tanks for vehicles in general	<a href="#">B60K 15/03</a>
Fittings for carrying sports gear, e.g. surf boards, exterior to vehicles	<a href="#">B60R 9/08</a>
Air-cushion vehicles	<a href="#">B60V</a>
Kites per se	<a href="#">B64C 31/06</a>
Large containers for use in or under water	<a href="#">B65D 88/78</a>
Transport or storage devices, conveyors, chutes, cableways, per se; Shore-based equipment for loading and unloading ships	<a href="#">B65G</a>
Elevators; Escalators or moving walkways	<a href="#">B66B</a>
Cranes; Derricks; Load-engaging elements or devices for cranes, capstans, winches or tackles	<a href="#">B66C</a>
Capstans, e.g. anchor capstans; Winches; Tackles, e.g. pulley blocks; Hoists	<a href="#">B66D</a>
Hoisting, lifting, hauling, in general	<a href="#">B66F</a>
Anti-fouling paints	<a href="#">C09D 5/16</a>
Inhibiting corrosion of metals by anodic or cathodic protection	<a href="#">C23F 13/00</a>

Ropes or cables in general	<a href="#">D07B</a>
Bridges based on land or on a fixed structure designed to give access to ships or other floating structures	<a href="#">E01D 15/24</a>
Equipment for shipping on coasts, in harbours or on other fixed marine structures, e.g. for landing or mooring purposes	<a href="#">E02B 3/00</a>
Artificial islands mounted on piles or like supports; Grounded platforms; Construction methods therefor	<a href="#">E02B 17/00</a>
Ship-lifting devices, e.g. locks	<a href="#">E02C</a>
Masts and staying in general; Tents or canopies in general	<a href="#">E04H</a>
Anti-theft devices using locks for boats, surfboards and parts or accessories thereof, e.g. outboard motors or propellers	<a href="#">E05B 73/007</a>
Ropes, predominantly used for driving purposes; Means for fastening cables or ropes to one another or to other objects; Chains	<a href="#">F16G</a>
Pipes or hoses; Joints or fittings therefor; Supports for pipes, cables or protective tubing; Laying, reclaiming, repairing or joining pipes on or under water; Thermal insulation in general	<a href="#">F16L</a>
Lighting devices or systems thereof, being portable or specially adapted for transportation	<a href="#">F21L</a>
Non-portable lighting devices or systems thereof	<a href="#">F21S</a>
Functional features or details of lighting devices or systems thereof, in general	<a href="#">F21V</a>
Arrangements in or on ship testing tanks or water tunnels	<a href="#">G01M 10/00</a>
Advertising on ships or other floating means	<a href="#">G09F 21/18</a>
Fog horns as such	<a href="#">G10K 9/00</a>
Electric cables supported on or from floats	<a href="#">H02G 9/12</a>

### Special rules of classification

In this subclass, two different Indexing Schemes are used:

The first Indexing Scheme represents a further sub-division of the CPC scheme (breakdown codes). The symbols of this first Indexing Scheme are hierarchically arranged under CPC groups. They are limited in their scope by the scope of the respective symbols of the CPC scheme under which they are indented. This first Indexing Scheme is used for invention information and additional information.

The second Indexing Scheme covers the range [B63B 2201/00](#) - [B63B 2241/00](#), and is used in this subclass and in all other subclasses of the class [B63](#) "Ships or other waterborne vessels; Related equipment". This second Indexing Scheme is a horizontal scheme, and is used for indexing non-trivial information related to the invention information, as far as for this information no place is provided for in a particular group in the class [B63](#).

The use of both Indexing Schemes is obligatory for documents published after July 2011. The contents of these groups are not complete before this date.

### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Accident	An event which is sudden, involuntary, and harmful.
Attitude	The position of a vessel in relation to its line of travel. The orientation in space of a floating or submerged body.

Awning	A roof-like removable or fixed covering, e. g. of canvas, used as a shelter from sun or rain, in particular above a deck of a vessel.
Bailing	Pumping or scooping out water that has entered the interior of a vessel or water craft.
Balance	Equilibrium.
Ballast	Any heavy material, such as gravel, sand, metal, water, etc., placed in the hold of a ship to weigh it down in the water and prevent it from capsizing when under sail or in motion
Barge	A flat-bottomed boat, built mainly for river and canal transport of heavy goods, often not self-propelled but towed or pushed by tugs.
Berth	A bed, bunk or sleeping-place in a ship, usually narrow and fixed to a wall; A long box or shelf for sleeping, on the side of a cabin.
Boat-hook	A pole-handled hook used for fending off or pulling a boat.
Bog shoe	A buoyant device attachable to one's foot to assist with walking upon boggy or swampy terrain or morass.
Bilge	Part of the hull and corresponding compartment of a ship where the hull sides curve inward to meet at the keel.
Bilge keel	Longitudinally extending profile protruding from the outer surface of the bilge, for resisting rolling motion.
Block	A support for facilitating storage of boats, typically matching the boat's hull shape.
Bollard	A wooden or iron post on a ship or quay to which ropes may be secured.
Breeches-buoy	A rescue device used to evacuate personnel from wrecked vessels, typically comprising a circular buoyant ring with an integral sit harness. The buoy is suspended on a zip-wire and designed to be hauled to the safety of shore or an adjacent vessel.
Bunker	A compartment for solid or fluid fuel.
Bulkhead	An upright wall within the hull of a ship, separating hull compartments.
Canoe	A small open boat propelled by a single-bladed paddle; term often used for any kind of paddle-propelled boat.
Canopy	A protective roof, e.g. tent-like made of canvas. A dome-shaped cabin roof.
Carcass	The structural skeleton of a ship, including ribs, keel, stem, and stern-post, after the planks are stripped off.
Centreboard	A retractable keel arranged centrally on sailboats to prevent leeward drift.
Chock	A pad, packing or bedding typically from wood or an elastomeric material, used for distributing localised loads acting on a boat's or ship's hull, e.g. from struts or shores ; a wooden support upon which a boat rests when stowed on a vessel, e.g. on the vessel's deck
Clear-view screen	A glass disk mounted in a window, usually on the bridge of a ship, that rotates at high speed to disperse rain, spray, and snow, typically driven at the centre of the screen.
Cleat	A device to which ropes may be fastened, featuring two horns extending parallel to the surface on which it is mounted.

Cofferdam	A caisson attachable to the outside of a ship's hull for providing dry access to underwater elements, e.g for repair; a watertight empty space separating particular ship spaces, e.g. cargo oil tanks, from other spaces
Collision mat	A large square of canvas, treated with a sealing agent and attached to lines at each corner, hauled over a damaged part of the hull to limit the inflow of water.
Davit	A crane on the side or stern of a ship for raising or lowering loads, often arranged in pairs for lowering lifeboats.
Derrick	A crane for hoisting heavy loads, comprising a movable boom and furnished with suitable tackle for loading and unloading cargo; A loading or unloading rig comprising a single boom pivotally supported on or near the deck on one end, suspended from a mast by means of a single span or tackle on the other end, and provided on this other end with rope or tackle for load lifting or lowering.
Draft	The vertical distance between the waterline and the bottom of the hull. A large draft increases stability in high winds, whilst a small draft allows a vessel to navigate through shallower waters.
Dragging	Drawing or pulling with force something which is heavy and resists motion; Hauling.
Drogue	A funnel-like device deployed in the water behind a vessel to create drag in order to reduce vessel speed or improve stability.
Drop keel	A retractable keel that can be moved between deployed and retracted positions, to allow sailing in shallow waters.
Dunnage	Material or packaging deployed around cargo to secure it during transportation.
Fairing	An outer structure designed to reduce drag, e.g. as a cable fairing which improves the cable's passage through the water by acting as a streamlined sleeve.
Fairlead	A ring or aperture on a boat to guide ropes or the like, in order to prevent entanglement or rubbing on other structures.
Fender	A buffer to protect a vessel's hull from chafing or collision with a wharf or with other vessels.
Fiddle	A guardrail used on a table during rough weather to prevent things from slipping off.
Flare	A device that produces a bright light for signaling, illumination, or identification.
Fluke	A flat blade upon an anchor, designed to penetrate and grip the seabed.
Fouling	The growth of marine organisms such as barnacles in the underwater portion of a ship's hull.
Frame	A beam-like steel structure secured to the shell of a hull to increase its strength and rigidity. A vertical transverse constructional section through a ship's hull.
Galley	The cooking-room or kitchen on a ship.
Gantry crane	A bridge crane travelling on rails and supported on a frame or platform.
Grating	A framework of wooden or metal bars.

Gyroscope	A rapidly rotating mass used for decreasing vessel movements, in particular roll.
Hatch	A hatchway; a hatch cover; a trap-door or grated framework for covering openings in a deck.
Hatch beam	A beam placed across a hatch opening to support hatch covers.
Hatch coaming	A raised lip around a hatch opening to prevent unwanted ingress of surface water when the hatch is open.
Hatchway	A square or oblong opening in the deck of a ship through which cargo can be lowered into the hold.
Hawser	Anchor or mooring line, rope or cable; towing rope, towline.
Hawse-hole	An opening in the hull of a vessel through which an anchor cable or anchor chain passes.
Hawse-pipe	A pipe beneath the hawse-hole through which the anchor cable or anchor chain passes.
Hydrofoil	A wing-like structure positioned below a hull which creates hydrodynamic lift when a vessel is moved through the water at speed. The term is also used to describe vessels which use hydrofoil features to lift the hull out of the water at speed, thereby reducing drag.
Hydroplane	A light water craft which skims over the water surface at high speeds.
Inboard	Within the sides of a ship or vessel, or inside the hull of a ship or vessel.
Kayak	A small boat made of a framework of light wood covered with sealskins sewn together, and with a covered opening for the user and propelled by a double-paddle, or a sport or touring boat developed from this design.
Keel	A longitudinal beam around which the hull is built; a subsurface fin protruding from the hull to afford directional control and stability
Keelson	A longitudinal structural member secured to the keel and arranged parallel to the keel and above the transverse members such as timbers, frames or floors to increase longitudinal strength and rigidity, and to bind the keel to the transverse members.
Kite	Light tethered wind-lifted flexible foil.
Kite-sail	Kite held by user or tethered to water-craft for employing tether tension for wind driven water craft propulsion.
Lashing	Fastening a movable body with a cord or the like.
Lining	An internal protective wall covering, e.g. for heat or acoustic insulation.
Lifeboat	An open or covered boat, motorized or propelled by wind or muscle power, e.g. by oars, for rescue of crew and passengers at sea.
Lifeboat-like craft	A small auxiliary boat, e.g. dinghy, zodiac or jolly-boat, carried on a larger vessels, e.g. for providing access to the shore, or for transfer to other vessels.
Lighter	A flat-bottomed barge, typically unpowered, used for transferring goods and passengers to and from moored ships; A flat-bottomed unpowered barge for transporting goods.

Lighthouse	A fixed structure in the form of a tower equipped with a strong light visible to mariners for warning them of obstructions, for marking harbour entrances, etc.
Lightship	A ship equipped like a lighthouse and anchored where a permanent lighthouse would be impracticable.
Monolithic concrete	Concrete, hardened into a solid unbroken mass
Mooring	Securing a boat or vessel in a particular place, e.g. by tying-up or anchoring.
Paravane	Towed device depth controlled by vanes, in particular for cutting mooring lines of anchor mines; board towed at an angle to the towing direction for producing transverse spreading forces on a trawl net or a towed array of hydrophones.
Panelling	A wall facing, wall lining, wainscot.
Pitch	The rotary motion of a vessel about a horizontal axis perpendicular to its longitudinal axis or direction of motion.
Planing surface	A substantially horizontal surface on the underside of a light water craft of the hydroplane type which generates hydrodynamic lift when skimming at high speed over the water surface.
Pollution	Harmful substances left in the environment.
Pontoon	A stationary floating structure, typically used for support purposes, e.g. landing stages.
Port	A door, gate or closable opening.
Port-hole	A typically circular window in the side of a boat or ship.
Rat guard	A disk of sheet metal fitted around a hawser to prevent rats from boarding a vessel moored at a dock.
Roll	The rotary movement of a vessel about an axis parallel to its longitudinal axis or direction of motion.
Rubbing strake	A protective strip running along the length of the upper hull to prevent damage when coming alongside other structures or vessels.
Scupper	A hole in a ship's side to carry water from the deck overboard.
Shaft bracket	A bracket for supporting a propeller shaft extending external to the hull, e.g. on twin propeller vessels.
Shell	The structural watertight skin of a ship's hull.
Shifting	Moving a vessel from one place to another, e.g. from one berth to another, or using an anchor and warp to pull a vessel into position.
Shipping	Ships collectively. Navigation. The act of putting persons or things onboard ship or transporting them by ship.
Side board	A retractable keel at the side of a sailing boat or sailing vessel, that can be moved between deployed and retracted positions, to allow sailing in shallow waters.
Skid fender	A removable fender strip which facilitates launching of lifeboats over a ship's side whilst offering protection from damage by striking against the side of the ship.
Slewing	Turning (a thing) round upon its own axis, or without shifting it from its place.



Soil-water	Sewage from water closets, or used waste-water, e.g. used for washing, bathing, cleaning, flushing.
Stability	The ability of a floating vessel to remain upright or return to an upright position when disturbed.
Stanchion	An upright support, often for the ship's guard rail or bulwark.
Stay	An inclined rope or cable forming part of the standing rigging, used for imparting lateral stability to a mast or other superstructure.
Stem	A structural member extending upward from the keel at the bow of a ship's hull.
Stern frame	A strong structural assembly forming the stern construction, often comprising a rudder shoe and a stern boss.
Stern post	A strong structural hull member extending upward from the keel at the stern, often comprising a rudder shoe and a stern boss.
Sailboard	A wind-propelled surfboard.
Stowing	The placing and securing of cargo on board of a vessel, e.g. in the hold; The storing of provisions between decks.
Superstructure	Those parts of a ship, other than masts and rigging, which protrude above the main deck.
Surf-board	A small recreational board-like planing hull for supporting a user, e.g. wind-propelled or for riding on the crest of a wave.
SWATH vessel	A vessel of the Small Waterline Area Twin Hull type
Tackle	A combination of pulley-blocks and a rope for facilitating hoisting or lowering of heavy bodies.
Trawler	A fishing boat that uses a trawl net or dragnet.
Trimming	Adjustment or division of ballast and/or cargo to alter a vessel's draft or trim. The distribution of buoyancy and load; Controlling, when lowering or hoisting, the orientation of a lifeboat, or the like relative to the ship, or to the water surface.
Trolley	A carriage running on wheels, self-propelled or towed by ropes.
Turret	A heavy cylindrical body rotatably supported in a vessel's hull, predominantly connected to underwater mooring lines for allowing the moored vessel to weathervane.
Tying-up	Securing a vessel with ropes.
Vaulted deck	A deck of arched or rounded shape.
Water shoes	A buoyant device attachable to one's foot to assist with walking upon water.
Water sledge	A small sledge-like buoyant device with planing hull and propelled by towing; a small buoyant device for partly supporting a user, when riding down white-water.
Web beam	A strengthened beam built from plate-like webs and stiffening flanges.
Web frame	A strengthened frame built from plate-like high webs and stiffening flanges.
Winch	A hoisting or hauling device comprising a driven rotating drum around which a rope passes

Yaw	A movement of deviation from the direct course, as from bad steering; The angular motion or displacement about a yawing axis.
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## Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

AOV	Autonomously Operated Vehicle
FPSO	Floating Production Storage and Offloading (unit, vessel)
GPS	Global Positioning System
LASH	Lighter Aboard SHip (carrier)
LNG	Liquified Natural Gas (predominantly Methane)
LPG	Liquified Petrol Gas (predominantly Propane and Butane)
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973
NOAA	National Oceanic and Atmospheric Administration (buoy)
OBO	Ore Bulk Oil (carrier)
RADAR	RAdio Detection And Ranging
Ro-Ro	Roll-on - Roll-off
ROV	Remotely Operated Vehicle
SOLAS	International Convention for the Safety Of Life At Sea, 1974
SONAR	SOund Navigation And Ranging
ULCC	Ultra Large Crude Carrier
VLCC	Very Large Crude Carrier

*In patent documents, the following words/expressions are often used as synonyms:*

- "berth" and "mooring place"
- "canoe", "Canadian or Indian canoe", and "Canadian"
- "centreboard" and "daggerboard"
- "dragging" and "trawling"
- "paravane", "otter board or door" and "trawl board or door"
- "side board" and "lee-board"
- "sailboard", "windsurfing board" and "windsurfer"
- "twin hull" and "catamaran"

*In patent documents, the word/expression in the first column is often used instead of the word/expression in the second column, which is used in the classification scheme of this place:*

"air-scoop"	"air-catching device"
"docking" and "mooring"	"tying-up"
"trim-tab"	"trimflap"

*In patent documents, the following words/expressions are often used with the meaning indicated:*

"fouling"	"to cause something, e.g. an anchor, a cable or a propeller, to become entangled"
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"turret"	"traversable or swivel-mounted gun"
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## B63B 1/00

**Hydrodynamic or hydrostatic features of hulls or of hydrofoils (keels [B63B 3/38](#); determining hydrodynamic or hydrostatic features [B63B 9/00](#); hulls peculiar to submarines [B63B 3/13](#); decreasing pitch, roll or like unwanted vessel movements by using foils or acting on ambient water [B63B 39/06](#))**

### Definition statement

*This place covers:*

Hydrodynamic and hydrostatic features of hulls, such as hull shapes or hull arrangements of multihulls, hydrodynamic features or arrangements of hydrofoils, and means for varying inherent hydrodynamic characteristics of hulls, such as means for reducing surface friction, or wave resistance. In particular, this main group covers:

Hydrodynamic or hydrostatic features of single hulls deriving lift mainly from water displacement:

- Disk-shaped hulls
- Single hulls having an underpart which is partly provided with channels, e.g. providing a central longitudinal channel resulting in a W-shaped or catamaran-like cross section
- Single hulls of spherical shape
- Single hulls in the shape of a vertical ring
- Single hulls extending principally vertically, e.g. spar-type hulls
- Shapes of fore parts, e.g. bulbous bows
- Shapes of after parts.

Hydrodynamic or hydrostatic features of multiple hulls deriving lift mainly from water displacement:

- Multiple hulls comprising a cockpit surrounded and pivotally supported by at least three hulls
- Semi-submersible and small waterline area multiple hull vessels or the like, e.g. SWATH-ships
- Rigidly interconnected multiple hulls, e.g. comprising two hulls
- Resiliently interconnected multiple hulls
- Multiple hulls having means for actively varying hull shape or configuration.

Hydrodynamic or hydrostatic features of hulls of hydroplane type deriving additional lift from hydrodynamic forces:

- Hulls comprising one or more planing surfaces
- Hulls comprising attached planing skis or the like
- Sponsons and arrangements thereof on hulls
- Planing hulls with longitudinal chines or transverse steps
- Planing hulls in rigid semi-catamaran or multiple hull configuration
- Planing multiple hull vessels with resiliently interconnected hulls
- Planing multiple hull vessels with actively variable hull shape or configuration
- Planing hulls with adjustable planing surfaces.

Hydrodynamic or hydrostatic features of hulls deriving additional lift from hydrodynamic forces by means of hydrofoils:

- Mounting or suspension of the foils
- Safety arrangements, e.g. means for preventing damage in case of collision with underwater obstacles
- Arrangements of propulsion elements on hydrofoils

- Shape, hydrodynamic features and construction of hydrofoils
- Hulls comprising multiple hydrofoils
- Hydrofoils movable around a vertical axis, e.g. for steering

Hydrofoils with means for varying the lift or angle of attack, e.g. using flaps

- Retractable or folding hydrofoils.

Other means for controlling or varying inherent hydrodynamic features of hulls:

- Arrangements or use of aerodynamic elements, e.g. using airfoils for generating lift, thereby reducing the wetted surface of the hull
- Interceptors
- Using magneto-hydrodynamic forces
- Means for reducing surface friction, e.g. by mechanical means, ejecting air bubbles, using supercavitation, or by generating gas filled cavities
- Means for diminishing wave resistance, other than particular shapes of fore or aft parts like bulbous bows.

### Relationships with other classification places

[B63B 1/00](#) is the general home for hull shapes and hull arrangements of vessels of the displacement- or planing-type or of floating structures, as far as hydrodynamic or hydrostatic features are concerned. It further covers hulls comprising hydrofoils for generating additional lift, as well as constructional and hydrodynamic features of such hydrofoils. [B63B 1/00](#) is further the home for means for varying hull resistance, aerodynamic lift producing means, or other means for varying inherent hydrodynamic hull characteristic.

Whilst single hulls with channels are classified in [B63B 1/042](#), shapes of fore parts in [B63B 1/06](#), and shapes of after parts in [B63B 1/08](#), [B63H 5/00](#) covers arrangements of paddle wheels, or of propellers with stationary water-guiding elements, and of arrangements of propellers mounted in recesses.

Whilst hulls exhibiting a spherical shape or a vertically arranged toroidal shape are classified in [B63B 1/047](#), [A63B 19/02](#) covers freely movable rolling hoops for exercising, like e.g. gyrowheels.

Whilst single hulls extending principally vertically as such are classified in [B63B 1/048](#), [B63B 35/44](#) covers floating buildings, stores, drilling platforms, or workshops, among which those of spar-type semi-submersible structure, or oscillating platforms.

Whilst shapes of fore parts as such are classified in [B63B 1/06](#), and shapes of after parts as such in [B63B 1/08](#), constructional aspects of hull parts, e.g. of stern posts or stems are covered by [B63B 3/14](#), and [B63B 35/08](#) covers ice-breakers, or other vessels or floating structures for operation in ice-infested waters.

Whilst semi-submersibles and their hydrodynamic and hydrostatic features as such are classified in [B63B 1/04](#) (single hulls) or [B63B 1/107](#) (multiple hulls) respectively, [B63B 35/44](#) covers floating buildings, stores, drilling platforms, or workshops, among which semi-submersible offshore structures.

Whilst hydroplane hulls comprising adjustable planing surfaces as such are classified in [B63B 1/22](#), trimflaps are covered by [B63B 39/061](#).

Whilst safety arrangements on vessels of the hydrofoil type are classified in [B63B 1/244](#), [B63B 43/18](#) covers means or arrangements on vessels for preventing collision or reducing collision damage in general, and [B63H 20/10](#) covers outboard propulsion units with or without stabilising fins, foils or anitcavitation plates, comprising means for tilting or lifting of the propulsion element when an obstruction is hit.

Whilst arrangements, shape and construction of hydrofoils for producing hydrodynamic lift to the hull are classified in [B63B 1/24](#), [B63B 39/06](#) covers hydrofoils for decreasing vessel movements.

Whilst hydrofoils arranged for rotation around a vertical axis are classified in [B63B 1/28](#), [B63H 25/00](#) covers steering of vessels in general, e.g. by rudders.

## References

### Limiting references

*This place does not cover:*

Oscillating platforms	<a href="#">B63B35744B2</a>
Shaft brackets	<a href="#">B63B 3/42</a>
Icebreakers, or other icebreaking vessels	<a href="#">B63B 35/08</a>
Spar-type semi-submersible structures for special purposes, e.g. platforms for drilling	<a href="#">B63B 35/44</a>
Decreasing pitch, roll or the like unwanted vessel movements by using foils acting on ambient water, e.g. trimflaps	<a href="#">B63B 39/06</a>
Convertible vehicles, i.e. vehicles capable of travelling in or on different media, e.g. amphibious vehicles;	<a href="#">B60F</a>
Water flotation gear for lighter-than-air aircraft	<a href="#">B64B 1/68</a>
Aircraft alighting gear comprising floats	<a href="#">B64C 25/54</a>
Flying-boats; Flying boat hulls; Seaplanes	<a href="#">B64C 35/00</a>
Emergency flotation gear for aircraft	<a href="#">B64D 25/18</a>
Marine torpedoes	<a href="#">F42B 19/00</a>

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Construction of hulls peculiar to submarines	<a href="#">B63B 3/13</a>
Construction of keels	<a href="#">B63B 3/38</a>
Determining hydrodynamic and hydrostatic features	<a href="#">B63B 9/00</a>
Equipment to decrease vessel movements by using foils acting on ambient water, e.g. by using trimflaps or having a variable cross section	<a href="#">B63B 39/06</a>
Air pockets for supporting the hull or for improving buoyancy	<a href="#">B63B 43/12</a>
Improving safety of vessels by preventing collision or grounding, or by reducing collision damage (in general)	<a href="#">B63B 43/18</a>
Buoyant wheels	<a href="#">B60B 19/06</a>
Air-cushion vehicles	<a href="#">B60V</a>
Bringing air into sunken vessels or objects for lifting	<a href="#">B63C 7/12</a>
Air pockets in submarines	<a href="#">B63G 8/14</a>
Rudders, e.g. with flaps or changing geometry	<a href="#">B63H 25/38</a>
Control of course, position, or attitude of waterborne vehicles	<a href="#">G05D 1/00</a>
Improving hydrodynamics of hull (automatically allocated indexing code)	<a href="#">Y02T 70/12</a>

### Special rules of classification

In this main group, subject-matter concerning the control of course or position, or the control of attitude, i.e. the control of roll, pitch or yaw, specially adapted to waterborne vehicles, is also classified

in the respective subgroups of [G05D 1/00](#) (reference is made to the Special rules of classification within main group [G01D 1/00](#)).

### Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

MHD (forces)	Magneto-HydroDynamic (forces)
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## B63B 3/00

**Constructions of hulls (non-metallic hulls [B63B 5/00](#); designing, building, maintaining or repairing methods [B63B 9/00](#))**

### Definition statement

*This place covers:*

Construction of hulls and of hull parts, especially hulls and hull parts made of metallic material, as well as constructional features of hulls or hull parts in which the material has no relevance. In particular, this main group covers:

Construction of hulls of particular type:

- Hulls assembled from a plurality of sub-units, e.g. permanently-connected sub-units, or detachably-connected sub-units
- Hulls constructed from non-magnetic metals
- Armoured hulls
- Hulls specially adapted to withstand hydrostatic pressure, e.g. hulls of submarines
- Frameless hulls.

Construction of hull parts:

- Connections between shell and deck
- Construction of shells, e.g. developed from flat panels, of double type, or with corrugations
- Means for minimising external protrusions or ridges on shells
- Construction of frames, e.g. of frames of transverse type, bilge knees, stringers, web frames or beams, of frames of longitudinal type and respective bulkhead connections, or of combined frame systems
- Construction of rigid keels forming part of the hull
- Stern posts, stern frames, or shaft brackets
- Bilge keels
- Stems
- Construction of decks, e.g. of vaulted type, of deck supporting pillars or of deck girders
- Construction of hatch openings, e.g. of hatch coamings or hatchway corners
- Bulkheads, e.g. with flat or with corrugated plating
- Construction of double bottoms or of tank tops
- Keelsons
- Gratings
- Panelling or lining, e.g. for hull insulation
- Construction of localized reinforcements, e.g. for carrying loads from propulsion power plants, towing equipment or guns

### Relationships with other classification places

[B63B 3/00](#) is the general home for constructional features of hulls, in particular of metallic hulls, such as armoured hulls, or hulls assembled from pre-fabricated sections, as well as for constructional

features of parts of hulls, such as shells, frames, stern frames, stems, decks, bulkheads, or local reinforcements.

Whilst [B63B 3/02](#) covers the construction of metallic hulls assembled from pre-fabricated sub-units, [B63B 7/00](#) covers collapsible or foldable vessels.

Whilst [B63B 3/40](#) provides for stern post or stern frames, propeller shaft stern tubes are classified in [B63B 23/36](#).

Whilst [B63B 3/54](#) covers the construction of hatch openings in the ship's hull, e.g. of hatch coamings, [B63B 19/00](#) covers arrangements and adaptations of hatches or hatchways, hatch covers, hatch beams or hatch fastenings.

Whilst [B63B 3/70](#) covers localized reinforcements in the ship's hull, e.g. for carrying propulsion power plants or guns, [B63B 21/00](#) covers equipment or arrangements for tying-up, towing or anchoring, e.g. anchor winches, mooring turrets, or towing hooks, [B63G 1/00](#) covers arrangements of guns or missile launchers, and [B63H 21/30](#) covers the mounting of propulsion power plants or units, e.g. for anti-vibration purposes.

## References

### Limiting references

*This place does not cover:*

Hulls characterised by their construction of non-metallic material	<a href="#">B63B 5/00</a>
Wooden planking of decks	<a href="#">B63B 5/06</a>
Collapsible, foldable, inflatable or like vessels	<a href="#">B63B 7/00</a>
Foldable pontoons	<a href="#">B63B 35/36</a>
Shape of surf-boards, e.g. of sailboards	<a href="#">B63B 35/7906</a>
Stabilising aspects of bilge keels	<a href="#">B63B 39/06</a>
Drop keels, e.g. centre boards, side boards	<a href="#">B63B 41/00</a>
Improving safety of vessels by reducing risk of capsizing or sinking, e.g. by by improving stability or by improving buoyancy	<a href="#">B63B 43/02</a>

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Methods of designing, building, maintaining, converting, refitting, repairing, or determining properties of vessels	<a href="#">B63B 9/00</a>
Arrangements or adaptations of ports, doors, windows, port-holes, hatches, hatchways, or other openings or covers	<a href="#">B63B 19/00</a>
Equipment or arrangements for tying-up, towing or anchoring, e.g. anchor winches, mooring turrets, or towing hooks	<a href="#">B63B 21/00</a>
Detachable decks	<a href="#">B63B 25/18</a>
Arrangements of watertight doors in bulkheads	<a href="#">B63B 43/24</a>
Arrangements of guns or missile launchers	<a href="#">B63G 1/00</a>
Waterjet-propulsion by means of magneto-hydrodynamic forces	<a href="#">B63H 11/025</a>
Mounting of propulsion power plants or units, e.g. for anti-vibration purposes	<a href="#">B63H 21/30</a>
Bearings or seals specially adapted for propeller shafts	<a href="#">B63H 23/32</a>

Propeller shaft tubes	<a href="#">B63H 23/36</a>
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## B63B 5/00

### Hulls characterised by their construction of non-metallic material

#### Definition statement

*This place covers:*

- Hulls characterised by being predominantly built from non-metallic material, such as wood, concrete or plastics. In particular, this main group covers:
- Hulls predominantly constructed of wood:
  - Carcasses
  - Shells.
  - Wooden decks, e.g. with single-layer or multiple-layer planking.
  - Composite hull constructions made predominantly of wood with metal reinforcement.
- Hulls predominantly made of concrete, e.g. with reinforcements:
  - Monolithic concrete hulls
  - Concrete hulls built-up from elements, e.g. combined with elements of other material

Concrete hulls with reinforcing members arranged external to the shell.

Hulls predominantly made of plastics, e.g. with reinforcements.

#### Relationships with other classification places

[B63B 5/00](#) is the general home for hulls constructed from non-metallic material, such as wood, concrete or plastics, opposite to hulls made of metallic material, which are classified in [B63B 3/00](#).

However, inflatable hulls are covered by [B63B 7/08](#), the construction of surf-boards, or sailboards, e.g. made of plastics is covered by [B63B 35/7909](#), and waterskis or watersledges and their constructional features are classified in [B63B 35/81](#).

#### References

##### Limiting references

*This place does not cover:*

Hulls characterised by their construction of metallic material	<a href="#">B63B 3/00</a>
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##### Application-oriented references

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Construction or shape of surf- or sailboards characterised by the arrangement of constructive parts made predominantly of plastics, e.g. layers	<a href="#">B63B 7/08</a>
Hulls of inflatable vessels, as far as the inflatable hull parts are concerned	<a href="#">B63B 35/7909</a>
Waterskis; Watersledges	<a href="#">B63B 35/81</a>



### Informative references

Attention is drawn to the following places, which may be of interest for search:

Methods of designing, building, maintaining, converting, refitting, repairing, or determining properties of vessels	<a href="#">B63B 9/00</a>
Working of plastics; working of substances in a plastic state in general	<a href="#">B29</a>
Layered products in general	<a href="#">B32</a>

### Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Carcass	The structural skeleton of a ship, including ribs, keel, stem, and stern-post, after the planks are stripped off.
Caulking	A method of stopping-up the seams of wooden planking by driving in oakum, or the like, melted pitch or resin being afterwards poured on, so as to prevent leaking.
Monolithic concrete	Concrete, hardened into a single solid unbroken mass
Oakum	Coarse woody fibres separated from the finer fibres of flax or hemp; Loosely twisted fibres obtained chiefly by untwisting and picking old hemp rope; such fibres or the like, used as a caulking material for the seams of wooden ships, the joints of pipes, or the like
Shell	The structural watertight skin of a ship's hull.
Surf-board	A small recreational board-like planing hull for supporting a user, e.g. wind-propelled or for riding on the crest of a wave.

## B63B 7/00

### Collapsible, foldable, inflatable or like vessels (foldable pontoons [B63B 35/36](#))

#### Definition statement

*This place covers:*

Vessels characterised by being collapsible or foldable, or deriving at least a substantial portion of hydrostatic lift from inflatable buoyancy members, or the like vessels, as well as related features of such vessels. In particular this main group covers:

Collapsible or foldable vessels comprising rigid parts only:

- Collapsible or foldable vessels comprising a plurality of sections
- Vessels comprising foldable members
- Vessels comprising nestable elements.

Collapsible, foldable, inflatable or the like vessels comprising parts of non-rigid material:

- Inflatable vessels, e.g. comprising parts of rigid material
- Vessels with flexible pockets adapted for receiving removable buoyancy elements
- Accessories specially adapted for inflatable vessels, e.g. seats, sailing-rigs or mountings for propulsion power units like transom mountings for outboard propulsion units.

## Relationships with other classification places

[B63B 7/00](#) is the general home for ships, boats, or other waterborne vessels which are adapted for being collapsed or being folded, e.g. by using non-rigid material, or which comprise inflatable hull members.

Whilst [B63B 7/00](#) provides for vessels or boats characterised by being collapsible, foldable or inflatable, [B63B 35/71](#) provides for canoes, kayaks or the like watercraft as such.

Whilst [B63B 7/00](#) and subgroups provide also for collapsible multi-hull vessels, [B63B 1/14](#) provides for multi-hull vessels with resilient connection between the hulls or provided with means for actively varying the hull shape, or configuration, and [B63B 3/02](#) provides for the construction of hulls assembled from prefabricated units, e.g. detachably connectable units.

Whilst [B63B 7/08](#) provides for inflatable vessels with or without having parts of rigid material, [B63B 5/24](#) provides for hulls substantially made from plastics in general, inflatable surf-boards, or the like are classified in [B63B 35/7913](#), and inflatable life-saving equipment, like e.g. life-rafts is covered by [B63C 9/00](#).

Whilst [B63B 7/085](#) provides for accessories or mountings specially adapted for inflatable vessels, e.g. seats, sailing kits, or motor mountings, [B63B 29/04](#) provides for furniture peculiar to vessels, [B63B 35/71](#) covers accessories for kayaks or canoes, [B63B 35/7953](#) provides for winddriven surf-boards or sailboards, [B63H 9/00](#) provides for propulsive devices directly acted on by wind, and arrangements thereof on vessels, in general, mountings of outboard propulsion units as such are covered by [B63B 20/00](#), and the mounting of propulsion plant or unit in general, e.g. for anti-vibration purposes is classified in [B63H 21/30](#).

## References

### Limiting references

*This place does not cover:*

Inflatable surf-boards	<a href="#">B63B 35/7913</a>
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### Application-oriented references

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Life-saving in water, e.g. inflatable life-saving equipment	<a href="#">B63C 9/00</a>
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### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Hydrodynamic or hydrostatic features of multiple hulls being interconnected resiliently, or having means for actively varying hull shape or configuration	<a href="#">B63B 1/14</a>
Constructions of hulls assembled from prefabricated sub-units, e.g. with detachably-connected sub-units	<a href="#">B63B 3/02</a>
Hulls characterised by their construction of non-metallic material, e.g. of plastics material, in general	<a href="#">B63B 5/00</a>
Furniture peculiar to vessels, e.g. seats	<a href="#">B63B 29/04</a>
Kayaks or canoes per se	<a href="#">B63B 35/71</a>
Winddriven surf-boards or sailboards; rigging thereof	<a href="#">B63B 35/7953</a>
Connection of valves to inflatable elastic bodies	<a href="#">B60C 29/00</a>

Propulsive devices directly acted on by wind; Arrangements thereof (in general)	<a href="#">B63H 9/00</a>
Outboard propulsion units, i.e. propulsion units having a substantially vertical power leg mounted outboard of a hull and terminating in a propulsion element, e.g. "outboard motors", Z-drives with level bridging shaft arranged substantially outboard; Arrangements thereof on vessels	<a href="#">B63H 20/00</a>
Mounting of propulsion plant or unit, e.g. for anti-vibration purposes, in general	<a href="#">B63H 21/30</a>

## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Foldable vessel	A water-craft comprising substantially rigid structural elements which remain connected to each other in their collapsed state by means of articulations or the like.
Nestable element	An element that forms part of a set of similar articles which can be fitted into one another

## B63B 9/00

**Methods of designing, building, maintaining, converting, refitting, repairing, or determining properties of vessels, not otherwise provided for (shuttering for building concrete vessels [E04G](#))**

### Definition statement

*This place covers:*

Methods, not otherwise provided for, of designing vessels, of building, maintaining, converting or repairing vessels, or of determining the properties of vessels. This main group covers in particular:

Methods of designing vessels by making use of towing tanks or ship model basins, e.g. using ice-model basins.

Methods of designing vessels or of determining properties of vessels by making use of analytical modelling.

Methods for determining stability and balance characteristics of vessel.

Methods of building, maintaining, converting, repairing or dismantling vessels:

- Methods for dismantling hulls, or elements of ships or other waterborne vessels, e.g. for dismantling hulls or unshipping of equipment or other non-structural elements, such as propeller, rudders or main engines
- Methods for repairing hulls or structural elements of ships or other waterborne vessel
- Methods for refitting, converting or rebuilding ships or other waterborne vessels, e.g. for increasing tonnage or for adapting the vessel to a new task
- Methods of building hulls of ships or of other waterborne vessels, such as floating offshore platforms, e.g. by means of in situ assembling of offshore structures in buoyant state.

### Relationships with other classification places

[B63B 9/00](#) is the general home for methods of ship design, shipbuilding, ship repair, ship conversion, ship repair, ship dismantling, or for corresponding methods for other waterborne vessels, e.g. for floating offshore structures. [B63B 9/00](#) is further the general home for methods of determining

properties of ships or other waterborne vessels, e.g. for determining ship stability properties like the metacentric height.

Whilst [B63B 9/001](#) provides methods of ship design or of determining vessel properties by means of analytical modelling, e.g. making use of computers, [G06F 17/50](#) provides for computer-aided design (CAD) in general, in particular [G06F 17/5018](#) for computer simulations using the finite difference method (FDM), or the finite element method (FEM), and [G06F 17/5095](#) for computer-aided vehicle design, in general.

Whilst [B63B 9/02](#) provides for design methods for ships or other waterborne vessels making use of towing tanks or ship model basins, and [B63B 9/08](#) for methods of determining vessel properties with respect to stability or balance, [G01M 1/00](#) provides for testing static or dynamic balance of machines or structures in general, and [G01M 10/00](#) provides for hydrodynamic testing in general, and for arrangements in or on ship testing tanks or water tunnels.

Whilst [B63B 9/04](#) provides for methods of rebuilding, converting or dismantling ships, and [B63B 9/06](#) for methods of building hulls, [B63B 17/0018](#) provides for cofferdams or other means facilitating access to underwater parts of ships, while devices for cleaning ship's hulls are provided for in [B63B 59/06](#), [B63C 1/00](#) covers dry-docking of vessels, as well as dry docks as such, [B63C 3/00](#) provides for ship launching or hauling-out by land-borne slipways, as well as for slipways as such, and [B63C 5/00](#) provides for equipment usable both on slipways and in dry docks, e.g. struts, shores or bilge blocks.

Whilst [B63B 9/065](#) provides for methods for building the hulls of floating offshore structures, e.g. methods for assembling floating offshore structures in situ, [E02B 17/00](#) covers ground-borne offshore structures, as well as the respective methods of building or assembly, including methods making use of buoyancy of the structure itself during transport and installation.

Whilst [B63B 9/08](#) provides for methods of determining vessel properties with respect to stability or balance, [B63B 39/00](#) cover apparatus for indicating vessel attitude

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements or devices specially adapted for facilitating access to underwater elements, e.g. cofferdams attachable to the hull	<a href="#">B63B 17/0018</a>
Apparatus for indicating vessel attitude, e.g. for indicating draught or load, or for indicating inclination or duration of roll	<a href="#">B63B 39/00</a>
Cleaning devices for hulls	<a href="#">B63B 59/06</a>
Dry-docking of vessels; Dry-docks	<a href="#">B63C 1/00</a>
Launching or hauling-out by land-borne slipways; Slipways	<a href="#">B63C 3/00</a>
Equipment usable both on slipways and in dry docks	<a href="#">B63C 5/00</a>
Artificial islands mounted on piles or like supports, e.g. platforms on raisable legs or offshore constructions; construction methods therefor	<a href="#">E02B 17/00</a>
Testing static or dynamic balance of machines or structures, in general; Testing structure or apparatus not otherwise provided for	<a href="#">G01M</a>
Hydrodynamic testing; Arrangements in or on ship-testing tanks or water tunnels	<a href="#">G01M 10/00</a>
Computer-aided design, in general	<a href="#">G06F 17/50</a>
Computer-aided simulation using the finite difference method, or the finite element method, in general	<a href="#">G06F 17/5018</a>
Computer-aided design of vehicles, in general	<a href="#">G06F 17/5095</a>

## Special rules of classification

Computer-aided methods of designing ships or other waterborne vessels, or of determining properties of vessels are also classified in the relevant groups for computer-aided design, see [G06F 17/50](#) and sub-groups.

## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Attitude	The position of a vessel in relation to its line of travel. The orientation in space of a floating or submerged body.
Balance	Equilibrium.
Cofferdam	A caisson attachable to the outside of a ship's hull for providing dry access to underwater elements, e.g for repair.
Stability	The ability of a floating vessel to remain upright or return to an upright position when disturbed.

## Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

CAD	Computer-aided design
CFD	Computational Fluid Dynamics
FDM	Finite Difference Method
FEM	Finite Element Method

*In patent documents, the following words/expressions are often used with the meaning indicated:*

"metacentric height"	"a measurement of the initial static stability of a floating body". It is calculated as the distance between the centre of gravity of a ship and its metacentre, which is defined as the "point on a vertical plane through the centre of gravity of a ship, at which the vector of hydrostatic lift acting on the centre of buoyancy at a small angle of inclination (heeling, pitching) crosses said vertical plane".
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## B63B 11/00

### Interior subdivision of hulls (bulkhead space construction [B63B 3/56](#))

#### Definition statement

*This place covers:*

Arrangements and constructional features of means for subdividing the interior of hulls:

- Arrangements of bulkheads, e.g. longitudinal or transverse for defining cargo holds
- Constructional features of bunkers or ballast tanks, e.g. comprising elastic walls for variably separating liquid fuel and ballast water
- Propeller-shaft tunnels.

#### Relationships with other classification places

[B63B 11/00](#) is the general home for subject-matter concerning the interior subdivision of hulls into smaller compartments.

Whilst [B63B 11/02](#) provides for arrangements of bulkheads, [B63B 3/56](#) provides for constructional aspects of bulkheads, or of bulkhead reinforcements, and arrangements of water-tight doors in bulkheads are covered by [B63B 43/24](#).

Whilst constructional features of bunkers, e.g. structural fuel tanks, or ballast tanks, e.g. with elastic walls, are provided for in [B63B 11/04](#), tanks for fuel, or the like not forming subdivisions of the hull are found in [B63B 17/0027](#), load-accomodations for fluid cargo are provided for in [B63B 25/08](#), and [B63B 57/00](#) provides for methods or apparatus specially adapted for cleaning of tanks or cargo holds onboard marine vessels.

Whilst propeller-shaft tunnels are classified in [B63B 11/06](#), propeller shaft tubes are provided for in [B63H 23/36](#).

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Construction of bulkheads; construction of bulkhead reinforcements	<a href="#">B63B 3/56</a>
Tanks for fuel or the like; Accessories therefor, e.g. tank filler caps	<a href="#">B63B 17/0027</a>
Load-accomodating arrangements, e.g. stowing, trimming; Vessels characterised thereby, e.g for fluid cargo	<a href="#">B63B 25/00</a>
Arrangements of watertight doors in bulkheads for improving safety of vessels, e.g. damage control	<a href="#">B63B 43/24</a>
Tank or cargo hold cleaning specially adapted for vessels	<a href="#">B63B 57/00</a>
Propeller shaft tubes	<a href="#">B63H 23/36</a>

## Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Bulkhead	An upright wall within the hull of a ship, separating hull compartments.
Bunker	A compartment for solid or fluid fuel.

## Synonyms and Keywords

In patent documents, the following words/expressions are often used with the meaning indicated:

"cofferdam"	"a watertight compartment in the interior of a ship's hull separating particular ship spaces, e.g. cargo oil tanks, from other spaces".
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## B63B 13/00

**Conduits for emptying or ballasting; Self-bailing equipment; Scuppers (draining means for hatches [B63B 19/26](#); centrifugal bilge-water separators [B04](#); {arrangements of installations for treating ballast water [B63J 4/002](#); } pipes in general [F16L](#))**

### Definition statement

*This place covers:*

Means and arrangements for taking-in or disposal of ballast water, or for getting-off of unwanted onboard water, e.g. bilge water, or on-deck water:

- Conduits for emptying or ballasting
- Self-bailing equipment
- Scuppers
- Sea-chests, also for taking-in, or discharge of cooling water
- Ports for passing water through the sides of a vessel.

### Relationships with other classification places

[B63B 13/00](#) is the general home for pipe system, or the like specially adapted for taking-in or discharging ballast water, as well as for equipment for bailing or discharging unwanted onboard water.

While [B63B 13/00](#) provides for scuppers, i. e. for draining holes for discharging water on deck, draining means for hatches are classified in [B63B 19/26](#).

Whilst [B63B 13/00](#) provides for conduits for taking-in or discharging water, e.g. sea-chests or ports for passing water through vessels' sides, [B04](#) provides for centrifugal bilge-water separators, hawse-holes or hawse-pipes are covered by [B63B 21/14](#), [B63H 21/383](#) covers apparatus or methods specially adapted for onboard handling of cooling water for marine power plants or units, [B63J 4/002](#) for arrangements on vessels of installations for treating ballast water, e.g. prior to discharge, treatment of water, waste water, sewage or sludge as such is classified in [C02E](#), and pipes in general are covered by [F16L](#).

### References

#### Application-oriented references

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Draining means for hatches	<a href="#">B63B 19/26</a>
Apparatus or methods specially adapted for use on marine vessels, for handling power plant or unit cooling water	<a href="#">B63H 21/383</a>

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Hawse-holes; Hawse-pipes	<a href="#">B63B 21/14</a>
Centrifugal apparatus or machines for carrying-out physical or chemical processes, e.g. bilge water separators	<a href="#">B04</a>
Emptying the contents of sunken, stranded, or disabled vessels, e.g. by engaging the vessel	<a href="#">B63C 7/00</a>
Jet propulsors with means to prevent foreign material from clogging fluid passage way	<a href="#">B63H 11/01</a>

treatment of water, waste water, sewage or sludge (as such)	<a href="#">C02F</a>
Pipes (in general); Joints or fittings for pipes; Supports for pipes, cables or protective tubing; Means for thermal insulation in general.	<a href="#">F16L</a>

## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Bailing	Pumping or scooping out water that has entered the interior of a vessel or water craft.
Ballast	Any heavy material, such as gravel, sand, metal, water, etc., placed in the hold of a ship to weigh it down in the water and prevent it from capsizing when under sail or in motion.
Hatch	A hatchway; a hatch cover; a trap-door or grated framework for covering openings in a deck.
Port	A door, gate or closable opening.
Scupper	A hole in a ship's side to carry water from the deck overboard.

## Synonyms and Keywords

*In patent documents, the following words/expressions are often used with the meaning indicated:*

"sea chest"	"a cavity inside of the outer hull shell being in open communication with the environmental water body, e.g. by perforations in the shell, which is used as a water intake, e.g. for cooling water, or for ballast water".
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## B63B 15/00

**Superstructures {, deckhouses, wheelhouses or the like}; Arrangements or adaptations of masts {or spars, e.g. bowsprits} (loading or unloading equipment [B63B 27/00](#); masts and staying in general [E04H](#); sails, running rigging [B63H](#); {mounting ladders or the like on masts [B63B 29/205](#)})**

### Definition statement

*This place covers:*

Superstructures, i.e. those parts of a ship or waterborne vessel, other than masts and rigging, which protrude above the main deck, e.g. deckhouses, wheelhouses or superstructures extending from side to side.

Arrangements or adaptations of masts or spars:

- Masts characterised by a particular configuration or construction, e.g. bipodded masts, masts of tripod-type, or telescoping masts
- Masts adapted for varying position or orientation, e.g. masts comprising active or passive means for changing mast inclination, or masts having movable mast foot
- Bowsprits.

Staying of masts or other spars, or of superstructures.



## Relationships with other classification places

[B63B 15/00](#) is the general home for superstructures, deckhouses, or the like, as well as for masts, e.g. masts for sailing boats, and for the staying or rigging of superstructures or masts, e.g. by means of standing ropes or guy ropes.

Whilst [B63B 15/00](#) provides for masts or superstructures of vessels in general, [B63B 27/00](#) provides for equipment for loading or unloading of cargo or passengers, e.g. derrick posts or deck cranes, arrangements on ships of sails, or other propulsive devices directly acted on by wind, e.g. Flettner rotors are classified in [B63H 9/00](#), [B63G 8/04](#) provides for superstructures of submarine vessels, and [E04H](#) provides for masts or staying of masts, in general.

Whilst [B63B 15/00](#) provides for mastfoot arrangements on ships in general, e.g. for articulated, counterbalanced masts, mastfoot arrangements for sailboards are classified in [B63B 35/7959](#), and counterbalancing of ships with solid ballast is covered by [B63B 39/02](#) or [B63B 43/08](#).

## References

### Limiting references

*This place does not cover:*

Mastfoot arrangements on winddriven boards	<a href="#">B63B 35/7959</a>
Superstructures of underwater vessels, e.g. of submarines	<a href="#">B63G 8/04</a>

### Application-oriented references

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Loading or unloading of cargo or passengers, Arrangements of loading or unloading equipment on vessels	<a href="#">B63B 27/00</a>
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### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Equipment to decrease vessel movements by displacement of masses	<a href="#">B63B 39/02</a>
Improving safety of vessels by improving stability by transfer of solid ballast	<a href="#">B63B 43/08</a>
Propulsive devices directly acted on by wind; Arrangements thereof	<a href="#">B63H 9/00</a>
Towers; Masts, poles; Chimney stacks; Water-towers; Methods for erecting such structures (in general)	<a href="#">E04H 12/00</a>
Side supporting means for towers, masts, poles, chimney stacks or water-towers, e.g. using guy ropes, struts (in general)	<a href="#">E04H 12/20</a>

## Special rules of classification

As bowsprits, even if employed for sailing boats, are no masts (= upright poles), they are to be classified in [B63B 15/00](#) (not in [B63B 15/0083](#)). If spars like bowsprits are movable for sail rigging purposes, they are (also or only, depending on the case) classified in [B63H 9/10](#) or subgroups, e.g. under spinnaker poles [B63H 9/1071](#). If they serve other purposes they are also classified with the purpose, if available, e.g. for handling anchors [B63B 21/22](#).

## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Bowsprit	A large, usually stayed spar or boom running out from the stem of a vessel, to which (and the jib-boom and flying jib-boom, which extend beyond it) the foremast stays are fastened.
Spar	The general term for all masts, yards, booms, gaffs, or the like.
Stay	An inclined rope or cable forming part of the standing rigging, used for imparting lateral stability to a mast or other superstructure.
Superstructure	Those parts of a ship, other than masts and rigging, which protrude above the main deck.

## B63B 17/00

**Vessels parts, details, or accessories, not otherwise provided for {(vehicle fittings for preventing or indicating unauthorised use or theft of vehicles in general [B60R 25/00](#); propeller guards, line cutters or other means for protecting propellers or rudders [B63H 5/165](#); protection of power legs of outboard propulsion units [B63H 20/36](#); locking devices for boats, surfboards or parts or accessories thereof [E05B 73/007](#))}**

### Definition statement

*This place covers:*

Parts or details of ships or other waterborne vessel, or accessories for the same, for which no other more specific classification place in this subclass is provided for. In particular, this main group covers:

Means or methods for preventing theft or unauthorised use of vessels, other than by using locks.

Tanks for fuel or the like, other than bunkers.

Protective hoods or covers:

- Awnings, e.g. rigid weather protection structures
- Canopies, e.g. connected to windshields
- Sunroofs
- Tarpaulins
- Hatchway tents, e.g. for weather protection of cargo during loading or unloading
- Caps, hoods, or the like devices not otherwise provided for.

Rests, props, or supports for booms or the like, e.g. for main sail booms or derricks, or for other movable ship-borne equipment.

Seaway compensators.

Wavebreakers.

Vibration isolation or damping elements or arrangements, other than for propulsion plants or units, e.g. for elastic support of deckhouses.

Stanchions, guard-rails, bulwarks or the like permanent installations for preventing crew or passengers from being lost overboard.

## Relationships with other classification places

[B63B 17/00](#) is the residual place for parts or details of, or of accessories for ships and other waterborne vessels.

Whilst [B63B 17/00](#) provides for anti-theft devices, or methods other than using locks, locks for boats, surfboards or parts or accessories thereof are classified in [E05B 73/007](#).

Whilst [B63B 17/00](#) covers caps, hoods, or the like devices for protective purposes, not otherwise provided for, means for protecting propellers or rudders, like propeller guards or line cutters are found in [B63H 5/165](#), and means for protecting power legs of outboard propulsion units, e.g. for units not in use, are classified in [B63H 20/36](#).

Whilst [B63B 17/00](#) provides for rests or supports for movable shipborne equipment, e.g. main sail booms, derricks, [B63C 11/02](#) provides for storage racks for SCUBA breathing gas tank.

Whilst [B63B 17/00](#) provides for seaway compensators for shipborne equipment in general, e.g. for loading or unloading equipment, self-levelling mountings of furniture are classified in [B63B 29/12](#), and equipment to decrease pitch, roll, or like unwanted solid body movements of vessel as a whole are found in [B63B 39/00](#)

Whilst [B63B 17/0018](#) provides for apparatus or installation for facilitating access to underwater elements of vessels while being afloat, e.g. cofferdams, [B63H 5/125](#) provides for retractable propellers, means for lifting or tilting the power leg of outboard propulsion units are classified in [B63H 20/08](#), and [B63H 25/00](#) provides for retractable thrusters or jets for steering or dynamic anchoring.

Whilst [B63B 17/0027](#) provides for fuel tanks, as well as for accessories therefore, and for arrangements for minimizing pollution by accidents, [B63B 25/08](#) provides for corresponding arrangements for fluid cargo, [B63B 11/04](#) provides for constructional features of bunkers, fuel tanks for vehicles in general are classified in [B63K15/03](#), and [B63H 21/38](#) covers handling of liquids for use in propulsion power plants.

Whilst [B63B 17/0081](#) provides for methods or arrangements for damping or isolating vibration on individual parts of marine vessels, [B63H 1/15](#) covers marine propellers with anti-vibration means, [B63H 21/30](#) provides for mountings of propulsion power plants or units with active or passive vibration damping, and [F16F](#) provides for vibration damping means in general.

Whilst [B63B 17/02](#) provides for awnings, sunroofs, tarpaulins or hatchway-tents, as well as for related accessories, non-fixed roofs for vehicles in general are found in [B60J 7/00](#), protective coverings for vehicles when not in use, in general, are classified in [B60J 11/00](#), and tents or canopies in general are found in [E04H 15/00](#).

Whilst [B63B 17/04](#) provides for stanchions, guard-rails or bulwarks, [E04F 11/18](#) provides for balustrades or handrails in general.

Whilst [B63B 17/06](#) provides for methods or means for discharge of refuse, e.g. of ash, treating refuse or sludge, e.g. of tank washing sludge is classified in [B63J 4/00](#), and removal of domestic or like refuse in general is found in [B65F](#).

## References

### Limiting references

*This place does not cover:*

Constructional features of bunkers	<a href="#">B63B 11/04</a>
Covers for lifeboats, or the like stored on deck	<a href="#">B63B 23/64</a>
Self-levelling mountings of furniture on marine vessels	<a href="#">B63B 29/12</a>

Marine propellers having vibration damping means	<a href="#">B63H 1/15</a>
Movable propellers, e.g. retractable	<a href="#">B63H 5/125</a>
Propeller guards, line cutters or other means for protecting propellers or rudders	<a href="#">B63H 5/165</a>
Means enabling movement of the position of the propulsion element of outboard propulsion units, e.g. for trim, tilt	<a href="#">B63H 20/08</a>
Protection of power legs of outboard propulsion units, e.g. when not in use	<a href="#">B63H 20/36</a>
Mounting of propulsion plant or unit, e.g. for anti-vibration purposes	<a href="#">B63H 21/30</a>
Steering or dynamic anchoring by propulsive elements other than jets; Steering or dynamic anchoring by propellers used therefor only; Steering or dynamic anchoring by rudders carrying propellers	<a href="#">B63H 25/42</a>
Steering or dynamic anchoring by jets, or by rudders carrying jets	<a href="#">B63H 25/46</a>

### **Informative references**

Attention is drawn to the following places, which may be of interest for search:

Constructional features of bunkers	<a href="#">B63B 11/04</a>
Arrangements of cargo tanks on vessels	<a href="#">B63B 25/08</a>
Load-accomodating arrangements for fluid bulk cargo comprising arrangements for minimizing pollution by accidents	<a href="#">B63B 25/082</a>
Equipment to decrease pitch, roll, or like unwanted vessel movements	<a href="#">B63B 39/00</a>
Cleaning of tanks or cargo holds	<a href="#">B63B 57/00</a>
Non-fixed roofs for vehicles; Roofs with movable panels for vehicles (in general)	<a href="#">B60J 7/00</a>
Protective coverings for vehicles not in use, in general	<a href="#">B60J 11/00</a>
Fuel tanks for vehicles in general	<a href="#">B60K 15/03</a>
Vehicle fittings for preventing or indicating unauthorised use or theft of vehicles in general	<a href="#">B60R 25/00</a>
Dry-docking of vessels or flying-boats	<a href="#">B63C 1/00</a>
Lunching or hauling-out by landborne slipways; Slipways	<a href="#">B63C 3/00</a>
Handling of liquids for use in power plants of marine vessels	<a href="#">B63H 21/38</a>
Arrangements of installations for treating ballast water, waste water, sewage, sludge, or refuse, or for preventing environmental pollution not otherwise provided for	<a href="#">B63J 4/00</a>
Gathering or removal of domestic or like refuse, in general	<a href="#">B65F</a>
Caissons adapted to laying foundations	<a href="#">E02D 23/00</a> - <a href="#">E02D 27/00</a>
Balustrades; Handrails	<a href="#">E04F 11/18</a>
Tents or canopies in general	<a href="#">E04H 15/00</a>
Miscellaneous locking devices for boats, surfboards or parts or accessories thereof , e.g. for outboard propulsion units	<a href="#">E05B 73/007</a>
Springs; Shock-absorbers; Means for damping vibration (in general)	<a href="#">F16F</a>
Advertising on ships or other floating means	<a href="#">G09F 21/18</a>

## Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Accident	An event which is sudden, involuntary, and harmful.
Breakwater	A wave breaker; An installation for deflecting or dissipating green water on deck, or deck wetness.
Awning	A roof-like removable or fixed covering e. g. of canvas used as a shelter from sun or rain, in particular above a deck of a vessel.
Bunker	A compartment for solid or fluid fuel.
Canopy	A protective roof, e.g. tent like made of canvas; A dome-shaped cabin roof.
Cofferdam	A caisson attachable to the outside of a ship's hull for providing dry access to underwater elements, e.g for repair.
Tarpaulin	A covering or sheet of canvas, coated or impregnated with tar so as to make it waterproof, used to spread over anything to protect it from wet.

## B63B 19/00

**Arrangements or adaptations of ports, doors, windows, port-holes, or other openings or covers (scuppers [B63B 13/00](#); arrangements of watertight doors in bulkheads [B63B 43/24](#))**

### Definition statement

*This place covers:*

Ports, doors, windows, hatches, hatch covers or other openings or covers specially adapted for ships or other waterborne vessels as well as arrangements thereof on ships or other waterborne vessels. In particular, this main group covers:

Ship's windows or the like:

- Bull's eyes, port-holes, or the like, e.g. with peripheral hinge axis
- Windows other than bull's eyes, e.g. fixed windows
- Clear-view screens
- Windshields
- Fly screens, or the like protection devices against insects, e.g. for detachable insertion into openings of bull's eyes
- Air catchers for windows or bull's eyes, e.g. readily detachable.
- Means for locking ports, doors, windows, covers or the like, in particular for providing a watertight closure.

Ports or like openings in the ship's sides, in particular providing access to the interior of the hull:

- Bow ports
- Side ports
- Stern ports
- Coal ports.

Hatches, hatchways, or hatch-covers, or related equipment or installations:

- Hatch covers, e.g. with detachable boards, slidable or foldable covers, or with covers of the roll-up type
- Hatch beams

- Hatch fastenings, e.g. cleats, or removable devices specially adapted for fastening hatch covers to hatch coamings or sills.
- Gaskets for hatches or hatch covers
- Water draining means specially adapted for hatches or hatch covers
- Safety means adapted for use on, or in combination with hatches or hatch covers.

### Relationships with other classification places

[B63B 19/00](#) is the general home for openings in the hull or superstructure, or in structural elements of ships or other waterborne vessels, such as bulkheads or decks, including respective closing members therefor, such as doors, windows, or hatch covers, which openings allow for access from outside to the interior, for access from one interior compartment to another, or for viewing from inside to the outside environment.

Whilst [B63B 19/00](#) provides for arrangements or adaptations of doors in or for use on marine vessels, or the like in general, [B63B 43/24](#) provides for arrangements of watertight doors in bulkheads.

Whilst [B63B 19/02](#) provides for clear-view screens or windshields, canopies connected to windshields are classified in [B63B 17/02](#).

Whilst [B63B 19/08](#) provides for side ports, bow ports, or stern ports, such ports are classified in [B63B 27/143](#), if the member closing the access opening in the shell itself is adapted for serving as loading or unloading ramp.

Whilst [B63B 19/24](#) provides for hatch fastenings, e.g. cleats, devices for fastening or securing constructional elements or machine parts together, e.g. nails, bolts, circlips, clamps, clips, wedges, joints or jointing in general are found in [F16B](#).

Whilst [B63B 19/26](#) provides for water draining means specially adapted to hatches or hatchways, draining or bailing unwanted onboard water in general is classified in [B63B 13/00](#).

### References

#### Limiting references

*This place does not cover:*

Scuppers	<a href="#">B63B 13/00</a>
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#### Application-oriented references

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Bow ports, side ports, or stern ports forming ramps for loading or unloading of cargo	<a href="#">B63B 27/143</a>
Arrangements of watertight doors in bulkheads for improving safety of vessels	<a href="#">B63B 43/24</a>

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Construction of hatch coamings	<a href="#">B63B 3/54</a>
Conduits on vessels for emptying or ballasting; Self-bailing equipment; Scuppers	<a href="#">B63B 13/00</a>

Awnings, including rigid weather protection structures, e.g. sunroofs; Tarpaulins, e.g. canopies connected to windshields; Accessories for awnings or tarpaulins	<a href="#">B63B 17/02</a>
Arrangements of ventilation equipment on vessels in general	<a href="#">B63J 2/00</a>
Hinges or other suspension devices for doors, windows, or wings in general	<a href="#">E05D</a>
Devices for moving wings (of doors, windows, or the like) into open or closed position; Checks for wings; Wing fittings not otherwise provided for, concerned with the functioning of the wing	<a href="#">E05F</a>
Fixed or movable closures for openings in buildings, vehicles, fences, or like enclosures, in general, e.g. doors, windows, blinds, gates	<a href="#">E06B</a>
Devices for fastening or securing constructional elements or machine parts together, e.g. nails, bolts, circlips, clamps, clips, wedges; Joints or jointing in general	<a href="#">F16B</a>

### Special rules of classification

In this main group, side ports adapted for use as bathing platform are also classified in [B63B 29/02](#).

### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Bow port	A port at the bow of a vessel, which allow access to the ships's interior, e.g. on ferry boats for facilitating loading or unloading of wheeled cargo
Canopy	A protective roof, e.g. tent like made of canvas.
Clear-view screen	A glass disk mounted in a window, usually on the bridge of a ship, that rotates at high speed to disperse rain, spray, and snow, typically driven at the centre of the screen.
Cleat	A device to which ropes may be fastened, featuring two horns extending parallel to the surface on which it is mounted.
Hatch	A hatchway; a hatch cover; a trap-door or grated framework for covering openings in a deck.
Hatch beam	A beam placed across a hatch opening to support hatch covers.
Hatch coaming	A raised lip around a hatch opening to prevent unwanted ingress of surface water when the hatch is open.
Hatchway	A square or oblong opening in the deck of a ship through which cargo can be lowered into the hold.
Port	A door, gate or closable opening.
Port-hole	A typically circular window in the side of a boat or ship.
Scupper	A hole in a ship's side to carry water from the deck overboard.
Side port	A port in the sides of a vessel, which allow access to the ships's interior, e.g. on ferry boats for facilitating loading or unloading of wheeled cargo
Stern port	A port at the stern of a vessel, which allow access to the ships's interior, e.g. on ferry boats for facilitating loading or unloading of wheeled cargo

## Synonyms and Keywords

*In patent documents, the word/expression in the first column is often used instead of the word/expression in the second column, which is used in the classification scheme of this place:*

"bull's eye"	"port-hole"
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*In patent documents, the following words/expressions are often used with the meaning indicated:*

"port-hole"	"an opening in the ship's side through which a cannon may be pointed".
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## B63B 21/00

**Tying-up; Shifting, towing, or pushing equipment; Anchoring (of buoys [B63B 22/04](#)); dynamic anchoring [B63H 25/00](#); equipment for shipping on coasts, in harbours or on other fixed marine structures, e.g. for landing purposes, [E02B](#))**

### Definition statement

*This place covers:*

Means, methods, arrangements or equipment for mooring vessels or other waterborne vessels to piers, posts or the like, or the sea bed, anchors and related means or methods, as well as equipment for shifting, towing or pushing of vessels. In particular, this main group covers:

Mooring bars, mooring yokes or the like, e.g. with articulations on both ends.

Equipment for mooring, anchoring, towing or pushing, not provided for in other places under this main group:

- Quick release elements in mooring connections
- Springs or dampers or the like elements to be placed in line with the mooring or towing line
- Suction cups or the like for use above or near the water surface, e.g. for mooring, towing or pushing
- Remotely operated assistance tools or related methods specially adapted for subsea handling of anchors or mooring connections
- Load or drift monitors.

Magnetic mooring equipment.

Equipment for fastening or guiding anchor chains, ropes, hawsers, or the like, e.g. T-shaped cleats, ship-borne bollards, specially adapted clamping devices, fairleads, rat guards or hawse-holes.

Equipment and methods characterised by the use of winches.

Stoppers for anchor chains.

Adaptations of chains, mooring cables, ropes, hawsers, or the like, or parts of the same, e.g. weights attached to mooring lines, or anchor chains and respective arrangements.

Handling or lashing of anchors:

- Using buoyancy elements for lifting or up-righting
- Marker buoys for indication anchor position or for providing a line connection between anchor and water surface
- Stowing of anchors inside the vessel by hauling-in.

Anchors as such:



- Collapsible anchors, or anchors adapted for being disassembled
- Anchors securing to the sea bed, e.g. by drag or gravity embedment, by penetration into the seabed using water jets or explosive charges, by suction, or by mere weight
- Drop keels, e.g. centre boards, side boards.
- Anchors rigid when in use, e.g. having one or more flukes
- Anchors pivoting when in use, e.g. having one fluke of ploughshare type or having two or more flukes
- Anchors having a variable connection to the chain, e.g. for facilitating anchor retrieval, in particular having a connection slidable along the shank, comprising a shear pin connection for freeing the shank end upon exceeding a predetermined load, or comprising a spreader-like arrangement of ropes of different lengths which form the shank.

Sea-anchors, or drogues.

Arrangements and related methods for anchoring special vessels like offshore structures:

- Arrangements comprising articulated towers
- Arrangements comprising tension legs, e.g. with tension legs equipped with suppressors for vortex induced vibrations
- Arrangements comprising mooring turrets, e.g. turrets connected to submerged buoys.
- Methods for on-site installation or mooring of floating offshore structures.

Boat-hooks or the like

Towing or pushing equipment:

- Equipment comprising running ropes or chains, e.g. endless chains driven by ground-borne motor
- Towing-hooks or mountings thereof on vessels
- Towing or pushing by means of land-borne vehicles or moving forward on ground-based paths along water-ways
- Equipment adapted for towing underwater vessels or objects, e.g. fairings for tow-cables or equipment for intermittent towing.

## Relationships with other classification places

[B63B 21/00](#) is the general home for ship-related methods, or shipborne means or equipment for mooring, anchoring, shifting, towing or pushing of vessels.

However, buoys specially adapted for mooring waterborne vessels, in particular if combined with means for transferring liquids to or from these vessel, are classified in [B63B 22/02](#), and fixations or other anchoring arrangements specially adapted for buoys are classified in [B63B 22/04](#).

Whilst [B63B 21/00](#) provides for ship-borne mooring equipment, [E02B](#) provides for landborne equipment for shipping, e.g. dockside mooring equipment.

## References

### Limiting references

*This place does not cover:*

Installation of floating offshore structures or the like involving assembly of hull components on site	<a href="#">B63B 9/065</a>
Buoys specially adapted for mooring a vessel, e.g. comprising means for transferring fluids	<a href="#">B63B 22/02</a>
Fixations or other anchoring arrangements specially adapted for buoys	<a href="#">B63B 22/04</a>
Dynamic anchoring	<a href="#">B63H 25/00</a>

**Application-oriented references**

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Towing devices for waterskis or watersledges, e.g. connections of the tow to the boat, or using winches	<a href="#">B63B 35/815</a>
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**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Loading or unloading fluids	<a href="#">B63B 27/24</a>
Arrangements of ship based loading or unloading equipment for transfer at sea between ships or between ships and offshore structures using pipelines	<a href="#">B63B 27/34</a>
Rigidly-interconnected pontoons, interconnection means therefor	<a href="#">B63B 35/38</a>
Tugs (as such)	<a href="#">B63B 35/66</a>
Towed floating structures for pleasure or sport, the towing member, e.g. tow-rope, being connected to the towed structure	<a href="#">B63B 35/73</a>
Devices for spreading or positioning trawling nets, e.g. control thereof by means of paravanes	<a href="#">A01K 73/02</a>
Salvaging of disabled, stranded, or sunken vessels; Salvaging of vessel parts or furnishings; Salvaging of other underwater objects	<a href="#">B63C 7/00</a>
Means for indicating the location of underwater objects, e.g. sunken vessels	<a href="#">B63C 7/26</a>
Towed underwater vessels	<a href="#">B63G 8/42</a>
Effecting propulsion by use of vessel-mounted driving mechanisms co-operating with anchored chains or the like	<a href="#">B63H 15/00</a>
Effecting propulsion of vessels by direct engagement with water-bed or ground	<a href="#">B63H 19/08</a>
Capstans; Winches; Tackles, e.g. pulley blocks; Hoists (per se)	<a href="#">B66D</a>
Anchor-chain sprockets; Anchor capstans (as such)	<a href="#">B66D 1/72</a>
Ropes or cables in general (other than electric)	<a href="#">D07B</a>
Equipment for shipping on coasts, in harbours or on other fixed marine structures, e.g. for landing purposes	<a href="#">E02B</a>
Arrangements of floating landing-stages	<a href="#">E02B 3/064</a>
Ground anchors	<a href="#">E02D 5/80</a>
Influencing flow of fluids around bodies of solid material by influencing the boundary layer	<a href="#">F15D 1/12</a>
Friction-grip releasable fastenings, e.g. clamps, in general	<a href="#">F16B 3/00</a>
Couplings with safety member for disconnecting, e.g. by tensile breaking, or by breaking due to shear stress (in general)	<a href="#">F16D 9/00</a>
Belts, cables, or ropes, predominantly used for driving purposes; Chains; Fittings predominantly used therefor	<a href="#">F16G</a>
Means for fastening cables or ropes to one another or to other objects	<a href="#">F16G 11/00</a>
Laying or reclaiming pipes under water	<a href="#">F16L 1/12</a>

Hydroenergy generated by tidal stream or damless hydropower, e.g. sea flood and ebb, rivers, streams	<a href="#">Y02E 10/28</a>
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### Special rules of classification

In this main group, next to classifying the respective method in the proper place in this main group, remotely controlled subsea assistance tools, or tool related methods specially adapted for handling of anchors or mooring lines, e.g. using remotely operated underwater vehicles (ROV's) for connecting mooring lines to anchors, are indexed with code [B63B 2021/007](#), and are also classified in the respective place for the tool, e.g. underwater tools in [B63C 11/52](#), or remotely operated underwater vehicles in [B63G 8/001](#).

### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Articulated tower	A slender substantially vertically arranged structures, typically held upright by buoyancy forces, articulated near the sea bed, extending near to or above the water surface, and being provided with means for mooring a vessel, or another waterborne structure
Boat-hook	A pole-handled hook
Bollard	A wooden or iron post on a ship or quay to which ropes may be secured.
Cleat	A device to which ropes may be fastened, featuring two horns extending parallel to the surface on which it is mounted.
Drag embedment	A method for securing an anchor to the sea bed by dragging it into the sea bed, i.e. by burying the the anchor deep into the ground through downward forces generated by the mooring line pull in combination with the shape and orientation of the anchor fluke.
Drogue	A funnel-like device deployed in the water behind a vessel to create drag in order to reduce vessel speed or improve stability.
Dynamic anchoring	Positioning of vessels or floating structures by means of propulsive elements.
Fairing	An outer structure designed to reduce drag, e.g. as a cable fairing, which improves the cable's passage through the water by acting as a streamlined sleeve.
Fairlead	A ring or aperture on a boat to guide ropes or the like, in order to prevent entanglement or rubbing on other structures.
Fluke	A flat blade upon an anchor, designed to penetrate and grip the seabed.
Gravity embedment	A method for securing an anchor to the sea bed by by penetration of the anchor into the sea bed using gravity forces, e.g. by dropping a pile-type anchor from a certain height.
Lashing	Fastening a movable body with a cord or the like.
Hawser	Anchor or mooring line, rope or cable; towing rope, towline.
Hawse-hole	An opening in the hull of a vessel through which an anchor cable or anchor chain passes.
Hawse-pipe	A pipe beneath the hawse-hole through which the anchor cable or anchor chain passes.
Mooring	Securing a boat or vessel in a particular place, e.g. by tying-up or anchoring.

Pontoon	A stationary floating structure, typically used for support purposes, e.g. landing stages.
Rat guard	A disk of sheet metal fitted around a hawser to prevent rats from boarding a vessel moored at a dock.
Salvaging	Retrieving or recovering, e.g. of shipwrecked goods, or rescuing of ships, crew or cargo from a hazardous situation.
Sea anchor	A floating rigid frame, e.g. made of wood, used to keep the ship's head to the wind in a gale or when dismasted or with disabled propulsion installation (called also drag-, sea-anchor).
Shifting	Moving a vessel from one place to another, e.g. from one berth to another, or using an anchor and warp to pull a vessel into position.
Tying-up	Securing a vessel with ropes.
Winch	A hoisting or hauling device comprising a driven rotating drum around which a rope passes

### Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

VIV	Vortex Induced Vibrations
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*In patent documents, the word/expression in the first column is often used instead of the word/expression in the second column, which is used in the classification scheme of this place:*

"drag anchor or drift anchor"	"sea anchor"
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*In patent documents, the following words/expressions are often used with the meaning indicated:*

"drift monitor"	"a device and installation for monitoring or detecting drift of anchors, i.e. undesired displacement of an anchor relative to the sea bed"
"marker buoy"	"a buoy for indicating the position of an anchor, or for providing a line connection between the anchor and the water surface"
"quick release element"	"release elements, e.g. remotely controlled, adapted for rapidly disconnecting a mooring line from an anchor, or elements for rapidly disconnecting a vessel or floating structure from the mooring line"
"spud pole"	"a vertically movable pole securing in down position to sea bed"
"yielding element"	"an element which yields at a predetermined load, e.g. a shear bolt for fixing the angle between shank or anchor line and fluke which allows the fluke to pivot as soon as predetermined limit torque is exceeded"
"yoke"	"a rigid ship-borne mooring structure projecting from a vessel, typically from the bow, or from a floating structure, and supported for articulation about a horizontal axis at the end near the vessel or floating structure, and connectable at its other end to a fixed or floating mooring point, e.g. for weathervaning the vessel or floating structure about said mooring point"

## B63B 22/00

**Buoys** ({floating decoys, e.g. for waterfowl [A01M 31/06](#);} means for indicating the location of underwater objects [B63C 7/26](#); life-buoys, e.g. rings [B63C 9/08](#); {mountings of acoustic transducer in underwater equipment, e.g. sonobuoys [G10K 11/006](#); electric cables supported on or from floats [H02G 9/12](#)})

### Definition statement

*This place covers:*

Buoys, i.e. unmanned floating or submerged buoyant objects, either moored or anchored to a particular position, or freely floating, which are adapted for being used in a wide variety of applications, among which anchored buoys which may be used for mooring vessels, wherein such mooring buoys may be adapted for transferring fluids to or from the moored vessel, or may be used for marking navigational routes, or freely floating buoys which may be equipped with sensing devices, e.g. for oceanographic research. In particular, this main group covers:

Mooring buoys in general, among which:

- Submerged mooring buoys, e.g. adapted to fit into a matching cavity in the bottom the moored vessel.

Mooring buoys with means for loading or unloading fluids, e.g. of oil to or from an oil tanker:

- Fluid transfer mooring buoys which are adapted for being submerged when not in use
- Fluid transfer mooring buoys comprising means for generating a restoring force in the mooring connection, e.g. by means of springs or weights
- Fluid transfer mooring buoys with means to allow the moored vessel to weathervane around the buoy.

Arrangements for anchoring buoys or for fixing buoys to a desired position or to particular object, among which:

- Submerged buoys with means to cause the buoy to the surface on demand
- Buoys connected to objects which are released or urged to the water surface upon submergence of the object.

Buoys comprising means for controlling the floating conditions or position, e.g. ballast means, foils or tethers.

Buoys for marking navigational routes, e.g. whistle buoys or buoys supporting lights.

Buoys of particular types or adapted for particular use or purpose, among which:

- Inflatable buoys carrying their own gas generator
- Buoys adapted for being thrown into the water from a substantial height above the water surface
- Buoys equipped with measuring or watch equipment
- Container-type buoys, e.g. submerged when not in use or comprising means for releasing its contents on demand.

### Relationships with other classification places

[B63B 22/00](#) is the general home for buoys, i.e. for small, substantially unmanned floating objects which are either moored or anchored to a particular position, e.g. for marking navigational routes or underwater obstacles, or which are freely drifting, e.g. for oceanographic purposes.

Whilst [B63B 22/00](#) provides for buoys in general, [B63C 9/08](#) provides for buoys or the like specially adapted for life-saving purposes.

Whilst [B63B 22/02](#) provides for buoys adapted for mooring vessels, mooring of ships or other waterborne vessels in general is found in [B63B 21/00](#).

Whilst [B63B 22/04](#) provides for fixations, or other anchoring arrangements of buoys, [B63B 21/00](#) provides for tying-up or mooring of ships or other waterborne vessels in general, in particular anchoring for special vessels is classified in [B63B 21/50](#).

Whilst [B63B 22/16](#) provides for buoys specially adapted for marking navigation routes, arrangements of such buoys are classified in [B63B 51/00](#).

## References

### Limiting references

*This place does not cover:*

Arrangements of buoys for marking navigation route	<a href="#">B63B 51/00</a>
Floating decoys, e.g. for waterfowl	<a href="#">A01M 31/06</a>
Life-buoys, e.g. rings; Life-belts, jackets, suits, or the like	<a href="#">B63C 9/08</a>

### Application-oriented references

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Means for indicating the location of underwater objects, e.g. sunken vessels	<a href="#">B63C 7/26</a>
Communication means, e.g. means for signalling the presence of divers	<a href="#">B63C 11/26</a>

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Tying-up; Shifting, towing, or pushing equipment; Anchoring (of ships or other waterborne vessels in general)	<a href="#">B63B 21/00</a>
Anchoring arrangements or methods for special vessels, e.g. for floating drilling platforms or dredgers	<a href="#">B63B 21/50</a>
Anchoring arrangements or methods for special vessels, e.g. for floating drilling platforms or dredgers with mooring turrets connected to submerged buoy	<a href="#">B63B 21/508</a>
Arrangements of ship based loading or unloading equipment for transfer at sea between ships or between ships and offshore structures using pipelines	<a href="#">B63B 27/34</a>
Marking of navigational route other than with buoys	<a href="#">B63B 51/00</a>
Pipe joints or couplings, in general	<a href="#">F16L</a>
Floats for laying or reclaiming pipes under water	<a href="#">F16L 1/24</a>
Use or application of lighting devices or systems for signalling, marking or indicating, for waterways	<a href="#">F21W 2111/04</a>
Surveying specially adapted to open water, e.g. sea, lake, river, canal	<a href="#">G01C 13/00</a>
Measuring speed of fluids	<a href="#">G01P 5/00</a>
Seismic or acoustic prospecting or detecting specially adapted for water-covered areas	<a href="#">G01V 1/38</a>
Mountings of acoustic transducer in underwater equipment, e.g. on sonobuoys	<a href="#">G10K 11/006</a>
Electric cables supported on or from floats	<a href="#">H02G 9/12</a>

## Special rules of classification

In this main group, buoys specially adapted for indicating the location of underwater objects, e.g. sunken vessels, which are classified in [B63C 7/26](#), and marker buoys specially adapted for signalling the presence of divers underwater which are classified in [B63C 11/26](#), are also classified in the respective group under this main group, if particular technical features are of general interest. Marker buoys for anchors are also indexed in [B63B 2021/225](#).

In this main group, the indexing code for submerged mooring buoys [B63B 2022/028](#) is allocated independent of the classification in any of the sub-groups for buoys for transferring fluids [B63B 22/021](#) - [B63B 22/026](#).

## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Attitude	The orientation in space of a floating or submerged body.
Buoy	A floating object either fastened to a particular position, e.g. for marking navigational routes or underwater obstacles, or freely drifting, e.g. for oceanographic purposes.
Mooring	Securing a boat or vessel in a particular place, e.g. by tying-up or anchoring.
Watch	The action or an act of watching or observing with continuous attention; a continued look-out, as of a sentinel, watchman, or guard

## Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

NOAA	National Oceanic and Atmospheric Administration, a US federal agency focused on the condition of the oceans and the atmosphere
SONAR	SOund Navigation And Ranging

## B63B 23/00

### Equipment for handling lifeboats or the like

#### Definition statement

*This place covers:*

Equipment onboard ships, or other waterborne vessels for handling lifeboats, or other small boats, e.g. dinghies or tenders adapted for being used as service boats, or as links between ships riding at anchor and the shore. In particular, this main group covers:

Davits, i.e. crane-like devices with arms from which boats, or the like water-craft can be lowered by means of cables or ropes:

- Davits with arms swinging about substantially horizontal axes, e.g. of gravity type
- Davits with pseudo-swinging arms rotating and translating in a substantially vertical plane, and guided by means of links or tracks
- Davits with arms pivoting about substantially vertical axes
- Equipment for actively moving davits from a rest position into a position for boat lowering
- Davits with means for rectilinearly translating boats prior to lowering.

Free fall devices or installations, with means for projecting or releasing boats to perform a free fall movement to the water surface.

Apparatus or devices for controlling the boat's movement to the water surface by means of guides:

- Rigid guides, e.g. by means of guide links pivoted near the water surface
- Guides, e.g. skid fenders, for guiding boats lowered by means of cables.

Methods or means for transporting boats from a storage position to the respective davit.

Use of particular means for boat lowering or hoisting:

- comprising breaking equipment, either shipborne or on the boat
- making use of winches, e.g. with winch control from the boat
- comprising means for controlling the boat's trim, e.g. from the boat
- comprising means for engaging the boat with, or releasing it from the hoisting or lowering gear, e.g. quick release devices.
- comprising additional means for connecting the boat to the davit, e.g. security stops

Methods and devices for securing or stowing boats on deck:

- Lashing devices
- Covers or tarpaulins
- Deck-mounted supports, e.g. for stacking a plurality of boats.

Automatic condition controlled equipment for handling lifeboats, e.g. with tackle release upon boat's contact with water surface.

## Relationships with other classification places

[B63B 1/00](#) is the general home for

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Loading or unloading cargo or passengers with intermittent action using cranes	<a href="#">B63B 27/10</a>
Loading or unloading cargo or passengers with intermittent action using lifts or hoists, e.g. for deployment or recovery of underwater vehicles	<a href="#">B63B 27/16</a>
Bilge or keel blocks for use on slipways, or in dry-docks	<a href="#">B63C 5/04</a>
Life-saving in water in general	<a href="#">B63C 9/00</a>
Devices for holding or launching life-buoys, inflatable life-rafts, or floatable life-saving equipment other than life-boats	<a href="#">B63C 9/22</a>
Cranes in general	<a href="#">B66C</a>
Devices for facilitating retrieval of floating objects, e.g. for recovering crafts from water (as such)	<a href="#">B66C 13/02</a>
Capstans, winches, tackles per se, e.g. pulley blocks, hoists	<a href="#">B66D</a>
Hoisting, lifting, hauling or pushing, not otherwise provided for, e.g. devices which apply a lifting or pushing force directly to the surface of a load	<a href="#">B66F</a>



## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Block	A support for facilitating storage of boats, typically matching the boat's hull shape.
Chock	A pad, packing or bedding typically from wood or an elastomeric material, used for distributing localised loads acting on a boat's or ship's hull, e.g. from struts or shores ; a wooden support upon which a boat rests when stowed on a vessel, e.g. on the vessel's deck
Davit	A crane on the side or stern of a ship for raising or lowering loads, often arranged in pairs for lowering lifeboats.
Lifeboat-like craft	A small auxiliary boat, e.g. dinghy, zodiac or jolly-boat, carried on a larger vessels, e.g. for providing access to the shore, or for transfer to other vessels.
Skid fender	A removable fender strip which facilitates launching of lifeboats over a ship's side whilst offering protection from damage by striking against the side of the ship.
Slewing	Turning (a thing) round upon its own axis, or without shifting it from its place.
Tackle	A combination of pulley-blocks and a rope for facilitating hoisting or lowering of heavy bodies.
Trimming	Controlling, when lowering or hoisting, the orientation of the lifeboat, or the like relative to the ship, or to the water surface.
Winch	A hoisting or hauling device comprising a driven rotating drum around which a rope passes

## Synonyms and Keywords

*In patent documents, the following words/expressions are often used with the meaning indicated:*

"trimming"	"Adjustment of division of ballast and/or cargo to alter a vessel's draft or trim, or the distribution of buoyancy and load".
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## B63B 25/00

**Load-accommodating arrangements, e.g. stowing, trimming; Vessels characterised thereby (trimming otherwise than by cargo division, e.g. by use of ballast [B63B 43/06](#), [B63B 43/08](#); constructive aspects of cargo spaces [B63B 11/00](#); hatches, hatchways [B63B 19/12](#))**

### Definition statement

*This place covers:*

Arrangements in or on ships, or other waterborne vessels for stowing, trimming or otherwise accomodating loads or cargo, as well as ships or vessels specially adapted correspondingly. In particular this main group covers:

Arrangements for non-bulk cargo, and vessels chacterised by such arrangements:

- for containerised cargo, on or under deck, e.g. container-guides, or lashings specially adapted for deck containers

- for cargo having own floating capacity, other than self-propelled marine vessels, e.g. floating containers or lighters
- for wheeled cargo, e.g. for motor vehicles, semi-trailers, wheeled cassettes, or the like
- for palletised articles
- for frozen goods
- for deck loads
- Detachable decks, e.g. for motor vehicles, or the like
- Means for preventing unwanted cargo movement, e.g. dunnage or vehicle retainers for wheeled cargo.

Arrangements for bulk cargo, and vessels characterised by such arrangements:

- for solid bulk cargo, e.g. coal, ore or cereals
- for fluid cargo, i.e. liquid or gaseous cargo, e.g. with cargo tanks open to the ambient air, or with pressurized or heat insulated cargo tanks
- for particular combinations of bulk cargo, e.g. ore-bulk-oil carriers, i.e. cargo vessels for carrying alternatively oil, ore or other bulk goods like coal or cereals
- with flexible receptacles for bulk cargo, e.g. bladders for liquid cargo inserted in tanks, or bags for dry bulk goods inserted in cargo holds
- comprising elastic separation membranes, i.e. membranes separating portions of fluid cargo holds, e.g. for transport of different kind of liquid cargo, or for separating spaces for liquid cargo from spaces for segregated ballast
- comprising separation membranes, i.e. membranes separating portions of fluid cargo holds, e.g. for transport of different kind of liquid cargo, or for segregated ballast.

### Relationships with other classification places

[B63B 23/00](#) is the general home for arrangements on ships for accommodating load or cargo, as well as for vessels characterised by such arrangements.

Whilst cargo vessels characterised by the accommodation of particular kinds of load, such as LASH-carriers, Ro-Ro-vessels or tankers are typically classified in [B63B 23/00](#), some special vessels, such as vessels for carrying very large loads, e.g. topsides or modules of offshore structures, fishing vessels, barges or ferries have found their place in [B63B 35/00](#).

Whilst arrangements for fluid cargo comprising separation membranes, e.g. for separating different kind of fluid cargo, or for segregated ballast are classified in [B63B 25/08](#), bunkers or ballast tanks with elastic walls are classified in [B63B 11/04](#).

### References

#### Limiting references

*This place does not cover:*

Interior subdivision of hulls, e.g. arrangement of bulkheads for defining cargo spaces	<a href="#">B63B 11/00</a>
Arrangements or adaptations of hatches, or hatchways	<a href="#">B63B 19/12</a>
Vessels or like floating structures adapted for transporting very large loads, e.g. offshore structure modules	<a href="#">B63B 35/003</a>
Barges or lighters, e.g. flexible or self-discharging	<a href="#">B63B 35/28</a>
Vessels or like floating structures for transporting marine vessels other than barges or lighters	<a href="#">B63B 35/40</a>
Vessels or floating structures for aircraft	<a href="#">B63B 35/50</a>
Ferries as such	<a href="#">B63B 35/54</a>

Improving safety of vessels by reducing risk of capsizing or sinking by improving stability, e.g. using ballast tanks, or by transfer of solid ballast (trimming otherwise than by cargo division)	<a href="#">B63B 43/04</a>
Military aircraft carriers	<a href="#">B63G 11/00</a>
Arrangements of heating or cooling installations on vessels	<a href="#">B63J 2/12</a>

### Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Fish holds on fishing vessels, e.g. for live fish	<a href="#">B63B 35/24</a>
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### Informative references

Attention is drawn to the following places, which may be of interest for search:

Constructional features of bunkers, such as structural fuel tanks, or ballast tanks, e.g. with elastic walls	<a href="#">B63B 11/04</a>
Tanks for fuel or the like not forming bunkers, e.g. with arrangements for minimizing pollution by accidents	<a href="#">B63B 17/0027</a>
Pressure vessels associated with substantially land-borne vehicles	<a href="#">B60 - B62</a>
Securing freight containers or forwarding containers on vehicles, in general	<a href="#">B60P 7/13</a>
Pressure vessels associated with substantially air-borne vehicles	<a href="#">B64</a>
General purpose coupling and lashing devices between large containers like ISO containers, e.g. twistlock	<a href="#">B65D 90/0006</a>
Turnbuckles for connecting rods or tubes, in general	<a href="#">F16B 7/06</a>
Turnbuckles for straining cables, ropes or wires, in general	<a href="#">F16G 11/12</a>
Pressure vessels for storage purposes, e.g. gas cylinders, gas tanks, as such, e.g. for gas storage in or on barges or on ships	<a href="#">F17C 1/00</a>

### Special rules of classification

In this main group, elastic separations in tanks for fluid cargo, are indexed with [B63B 2025/085](#), however if this separation is adapted for separating, within a tank, variable size spaces for fluid cargo from variable size spaces for water ballast, such as to provide for a segregated ballast configuration, then such separations are also classified in [B63B 11/04](#).

### Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Accident	An event which is sudden, involuntary, and harmful.
Barge	A flat-bottomed boat, built mainly for river and canal transport of heavy goods, often not self-propelled but towed or pushed by tugs.
Bunker	A compartment for solid or fluid fuel.
Dunnage	Material or packaging deployed around cargo to secure it during transportation.
Hatchway	A square or oblong opening in the deck of a ship through which cargo can be lowered into the hold.

Lighter	A flat-bottomed unpowered barge for transporting goods.
Panelling	A wall facing, wall lining, wainscot.
Stowing	The placing and securing of cargo on board of a vessel, e.g. in the hold; The storing of provisions between decks.
Trimming	Adjustment of division of ballast and/or cargo to alter a vessel's draft or trim, or the distribution of buoyancy and load

## Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

LASH	Lighter Aboard SHip (carrier)
OBO	Ore Bulk Oil (carrier)

*In patent documents, the following words/expressions are often used with the meaning indicated:*

"lighter"	"a flat-bottomed barge, typically unpowered, used for transferring goods and passengers to and from moored ships".
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## B63B 27/00

**Loading or unloading cargo or passengers (self-discharging barges or lighters [B63B 35/30](#); shore-based [B65G](#) {elevators, escalators or moving walkways per se [B66B](#); floating cranes [B66C 23/52](#); loading or unloading devices per se, see the relevant subclasses, e.g. [B65G](#), [B66C](#), [B67D](#)})**

### Definition statement

*This place covers:*

Arrangements in or on ships, or other waterborne vessels for loading or unloading freight, or for embarking or disembarking passengers, as well as methods and devices specially adapted therefor. In particular this main group covers:

Arrangements and methods for loading or unloading ships involving an intermittent action:

- Arrangements, use, and special adaptations of ships' derricks, i.e. employing ships' masts, e.g. using guys for slewing
- Arrangements, use, and special adaptations of winches
- Arrangements, use, and special adaptations of cranes, e.g. of gantry cranes
- Arrangements, use, and special adaptations of ramps, e.g. telescopic or inflatable
- Arrangements, use, and special adaptations of gangways
- Arrangements, use, and special adaptations of pilot ladders, or similar outboard ladders, e.g. bathing ladders
- Arrangements, use, and special adaptations of pilot lifts
- Arrangements, use, and special adaptations of elevators, lifts or hoists (other than pilot lifts)
- Arrangements, use, and special adaptations of cable-ways, e.g. using breeches-buoys

Arrangements and methods for loading or unloading ships involving a continuous action:

- Arrangements, use, and special adaptations of conveyors, e.g. of endless-belt or screw-type
- Arrangements, use, and special adaptations of pipe-lines, or the like conduits, e.g. for liquids, or for fluidized bulk material
- Arrangements, use, and special adaptations of devices using throwing action

- Arrangements, use, and special adaptations of

Arrangement of ship-based loading or unloading equipment specially adapted for transfer at sea between ships or between ships and off-shore structures:

- Arrangements, and special adaptations of equipment using cableways
- Arrangements, and special adaptations of equipment using pipe-lines.

Arrangement of ship-based loading or unloading equipment specially adapted for for floating cargo.

### Relationships with other classification places

[B63B 27/00](#) is the home for ship-borne arrangements or methods for loading or unloading ships or other waterborne vessels, or for embarking or disembarking passengers or crew members.

Whilst [B63B 27/00](#) provides for ship-based loading or unloading means, [B65G 67/60](#) provides for loading or unloading ships in general, and for land-borne arrangements and methods for loading ships in particular.

Whilst ramps simultaneously serving as bow-, stern- or side-ports are classified in [B63B 27/14](#), bow-, stern- or side-ports in general are found in [B63B 19/08](#).

Whilst [B63B 27/16](#) covers, among others, the deployment or recovery of underwater vehicles using lifts or hoists, [B63G 8/001](#) provides for docking stations for unmanned underwater vessels, or the like.

Whilst [B63B 27/34](#) covers ship-based loading or unloading equipment for cargo transfer at sea between ships or between ships and off-shore structures using pipe-lines, buoys specially adapted for mooring a vessel and for transferring fluids, e.g. liquids are classified in [B63B 22/021](#)

### References

#### Application-oriented references

*Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:*

Buoys specially adapted for mooring a vessel and for transferring fluids, e.g. liquids	<a href="#">B63B 22/021</a>
Docking stations for unmanned underwater vessels, or the like, e.g. for downloading or uploading data, or for recharging	<a href="#">B63G 8/001</a>

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Ports or like openings in vessels' sides, or at the vessels' bow or stern	<a href="#">B63B 19/08</a>
Anchoring arrangements for special vessels with mooring turrets	<a href="#">B63B 21/507</a>
Buoys specially adapted for mooring a vessel and for transferring fluids, e.g. liquids	<a href="#">B63B 22/021</a>
Arrangements or adaptations of ladders onboard ships, in general	<a href="#">B63B 29/20</a>
Devices for lowering persons from buildings or the like by making use of chutes, e.g. hoses, pipes, sliding-grooves, sliding-sheets	<a href="#">A62B 1/20</a>
Rope railways, e.g. cable-ways; Power-and-free railway systems	<a href="#">B61B 7/00</a> - <a href="#">B61B 12/00</a>
Emptying the contents of sunken, stranded, or disabled vessels, e.g. by engaging the vessel; Underwater collecting of buoyant contents, such as liquid, particulate or gaseous contents, escaping from sunken vessels, e.g. using funnels, or tents for recovery of escaping hydrocarbons	<a href="#">B63C 7/006</a>

Inflatable escape chutes for aircraft	<a href="#">B64D 25/14</a>
Transport or storage devices, e.g. conveyors for loading or tipping, e.g. devices with throwing action per se, or chutes per se; Shop conveyor systems; Pneumatic tube conveyors (in general)	<a href="#">B65G</a>
Arrangements, or methods for loading or unloading ships, in general (in particular land-borne)	<a href="#">B65G 67/60</a>
Loading ramps, e.g. permanently installed on the dock	<a href="#">B65G 69/28</a>
Elevators, lifts or hoists; Escalators or moving walkways (in general)	<a href="#">B66B</a>
Cranes; Load-engaging elements or devices for cranes, capstans, wiches, or tackles	<a href="#">B66C</a>
Devices for facilitating retrieval of floating objects, e.g. for recovering crafts from water (per se)	<a href="#">B66C 13/02</a>
Winches per se	<a href="#">B66D</a>
Conveyors having an endless traction element, transmitting movement to a series of individual load-carriers	<b>B66G17/00</b>
Bridges or similar structures, based on land or on a fixed structure and designed to give access to ships or other floating structures	<a href="#">E01D 15/24</a>
Ladders, in general	<a href="#">E06C</a>
Launchers for marine torpedoes	<a href="#">F41F 3/08</a>

### Special rules of classification

The scope of this main group is broader than the scope of the corresponding IPC group, and includes the scope of the IPC 2 subgroups [B63B 27/02](#), [B63B 27/06](#), and [B63B 27/20](#).

Ramps adapted for use as bathing platforms are also classified in [B63B 29/02](#).

### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Derrick	A loading or unloading rig comprising a single boom pivotally supported on or near the deck on one end, suspended from a mast by means of a single span or tackle on the other end, and provided on this other end with rope or tackle for load lifting or lowering.
Gantry	A frame or platform for carrying a travelling-crane, e.g. of portal or bridge type.
Gantry crane	A bridge crane travelling on rails and supported on a frame or platform.
Pipe	The general term for a conduit of closed cross-section, which is specially adapted to convey fluids, materials or objects, e.g. a rigid pipe or a hose.
Pipe-line systems	Systems of pipe-lines as described in flow sheets; Arrangements of co-operating pipe-line elements.
Port	A door, gate or closable opening.
Slewing	Turning (a thing) round upon its own axis, or without shifting it from its place.
Winch	A hoisting or hauling device comprising a driven rotating drum around which a rope passes

## Synonyms and Keywords

*In patent documents, the following words/expressions are often used with the meaning indicated:*

"derrick"	"a crane for hoisting heavy loads, comprising a movable boom and furnished with suitable tackle for loading and unloading cargo",
"hose"	"a pipe which has flexibility as an essential characteristic", and
"span"	"a rope or tackle for suspending the free end of a loading boom from a fixed point up in a mast, so that the boom can be topped or lowered".

## B63B 29/00

### Accommodation for crew or passengers not otherwise provided for

#### Definition statement

*This place covers:*

Onboard arrangements or areas adapted for serving as habitat for crew or passengers, as well as devices specially adapted for this purpose, as far as there is no other classification place provided for such arrangements or devices. In particular this main group covers:

Cabins or other living spaces as such, as well as their construction or arrangement on ships, or other waterborne vessels:

- making use of modular or prefabricated cabins
- making use of portable walls or wall panels, e.g. for temporarily erecting cabin spaces in ship hold, or for subdividing living areas into smaller units.

Furniture specially adapted for use on vessels:

- Seats peculiar to vessels, e.g. canoe seats, waterscooter seats, and arrangements thereof on marine vessels
- Tables specially adapted for use on marine vessels, e.g. foldable or stowable
- Fastening of furniture to floors
- Storm guards on tables, e.g. fiddles
- Berths, e.g. bunk beds, as well as mounting ladders for berths
- Self-levelling furniture

Arrangements or adaptations of sanitation devices specially adapted for use on ships:

- Closet or like flushing arrangements
- Collapsible or non-permanent privacy rooms, e.g. for closets or as changing rooms
- Washing or bathing facilities.

Soil water discharges.

Arrangements or adaptations of swimming pools.

Arrangements or adaptations of ladders, e.g. on masts.

Galleys.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Seaway compensators for equipment or accessories other than self-levelling furniture	<a href="#">B63B 17/00</a>
Tables; Desks; Office furniture; Cabinets; Drawers; General details of furniture (in general)	<a href="#">A47B</a>
Folding or stowable tables (in general)	<a href="#">A47B 3/00</a>
Suspended or hinged panels forming a table; Wall tables (in general)	<a href="#">A47B 5/00</a>
Chairs; Sofas; Beds (in general)	<a href="#">A47C</a>
Bedsteads, e.g. multi-stage bedsteads (in general)	<a href="#">A47C 19/00</a>
Screens, in general	<a href="#">A47G 5/00</a>
Kitchen equipment per se	<a href="#">A47J</a>
Sanitary equipment not otherwise provided for, e.g. wash-stands, baths, showers, or closets without flushing; Toilet accessories (in general)	<a href="#">A47K</a>
Seats specially adapted for vehicles; Arrangements or mountings of seats in vehicles (in general)	<a href="#">B60N 2/00</a>
Arrangements or adaptations of other passenger fittings in or for vehicles, not otherwise provided for, e.g. of tables or trays, or of beds (in general)	<a href="#">B60N 3/00</a>
Arrangements or adaptations of sanitation devices in vehicles (in general)	<a href="#">B60R 15/00</a>
Furniture or furnishings peculiar to rail vehicles, e.g. sleeping accommodation	<a href="#">B61D 31/00</a> - <a href="#">B61D 37/00</a>
Ports or the like openings in vessels' sides	<a href="#">B63H 19/08</a>
Arrangements on vessels of installations for treating waste water or sewage	<a href="#">B63J 4/006</a>
Water-closets or urinals with flushing devices; Flushing valves therefor (in general)	<a href="#">E03D</a>
Methods, systems, or installations for draining-off sewage or storm water, e.g. temporary land-borne fluid connections for emptying mobile sewage holding tanks, e.g. of trailers, boats	<a href="#">E03F 1/00</a>
Removable non-load-bearing partitions; Partitions with a free upper edge, e.g. assembled using frames with infill panels or coverings only (in general)	<a href="#">E04B 2/74</a>
Swimming or splash baths or pools (in general)	<a href="#">E04H 4/00</a>
Ladders, in general	<a href="#">E06C</a>

### Special rules of classification

In this main group, bathing platforms arranged in the form of side-ports, or stern-ports are also classified in [B63B 19/08](#), and bathing platforms arranged in the form of ramps are also classified in [B63B 27/143](#).

Furniture such as seats specially adapted for inflatable vehicles are also classified in [B63B 7/085](#).

Furniture such as seats specially adapted for canoes, kayaks, or the like are also indexed with code [B63B 2035/715](#).



## Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Bathing platform	A fixed or movable platform arranged near the water surface for facilitating user's access to or re-boarding from the water, e. g. for swimming or diving.
Berth	A bed, bunk or sleeping-place in a ship, usually narrow and fixed to a wall; A long box or shelf for sleeping, on the side of a cabin.
Fiddle	A guardrail used on a table during rough weather to prevent things from slipping off.
Galley	The cooking-room or kitchen on a ship.
Soil-water	Sewage from water closets, or used waste-water, e.g. used for washing, bathing, cleaning, flushing.

## B63B 35/00

**Vessels or like floating structures adapted for special purposes (vessels characterised by load-accommodating arrangements [B63B 25/00](#); fire-fighting vessels [A62C 29/00](#); submarines, mine-layers or mine-sweepers [B63G](#); large containers for use in or under water [B65D 88/78](#); {Advertising on ships or other floating means [G09F 21/18](#)})**

### Definition statement

*This place covers:*

Ships or other waterborne vessels or structures which are designed or adapted for fulfilling special tasks or for serving a particular purpose, e.g. icebreakers, fishery vessels, lightships, rafts, offshore structures, or pleasure boats, like surfboards, but also waterskis or the like. In particular, this main group covers:

Vessels or other floating structures specially adapted for particular transport tasks:

- for transporting very large loads, e.g. offshore structure modules
- for transporting marine vessels, e.g. with adjustable draught, or for carrying submarines
- Passenger vessels, e.g. cruise vessels or the like
- Ferries.

Vessels or other floating structures specially adapted for particular operational tasks:

- Vessels for collecting pollution from open water, i.e. for removing solid, liquid or gaseous contamination of open waters, e.g. by oil or chemicals, either floating on the surface, or floating or dissolved underwater in the water body
- Search and rescue (SAR) vessels
- Pipe-laying vessels
- Cable-laying vessel
- Fishing vessels, e.g. trawlers or whale catchers
- Vessels or floating structures for aircraft (other than military aircraft carriers), and equipment specially adapted therefor, e.g. floating runways, or nets for recovering aircraft from water
- Lightships
- Tugs, e.g. for towing or pushing
- Floating propeller units.

Vessels or other floating structures specially adapted for particular navigation conditions:

- for beach loading or unloading, e.g. landing crafts
- for inland waters, e.g. for use on canals or rivers
- Ice-breakers, or other vessels or floating structures for operation in ice-infested waters, or having equipment specially adapted therefor.

Floating buildings, stores, drilling platforms, workshops, or the like floating structures adapted for special purposes, in particular:

- Articulated towers
- Floating drilling platforms, e.g. drilling platforms carrying water-oil separating devices, as well as methods of installation thereof
- Spar-type semi-submersible structures
- Stationary floating buildings for human use, e.g. floating dwellings, floating restaurants, or the like
- Stationary floating structures carrying electric power plants, e.g. wind turbines, or nuclear power plants
- Floating structures supporting industrial plants, such as factories, refineries, or the like
- Floating hydrocarbon production vessels, e.g. Floating Production Storage and Offloading vessels (FPSO)
- Floating storage vessels, other than vessels for hydrocarbon production and storage, e.g. for liquid cargo
- Floating structures supporting vegetation, such as trees, reeds, crops, plants, or the like, e.g. flexible structures.

Unmanned surface vessels, e.g. remotely controlled.

Barges or lighters, e.g. flexible barges or self-discharging barges.

Pontoons, e.g. foldable or rigidly-interconnected.

Wind propelled vessels comprising arrangements, installations or equipment specially adapted therefor, characterised by features other than wind propulsion arrangements, installations, or devices, such as sails, running rigging, or the like, and other than sailboards, or the like or related equipment.

Rafts, e.g. formed from logs or the like.

Canoes, kayaks or the like; Equipment specially adapted therefor;

Boats, or other floating structures for pleasure or sport, not otherwise provided for, in particular:

- Waterscooters
- House boats
- Racing rowing boats
- Towed floating structures for pleasure or sport, i.e. having the towing member, e.g. tow-rope, directly connected to the towed structure
- Pleasure boats or other floating structures adapted for particular purposes, e.g. for hunting or fishing
- Body supporting buoyant devices with seat, or bathing boats, e.g. with ring or U-shaped buoyant member
- Surf-boards, and equipment specially adapted therefor
- Sailboards, and rigging and sail arrangements specially adapted therefor
- Body-boards
- Motor-propelled boards
- Boards transformable into another vehicle, e.g. sailboat, or watercycle
- Arrangements for stowing or transporting boards
- Waterskis, watersledges, wakeboards or the like, and related equipment, e.g. bindings, fins, or towing devices

- Equipment and arrangements for generating waves specially adapted for surfing, waterskiing, or the like, e.g. attached to or towed by a boat, or stationary near a shore.

### Relationships with other classification places

[B63B 35/00](#) is the general home for ships, floating structures or other water-craft, which are particularly designed for special purposes.

Whilst [B63B 35/00](#) provides for ships or other floating vessels adapted for special purposes, anchoring arrangements for such special vessels are classified in [B63B 21/50](#).

However, [B63B 38/00](#) provides for a residual place for ships, or other floating vessels or structures, which are not covered by the scope of [B63B 35/00](#) or the scope of other classification units in this subclass.

Whilst [B63B 35/44](#) provides for offshore structures or platforms which are floating or have substantial positive buoyancy when in use, construction of the hull of such floating offshore platforms is classified in [B63B 9/065](#), [E02B 17/00](#) is the home of offshore platforms which, when in use, rest on the sea bed, even if the platform or parts thereof exhibit positive buoyancy during transport to or during installation at the site of use, or during recovery or relocation after use, in particular, jack-up platforms with floating topsides, which are jacked-up above the sea level when in use, are classified in [E02B 17/021](#).

Whilst [B63B 35/50](#) provides for ships or other floating structures for air carrying aircraft, e.g. floating landing strips, [B63B 17/00](#) provides for seaway-compensators, [B63G 11/00](#) for military aircraft-carriers, and aircraft-carrier-deck installations, like arresting gear or catapults are classified in [B64F 1/00](#).

Whilst [B63B 35/56](#) provides for lightships as such, marking of navigational routes, and related arrangements are classified in [B63B 51/00](#), and buoys specially adapted for marking navigational routes are provided for in [B63B 22/16](#).

Whilst [B63B 35/71](#) provides for canoes, kayaks or the like boats as such, and related equipment, vessels characterised by being collapsible, foldable or inflatable are classified in [B63B 7/00](#), and equipment contributing to the propulsion of canoes or kayaks, like movable thwarts or footrests, or paddles is classified in [B63H 16/00](#).

Whilst [B63B 35/74](#) provides for body supporting buoyant devices with seat, e.g. with ring or U-shaped buoyant member, floating general purpose seats are classified in [A47C 15/006](#), [B63C 9/08](#) provides for life-buoys or life-rings, and [B63C 9/30](#) for floating furniture specially adapted for life-saving.

### References

#### Limiting references

*This place does not cover:*

Hydrodynamic or hydrostatic features of hulls, e.g. of semi-submersible multiple hulls	<a href="#">B63B 1/00</a>
Collapsible, foldable, inflatable, or like vessels	<a href="#">B63B 7/00</a>
Buoys	<a href="#">B63B 22/00</a>
Vessels characterised by load-accommodating arrangements, e.g. container vessels, or tank vessels	<a href="#">B63B 25/00</a>
Load accommodation for floating barges, or the like	<a href="#">B63B 25/006</a>
Travelling or camp articles which may be converted into boats; Sacks or packs carried on the body and convertible into boats	<a href="#">A45F 4/10</a>
Floating seats (general purpose furniture, other than for life-saving)	<a href="#">A47C 15/006</a>
Fire-fighting vessels, or the like structures	<a href="#">A62C 29/00</a>

Swimming framework with driving mechanisms operated by the swimmer or by a motor	<a href="#">A63B 35/00</a>
Water roundabouts, e.g. freely floating	<a href="#">A63G 3/00</a>
Amphibious vehicles, i.e. vehicles capable of travelling both on land and on water; Land vehicles capable of travelling under water	<a href="#">B60F 3/00</a>
Waterborne vehicles adapted or modified to travel on air-cushions	<a href="#">B60V 3/06</a>
Life-saving in water	<a href="#">B63C 9/00</a>
Lifeboats, life-rafts or the like, specially adapted for life-saving	<a href="#">B63C 9/02</a>
Life-buoys, e.g. life-rings; Life-belts, jackets, suits, or the like	<a href="#">B63C 9/08</a>
Floatable furniture (adapted for life-saving in water)	<a href="#">B63C 9/30</a>
Offensive or defensive arrangements on vessels; Vessels characterised thereby; Laying or sweeping of mines, or laying of depth charges, and related vessels; Underwater vessels, e.g. submarines; Aircraft carriers	<a href="#">B63G</a>
Unmanned surface vessels for mine sweeping, e.g. unmanned autonomously operating mine sweeping vehicles	<a href="#">B63G 7/00</a>
Underwater vessels adapted for special purposes, e.g. unmanned underwater vehicles	<a href="#">B63G 8/001</a>
Underwater-towed barges	<a href="#">B63G 8/42</a>
Aircraft carriers	<a href="#">B63G 11/00</a>
Movable thwarts; Footrests	<a href="#">B63H 16/02</a>
Oars; Sculls; Paddles; Poles	<a href="#">B63H 16/04</a>
Grund or aircraft-carrier-deck installations, e.g. launching gear using catapults	<a href="#">B64F 1/00</a>
Large containers for use in or under water	<a href="#">B65D 88/78</a>
Floating bridges, e.g. ponton bridges or landborne structures designed to give acces to ships	<a href="#">E01D 15/00</a>
Moles, piers, breakwaters, or the like structures, characterised by constructions floating in operational condition, e.g. floating landing-stages	<a href="#">E02B 3/062</a>
Jack-up structures with floating platforms (floating capability for transport purposes)	<a href="#">E02B 17/021:</a>
Floating substructures as supports for dredgers	<a href="#">E02F 9/06</a>
Seagoing targets (for shooting exercise at sea, e.g. armoured, remotely controlled self-propelled or towed target vessels)	<a href="#">F41J 9/04</a>

### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Construction methods for hulls of floating platforms, e.g. for assembling offshore structures in situ, using buoyancy forces for supporting the structure itself, or parts of it	<a href="#">B63B 9/065</a>
Seaway compensators for equipment other than self-levelling furniture	<a href="#">B63B 17/00</a>
Ports or like openings in vessels' sides, or at the vessels' bow or stern	<a href="#">B63B 19/08</a>
Anchoring arrangements for special vessels, e.g. making use of articulated towers	<a href="#">B63B 21/50</a>
Towing or pushing equipment on vessels	<a href="#">B63B 21/56</a>

Furniture peculiar to vessels, e.g. seats, in general	<a href="#">B63B 29/04</a>
Marking navigation route	<a href="#">B63B 51/00</a>
Fishing per se	<a href="#">A01K 69/00</a> - <a href="#">A01K 97/00</a>
Sacks or packs carried on the body, e.g. carrying-frames, or frames combined with sacks	<a href="#">A45F 3/00</a>
Inflatable chairs	<a href="#">A47C 4/54</a>
Training appliances or apparatus for surfing, i.e. without a sail	<a href="#">A63B 69/0093</a>
Training appliances or apparatus for water-skiing	<a href="#">A63B 69/187</a>
Bindings for snowboards	<a href="#">A63C 10/00</a>
Design or layout of areas for water-skiing; Covers therefor	<a href="#">A63C 19/00</a>
Propulsive devices directly acted on by wind; Arrangements thereof (in general)	<a href="#">B63H 9/00</a>
Effecting propulsion by jets, i.e. reaction principle	<a href="#">B63H 11/00</a>
Propulsion of chain ferries	<a href="#">B63H 15/00</a>
Effecting propulsion by muscle power	<a href="#">B63H 16/00</a>
Propulsion of trail-flying ferries	<a href="#">B63H 19/04</a>
Outboard propulsion units, i.e. propulsion units having a substantially vertical power leg mounted outboard of a hull and terminating in a propulsion element, e.g. "outboard motors", Z-drives	<a href="#">B63H 20/00</a>
Water flotation gear for lighter-than-air aircraft	<a href="#">B64B 1/68</a>
Aircraft alighting gear comprising floats;	<a href="#">B64C 25/54</a>
Flying boat hulls	<b>B64C35/02</b>
Emergency flotation gear for aircraft;	<a href="#">B64D 25/18</a>
Floating cranes (crane aspects)	<a href="#">B66C 23/52</a>
Cracking hydrocarbon oils; Production of liquid hydrocarbon mixtures, e.g. by destructive hydrogenation, oligomerisation, polymerisation (per se)	<a href="#">C10G</a>
Hydraulic engineering	<a href="#">E02B</a>
Cleaning or keeping clear the surface of open water; Apparatus therefor (in general)	<a href="#">E02B 15/00</a>
Offshore structures supported on the sea bed when in use	<a href="#">E02B 17/00</a>
Buildings, or groups of buildings, or shelters adapted to withstand or provide protection against floods	<a href="#">E04H 9/145</a>
Steam engine plants; Steam accumulators; Engine plants not otherwise provided for; Engines using special working fluids or cycles (per se)	<a href="#">F01K</a>
Internal-combustion piston engines (per se); combustion engines in general	<a href="#">F02B</a>
Gas turbine plants, per se	<a href="#">F02C</a>
Machines or engines for liquids per se	<a href="#">F03C</a>
Wind motors, per se	<a href="#">F03D</a>
Mounting of machines or engines on supporting structures or systems, e.g. on a structure floating on a liquid surface, offshore, or as part of a wind farm (indexing code)	<a href="#">F05B 2240/90</a>

Methods or apparatus specially adapted for laying or reclaiming pipes on or under water, e.g. laying apparatus on vehicle	<a href="#">F16L 1/12</a>
Use of solar heat, e.g. solar heat collectors per se	<a href="#">F24S</a>
Advertising on ships or other floating means	<a href="#">G09F 21/18</a>
Nuclear power plant, per se	<a href="#">G21D</a>
Methods or apparatus specially adapted for laying cables in or under water, e.g. laying apparatus on vehicle	<a href="#">H02G 1/10</a>
Generators in which light radiation is directly converted into electrical energy per se	<a href="#">H02S 99/00</a>
Reduction of greenhouse gasses (GHG) emission, related to energy generation, transmission or distribution, e.g. hydroenergy from tidal stream or damless hydropower, like sea flood and ebb, river, or stream (scheme for automatic indexation)	<a href="#">Y02E</a>

### Special rules of classification

In this main group, subject-matter concerning vessels, or floating structures specially adapted for operation in ice-infested water, and at the same time adapted for an other particular purpose, is classified in [B63B 35/08](#) and subgroups, and is also classified in the respective other particular groups of [B63B 35/00](#), e.g. floating buildings, stores, drilling platforms or workshops for operation in ice infested waters are also classified in [B63B 35/44](#).

In this main group, subject-matter concerning devices or installations for collecting pollution from the surface of open water installed on board of vessels specially adapted for this task, e.g. devices for collecting spilled oil, is also classified in [E02B 15/00](#) and subgroups.

In this main group, towed floating structures for pleasure or sport, i.e. structures having the towing member, e.g. tow-rope, directly connected thereto, are indexed with code [B63B 2035/735](#), and are also classified in the respective place for the towed structure as such, e.g. surf-boards in [B63B 35/79](#) and subgroups, or water sledges in [B63B 35/81](#).

### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Aircraft carrier	A warship equipped with a flight deck and hangars which carries and serves as a base for aircraft, and from which they are able to take off and land on.
Articulated tower	A substantially floating structure comprising a slender tower-like hull anchored at its lower end to the sea floor by means of a single articulation, e.g. using an articulated bearing
Barge	A flat-bottomed boat, built mainly for river and canal transport of heavy goods, often not self-propelled but towed or pushed by tugs.
Body-board	A surfboards specially adapted for use by a single user in prone position attachable to or holding on to the board; A planing member attachable to the body of, or held by a single user riding a breaking wave, or occasionally a river current, without a surfboard.
Canoe	A small open boat propelled by a single-bladed paddle; term often used for any kind of paddle-propelled boat.
Dragging	Drawing or pulling with force something which is heavy and resists motion; Hauling.

Ferry	A provision for the conveyance of passengers, vehicles, or the like by boat from one shore to the other
Floating propeller unit	An unmanned floating vessel comprising a propulsion power plant or unit, and a propulsive element, e.g. a propeller, adapted for propelling a barge or the like.
Kayak	A small boat made of a framework of light wood covered with sealskins sewn together, and with a covered opening for the user and propelled by a double-paddle, or a sport or touring boat developed from this design.
Leash	A security line, or tether connecting a surf-board or the like to the rider, e.g. to a limb
Lighter	A flat-bottomed barge, typically unpowered, used for transferring goods and passengers to and from moored ships; A flat-bottomed unpowered barge for transporting goods.
Lightship	A ship equipped like a lighthouse and anchored where a permanent lighthouse would be impracticable.
Ice-breaker	A vessel for breaking a navigable channel into an ice-cover, or for assisting other vessels in ice-infested waters
Pollution	Harmful substances left in the environment.
Pontoon	A stationary floating structure, typically used for support purposes, e.g. landing stages.
Racing rowing boat	A light, long, narrow racing boat propelled by rowing using oars or sculls
Raft	A free floating waterborne vessels, of shallow draft, with little or no freeboard, and having a platform or floor for supporting a user; A flat, buoyant structure of timber, or other materials fastened together, used as a boat or floating platform.
Sailboard	A wind-propelled surf-board.
Surf-board	A small recreational board-like planing hull for supporting a user, e.g. wind-propelled or for riding on the crest of a wave.
Trawler	A fishing boat that uses a trawl net or dragnet.
Wakeboard	A monoboards for users being towed behind a boat, the board comprising bindings oriented substantially perpendicular to the longitudinal axis of the board, e.g. snowboard-like bindings
Waterscooter	A motorized pleasure boat resembling a motor-scooter, typically water-jet propelled, and with a handlebar for steering.

### Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

FPSO	Floating Production Storage and Offloading (unit, vessel)
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*In patent documents, the following words/expressions are often used with the meaning indicated:*

"raft"	"number of logs, planks, etc., fastened together in the water for transportation by floating"
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"sit-on-top kayak" or "surfski"	"a kayak-shaped double-paddle propelled boat without closed cockpit, with a seat and footrests arranged in recesses in the central upper hull portion, and exposing the user to the outside environment"
"windsurfing"	"using a windpropelled sailboard"

## B63B 38/00

**Vessels or like floating structures not otherwise provided for (vessels characterised by load-accommodating arrangements [B63B 25/00](#); fire-extinguishing vessels [A62C 29/00](#); submarines, mine-layers or mine-sweepers [B63G](#); large containers for use in or under water [B65D 88/78](#))**

### Definition statement

*This place covers:*

Ships or other floating vessels or structures, which are not covered by the scope of any other classification unit in this subclass. This main group forms a residual place for such ships, vessels or floating structures.

### References

#### Limiting references

*This place does not cover:*

Fire-fighting vessels or the like structures	<a href="#">A62C 29/00</a>
Offensive or defensive arrangements on vessels; Vessels characterised thereby; Laying or sweeping of mines, or laying of depth charges, and related vessels; Underwater vessels, e.g. submarines; Aircraft carriers	<a href="#">B63G</a>
Large containers for use in or under water	<a href="#">B65D 88/78</a>
Floating bridges, e.g. ponton bridges or landborne structures designed to give acces to ships	<a href="#">E01D 15/00</a>
Moles, piers, breakwaters, or the like structures, characterised by constructions floating in operational condition, e.g. floating landing-stages	<a href="#">E02B 3/062</a>
Jack-up structures with floating platforms (floating capability for transport purposes)	<a href="#">E02B 17/021</a> :
Floating substructures as supports for dredgers	<a href="#">E02F 9/06</a>
Seagoing targets (for shooting exercise at sea, e.g. armoured, remotely controlled self-propelled or towed target vessels)	<a href="#">F41J 9/04</a>

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Collapsible, foldable, inflatable, or like vessels	<a href="#">B63B 7/00</a>
Buoys	<a href="#">B63B 22/00</a>
Vessels characterised by load-accommodating arrangements, e.g. container vessels, or tank vessels	<a href="#">B63B 25/00</a>



## B63B 39/00

**Equipment to decrease pitch, roll, or like unwanted vessel movements;  
Apparatus for indicating vessel attitude {(for amphibious vehicles  
[B60F 3/0038](#))}**

### Definition statement

*This place covers:*

Ship-borne devices, installations or means for reducing the amplitude of the ship or vessel motions such as pitch or roll, as well as devices for indicating the position of a vessel in relation to its line of travel, or the vessel's orientation in space, e.g. the heeling angle, or for indicating the rolling period, or the like. In particular, this main group covers:

Equipment to decrease ship's vibrations produced externally to the ship, e.g. wave-induced vibrations.

Equipment to decrease solid body motions of ships or other waterborne vessels:

- by displacement of masses, e.g. by transferring liquids
- by using gyroscopes directly
- by using foils acting on ambient water, e.g. by using trimflaps, or using foils having a variable cross section
- by using auxiliary jets or propellers
- by damping the waves, e.g. by pouring oil on water, or through absorption of wave energy.

Apparatus for indicating vessel attitude, e.g.

- for indicating draught or load
- for indicating inclination or duration of roll.

### Relationships with other classification places

[B63B 39/00](#) is the general home for a variety of ship-borne equipment adapted for minimizing ship movements like pitch or roll, or for apparatus for indicating the vessel's attitude.

Whilst equipment for minimizing ship motions, e.g. gyroscopes, bilge-keels or lift-controlled stabilizing foils are classified in [B63B 39/00](#), [B63B 1/00](#) covers hull shapes adapted for minimizing such motions, e.g. semi-submersible hulls, [B63B 3/00](#) provides for the construction of rigid keels, [B63B 41/00](#) provides for movable keels, and [B63B 43/04](#) provides for means for improving ship stability, such as solid or water ballast.

### References

#### Limiting references

*This place does not cover:*

Construction of keels integral with the ship's hull, e.g. of keels with means for controlling heeling or rolling motions, by means of flaps, by changing geometry, or by ballast displacement	<a href="#">B63B 3/38</a>
Construction of bilge keels	<a href="#">B63B 3/44</a>
Arrangements of nautical instruments or navigational aids	<a href="#">B63B 49/00</a>

### Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Anchoring arrangements for special vessels using tension legs, e.g. comprising suppressors for vortex induced vibrations	<a href="#">B63B 21/502</a>
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### Informative references

Attention is drawn to the following places, which may be of interest for search:

Hydrofoils	<a href="#">B63B 1/24</a>
Movable hydrofoils changing the angle of attack or the lift of the foil, e.g. using flaps	<a href="#">B63B 1/285</a>
Means for varying the inherent hydrodynamic characteristics of hulls, e.g. by using interceptors, or by reducing surface friction using mechanical means	<a href="#">B63B 1/32</a>
Drop keels, e.g. centre boards, side boards; Collapsible keels, or the like, e.g. telescopically; Longitudinally split hinged keels	<a href="#">B63B 41/00</a>
Reducing risk of capsizing or sinking of vessels by improving stability	<a href="#">B63B 43/04</a>
Arrangements of stability devices on amphibious vehicles	<a href="#">B60F 3/0038</a>
Mounting of propulsion plant or unit, e.g. for anti-vibration purposes	<a href="#">B63H 21/30</a>
Rudders, e.g. with flaps or changing geometry	<a href="#">B63H 25/38</a>
Rudders using Magnus effect	<a href="#">B63H 25/40</a>
Steering or dynamic anchoring using propellers	<a href="#">B63H 25/42</a>
Steering or dynamic anchoring using jets	<a href="#">B63H 25/46</a>
Influencing the flow of fluids around bodies of solid material, e.g. by influencing the boundary layer	<a href="#">F15D 1/10</a>
Springs; Shock-absorbers; Means for damping vibration; Suppression of vibration in systems	<a href="#">F16F</a>
Measuring length, thickness, or similar linear dimensions; Measuring angles (in general)	<a href="#">G01B</a>
Measuring instruments for measuring angles, inclinations, distances, heights or levels (in general)	<a href="#">G01C</a>
Measuring inclinations in general;	<a href="#">G01C 9/00</a>
Measuring frequencies of mechanical vibrators in general	<a href="#">G01H</a>
Control of attitude, i.e. of roll, pitch or yaw of waterborne vehicles	<a href="#">G05D 1/0875</a>

### Special rules of classification

In this main group, subject-matter concerning the control of attitude, i.e. the control of roll, pitch or yaw, specially adapted to waterborne vehicles, is also classified in [G05D 1/0875](#) (reference is made to the Special rules of classification within main group [G01D 1/00](#)).

The breakdown indexing codes [B63B 2039/063](#), [B63B 2039/065](#), [B63B 2039/066](#) and [B63B 2039/068](#) arranged under subgroup [B63B 39/06](#) are also used for indexing movable keels, like drop keels, classified in [B63B 41/00](#).

## Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Attitude	The position of a vessel in relation to its line of travel. The orientation in space of a floating or submerged body.
Bilge	Part of the hull and corresponding compartment of a ship where the hull sides curve inward to meet at the keel.
Bilge keel	Longitudinally extending profile protruding from the outer surface of the bilge, for resisting rolling motion.
Gyroscope	A rapidly rotating mass used for decreasing vessel movements, in particular roll.
Hydrofoil	A wing-like structure positioned below a hull which creates hydrodynamic lift when a vessel is moved through the water at speed.
Magnus effect	The phenomenon of a rotating object moving in a fluid generating a circulation and thus a lift perpendicular to the axis of rotation and to the direction of movement of the object.
Pitch	The rotary motion of a vessel about a horizontal axis perpendicular to its longitudinal axis or direction of motion.
Roll	The rotary movement of a vessel about an axis parallel to its longitudinal axis or direction of motion.
Trimflap	A small planing surface, typically arranged in pairs, one on each side, at the transom of a planing hull, and adjustably mounted for pivoting about a substantially horizontal axis, used for controlling trim, or for assisting in turning manoeuvres.
Yaw	A movement of deviation from the direct course, as from bad steering; The angular motion or displacement about a yawing axis.

## Synonyms and Keywords

*In patent documents, the word/expression in the first column is often used instead of the word/expression in the second column, which is used in the classification scheme of this place:*

"trim tab"	"trimflap"
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*In patent documents, the following words/expressions are often used with the meaning indicated:*

"trimflap" or "trim tab"	"a hinged tab fitted to the trailing edge of a wing, foil, keel or rudder to control hydrodynamic lift, e.g. to facilitate steering"
"hydrofoil"	"a vessel which uses hydrofoil features to lift the hull out of the water at speed, thereby reducing drag"

## B63B 41/00

Drop keels, e.g. centre boards or side boards {; Collapsible keels, or the like, e.g. telescopically; Longitudinally split hinged keels (keels integral with hull [B63B 3/38](#); foils or keels on surf-boards [B63B 35/7906](#); stabilising foils [B63B 39/06](#)}}

### Definition statement

*This place covers:*

Keels which are movable with respect to the hull of the water-craft, e.g. retractable, collapsible or telescoping keels, such as daggerboards or lee-boards.

Hydrodynamic or hydrostatic features of hulls or of hydrofoils:

- Constructions of hulls
- Drop keels, e.g. centre boards, side boards.

Hydrodynamic or hydrostatic features of hulls or of hydrofoils:

- Constructions of hulls
- Drop keels, e.g. centre boards, side boards.

Hydrodynamic or hydrostatic features of hulls or of hydrofoils:

- Constructions of hulls
- Drop keels, e.g. centre boards, side boards.

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Construction of keels integral with the ship's hull, e.g. of keels with means for controlling heeling or rolling motions, by means of flaps, by changing geometry, or by ballast displacement	<a href="#">B63B 3/38</a>
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### Special rules of classification

In this main group, the breakdown indexing codes [B63B 2039/063](#), [B63B 2039/065](#), [B63B 2039/066](#) and [B63B 2039/068](#) arranged under subgroup [B63B 39/06](#) are also used for indexing the corresponding features of movable keels.

## B63B 43/00

Improving safety of vessels, e.g. damage control, not otherwise provided for (fire-fighting in ships [A62C 3/10](#))

### Definition statement

*This place covers:*

Means or methods for improving the safety of ship or other waterborne vessels, e.g. by improving stability or buoyancy, as far as there is no other classification place provided for. In particular, this main group covers:

Methods or means for reducing the risk of capzising or sinking:

- Improving stability
- Improving buoyancy

- Arrangements of watertight doors in bulkheads, e.g. sliding doors.

Methods or means for preventing collision, or reducing collision damage, e.g. feelers.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements on ships or other waterborne vessels, or adaptations therefor of ports, doors, windows, port-holes, or other openings or covers, in general	<a href="#">B63B 19/00</a>
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## B63B 45/00

**Arrangements or adaptations of signalling or lighting devices (arrangement of signalling or lighting devices, the mounting or supporting thereof or circuits therefor, for vehicles in general [B60Q](#); life-buoys, -belts, -jackets, -suits or the like, characterised by signalling means [B63C 9/20](#); lighting devices or systems therefor [F21L](#), [F21S](#))**

### Definition statement

*This place covers:*

Assemblages or relative disposition of apparatus for signalling or lighting on ships or other waterborne vessels, as well as modifications of such apparatus if of interest for the respective arrangement concerned, and signalling or lighting devices specially adapted for use onboard marine vessels or other waterborne structures. In particular this main group covers:

Arrangements or adaptations of illuminating devices:

- of spotlights or floodlights or the like, for illuminating the environment, e.g. the way ahead
- of floodlights or other lights for illuminating the vessel's interior or exterior, e.g. decks
- of position-lanterns or the like.
- Arrangements or adaptations of sound producing devices, e.g. of sirens.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements or adaptations of optical signalling or lighting devices for vehicles in general	<a href="#">B60Q 1/00</a>
Arrangements or adaptations of lighting devices for vehicle interior in general	<a href="#">B60Q 3/00</a>
Use or application of lighting devices on or in water vehicles	<a href="#">F21W 2107/20</a>

### Special rules of classification

In this main group, the use of the indexing scheme [B63B 2201/00](#) (Signalling devices) is mandatory for indexing non-trivial features which are related to the invention information.

## B63B 49/00

**Arrangements of nautical instruments or navigational aids (nautical measuring instruments [G01C](#); radio navigation, analogous arrangements using other waves [G01S](#))**

### Definition statement

*This place covers:*

Assemblages or relative disposition of nautical instruments or navigational aids, e.g. on a vessel's bridge, as well as modifications of such instruments or aids if of interest for the respective arrangement concerned.

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Apparatus for indicating vessel attitude, e.g. for indicating draught or load, or for indicating inclination or duration of roll.	<a href="#">B63B 39/00</a>
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## B63B 51/00

### Marking of navigation route

#### Definition statement

*This place covers:*

Systems or methods for marking navigational routes, or arrangements of devices or installations specially adapted therefor. In particular this main group covers:

Arrangements of lightships, as well as systems or methods using lightships for marking navigational routes.

Arrangements of lighthouses, as well as systems or methods using lighthouses for marking navigational routes.

Arrangements of freely floating devices that produce a bright light for signalling, illumination, or identification, e.g. torches, as well as systems or methods using such freely floating devices for marking navigational routes.

#### Relationships with other classification places

While [B63B 51/00](#) is the general home for means and methods for marking navigational routes, [B63B 22/16](#) provides for buoys specially adapted for marking a navigational route, lightships as such are covered by [B63B 35/56](#), and constructional aspects of lighthouses are covered by [E04H 12/00](#).

### References

#### Limiting references

*This place does not cover:*

Buoys specially adapted for marking a navigational route as such	<a href="#">B63B 22/16</a>
Lightships as such	<a href="#">B63B 35/56</a>
Constructional aspects of lighthouses	<a href="#">E04H 12/00</a>

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Use or application of lighting devices or systems for signalling, marking or indicating, for waterways (indexing code)	<a href="#">F21W 2111/04</a>
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### Special rules of classification

The scope of this main group deviates from the scope of the corresponding IPC group in as far as it covers also arrangements of buoys for marking navigational routes, i.e. assemblages or relative dispositions of such buoys, as well as systems or methods for marking navigational routes using buoys, while buoys specially adapted for marking a navigational route as such are classified in [B63B 22/16](#).

### B63B 57/00

**Tank {or cargo hold} cleaning specially adapted for vessels (tank cleaning in general [B08B 9/08](#))**

#### Definition statement

*This place covers:*

Devices or methods specially adapted for cleaning tanks or cargo holds of ships or other marine vessels. In particular, this main group covers:

- Apparatus or methods for washing tanks of marine vessels
- Apparatus or method for ventilating tanks of marine vessels.

### B63B 59/00

**Hull protection peculiar to vessels; Cleaning devices peculiar to vessels and integral therewith (cleaning of vehicles in general [B60S](#); other cleaning in general [B08B](#); inhibiting corrosion of metals by anodic or cathodic protection [C23F 13/00](#))**

#### Definition statement

*This place covers:*

Protection methods or means peculiar to the protection of the hull of ships or other waterborne vessels, as well as devices specially adapted for cleaning ships, other marine vessels or hulls thereof. In particular, this main group covers:

Fenders or rubbing strakes integral with ship's hulls or the like, or specially adapted for protecting such hulls against impact damage, e.g. inflatable fenders.

Preventing hull fouling with barnacles or the like marine growth, e.g. by using anti-fouling paints, or by wrapping the hull with an impermeable sheet.

Devices specially adapted for cleaning ship's hulls or hulls of other waterborne vessels, in particular:

- Cleaning devices carried by land-borne vehicles, e.g. travelling on the dry bottom of a dock
- Cleaning devices adapted for cleaning the submerged surface of a ship's hull while afloat, e.g. diver operated devices or devices carried by robots travelling along the hull's surface.

#### Relationships with other classification places

[B63B 1/00](#) is the general home for methods or means for protecting ship's hulls, for preventing marine growth, as well as for cleaning devices specially adapted for cleaning vessels, in particular for cleaning

ship's underwater hulls. However, cleaning of vehicle in general is found in [B60S](#), whereas cleaning in general is classified in [B08B](#), [C09D 5/16](#) covers anti-fouling coatings, and [C23F 13/00](#) covers inhibiting corrosion of metals by means of anodic or cathodic protection.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Fenders for use on coast, in harbours or on other fixed marine structures	<a href="#">E02B 3/26</a>
Fender piles	<a href="#">E02B 3/28</a>
Equipment specially adapted for cleaning swimming or splash baths or pools	<a href="#">E04H 4/16</a>

## B63B 69/00

### Equipment for shipping not otherwise provided for

#### Definition statement

*This place covers:*

Equipment, not otherwise provided for, used for shipping in its broadest sense, i.e. concerning ships collectively, for marine navigation, or in view of putting persons or things onboard ships, or transporting them by ships. This main group serves as residual place for such equipment.

## B63B 2201/00

### Signalling devices

#### Definition statement

*This place covers:*

Indexing codes related to a non-trivial use, characteristics or special adaptations of signalling devices, as far as related to invention information. In particular, this main group covers:

Signalling devices characterised by the type of the signal:

- Sound
- Light

Signalling devices characterised by the apparatus of signal generation:

- Smoke generators
- Reflectors
- Radio apparatus
- Sonar apparatus
- Spreaders for chemicals or other products
- Bubble generators.

Accessories for signalling:

- Balloons
- Antennas or masts

Adaptations for particular purposes, e.g. for signalling anomalies.



## **B63B 2203/00**

### **Communication means**

#### **Definition statement**

*This place covers:*

Indexing codes related to a non-trivial use, characteristics or special adaptations of communication means, as far as related to invention information, e.g. making use of telephones.

## **B63B 2205/00**

### **Tether**

#### **Definition statement**

*This place covers:*

Indexing codes related to a non-trivial use, characteristics or special adaptations of ropes, cords, line, leash or the like adapted for providing a line connection between a user, an object or a location in space, like the water surface, and another object, e.g. a submerged object, as far as related to invention information, and as far as not otherwise provided for in this class [B63](#). In particular, this main group covers:

Tethers combined with tether payout means:

- Means for controlling payout, e.g. using brakes
- Reels for storing tethers, e.g. in winding or unwinding

Tethers adapted for salvaging or recovering underwater objects.

## **B63B 2207/00**

### **Buoyancy or ballast means**

#### **Definition statement**

*This place covers:*

Indexing codes related to a non-trivial use or adaptations of means providing buoyant lift or of ballast means, as far as related to invention information, e.g. means adapted for varying buoyancy or ballast, as far as not otherwise provided for in this class [B63](#).

## **B63B 2209/00**

### **Energy supply or activating means**

#### **Definition statement**

*This place covers:*

Indexing codes related to non-trivial ways of energy supply to devices or systems, including watercraft, or to non-trivial means for activating an apparatus, which ways or means are related to invention information, e.g. using solar energy as energy source, or activating an inflation device by contact with water, and as far as not otherwise provided for in this class [B63](#).

## B63B 2211/00

### Applications

#### Definition statement

*This place covers:*

Indexing codes related to non-trivial use or applications which are related to the invention information, e.g. oceanography, diving, or operation in ice-infested waters, and as far as not otherwise provided for in this class [B63](#).

## B63B 2213/00

### Navigational aids and use thereof, not otherwise provided for in this class

#### Definition statement

*This place covers:*

Indexing codes related to a non-trivial use of particular navigational aids, as well as to non-trivial adaptations of such navigational aids for use onboard ships or other waterborne vessel, which is related to invention information, and which is not otherwise provided for in this class [B63](#), e.g. a non-trivial use of the Global Positioning System GPS.

## B63B 2221/00

### Methods and means for joining members or elements

#### Definition statement

*This place covers:*

Indexing codes related to a non-trivial use of particular means or methods for releasably or permanently, rigidly or movably connecting members, parts or elements together, as far as related to invention information, and as far as not otherwise provided for in this class [B63](#). In particular, this main group covers:

Connecting means or methods characterised by the joining method, or by the use of particular joining means:

- by welding
- by soldering
- by sewing, stapling, stitching or the like methods
- by riveting or by use of rivets
- using threaded bolts or nuts, or the like
- using hook and loop fasteners, or zippers
- using laces, straps or ribbons

Connecting substantially rigid members in a way that one or more degrees of freedom are allowed, e.g. using hinges, articulations or universal joints, or using telescoping joints.

## B63B 2231/00

### Material used for some parts or elements, or for particular purposes

#### Definition statement

*This place covers:*

Indexing codes related to a non-trivial use of particular materials for some parts or elements, or in view of particular purposes, which is related to invention information, e.g. the use of stainless steel for the blades of an ice-going propeller, opposite to the use of AlCuNic-bronze as usual for propellers. In particular, this main group covers:

The use of metallic materials, e.g. of stainless steels, titanium or shape-memory alloys.

The use of magnetic materials.

The use of vegetable materials, e.g. of wood products.

The use of synthetic materials, e.g. of synthetic rubber, fibre-reinforced plastics or foamed synthetic materials.

The use of concretes, e.g. of prestressed concrete.

The use of glass, e.g. of hollow glass microspheres.

The use of bituminous materials.

The use of ice, e.g. as a construction material or for closing leaks.

## B63B 2241/00

### Design characteristics

#### Definition statement

*This place covers:*

Indexing codes related to particular non-trivial design characteristics related to invention information, e.g. particular shapes or particular intended use, and not otherwise provided for in this class [B63](#). In particular this main group covers:

- Particular cross sections, e.g. circular.
- Particular three-dimensional shapes, e.g. toroidal.
- Designs or arrangements for particular purposes, not otherwise provided for in this class, e.g. for providing redundancy, or for facilitating road transport.