

## SECTION B — PERFORMING OPERATIONS; TRANSPORTING

### B63 SHIPS OR OTHER WATERBORNE VESSELS; RELATED EQUIPMENT

**B63B SHIPS OR OTHER WATERBORNE VESSELS; EQUIPMENT FOR SHIPPING** (arrangements of vessel ventilation, heating, cooling, or air-conditioning B63J 2/00; floating substructures as supports of dredgers or soil-shifting machines E02F 9/06) [2]

#### Subclass index

#### HULLS

Study; general characteristics.....	9/00, 1/00
General; adjustable keels; protection.....	3/00, 41/00, 59/00
Particular types.....	5/00, 7/00
Subdivision; cleaning of tanks.....	11/00, 57/00
SUPERSTRUCTURES; HULL OR SUPERSTRUCTURE OPENINGS.....	15/00, 19/00
EMPTYING, BALLASTING; STABILITY; SAFETY.....	13/00, 29/16, 39/00, 43/00
MOORING, SHIFTING; HANDLING LIFEBOATS.....	21/00, 23/00
ACCOMMODATION FOR CARGO OR PERSONS.....	25/00, 27/00, 29/00
ARRANGEMENTS OR ADAPTATIONS OF SIGNALLING OR LIGHTING DEVICES OR OF NAUTICAL INSTRUMENTS.....	45/00, 49/00
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PARTICULAR KINDS OF SHIPS OR FLOATING STRUCTURES NOT OTHERWISE PROVIDED FOR.....	35/00, 38/00
BUOYS; MARKING NAVIGATION ROUTES.....	22/00, 51/00

<b>1/00 Hydrodynamic or hydrostatic features of hulls or of hydrofoils</b> (hulls peculiar to submarines B63B 3/13; keels B63B 3/38) [1, 2006.01]	3/02	• Hulls assembled from prefabricated sub-units [1, 2006.01]
1/02 • deriving lift mainly from water displacement (B63B 1/16 takes precedence) [1, 2006.01]	3/04	• • with permanently-connected sub-units [1, 2006.01]
1/04 • • with single hull [1, 2006.01]	3/06	• • • the sub-units being substantially identical [1, 2006.01]
1/06 • • • Shape of fore part [1, 2006.01]	3/08	• • with detachably-connected sub-units [1, 2006.01]
1/08 • • • Shape of aft part [1, 2006.01]	3/09	• Hulls constructed of non-magnetic metal [1, 2006.01]
1/10 • • with multiple hulls [1, 2006.01]	3/10	• Armoured hulls [1, 2006.01]
1/12 • • • the hulls being interconnected rigidly [1, 2006.01]	3/12	• Frameless hulls [1, 2006.01]
1/14 • • • the hulls being interconnected resiliently [1, 2006.01]	3/13	• Hulls built to withstand hydrostatic pressure when fully submerged, e.g. submarine hulls [1, 2006.01]
1/16 • deriving additional lift from hydrodynamic forces [1, 2006.01]	3/14	• Hull parts (hull armour B63B 3/10) [1, 2006.01]
1/18 • • of hydroplane type [1, 2006.01]	3/16	• • Shells (ports or closures therefor B63B 19/00) [1, 2006.01]
1/20 • • • having more than one planing surface (B63B 1/22 takes precedence) [1, 2006.01]	3/18	• • • characterised by being formed predominantly of parts that may be developed into plane surfaces [1, 2006.01]
1/22 • • • with adjustable planing surfaces [1, 2006.01]	3/20	• • • of double type [1, 2006.01]
1/24 • • of hydrofoil type [1, 2006.01]	3/22	• • • with corrugations [1, 2006.01]
1/26 • • • having more than one hydrofoil (B63B 1/28 takes precedence) [1, 2006.01]	3/24	• • • Means for diminishing external ridges or protrusions [1, 2006.01]
1/28 • • • with movable hydrofoils [1, 2006.01]	3/26	• • Frames [1, 2006.01]
1/30 • • • retracting or folding [1, 2006.01]	3/28	• • • of transverse type; Stringers [1, 2006.01]
1/32 • Other means for varying the inherent hydrodynamic characteristics of hulls [1, 2006.01]	3/30	• • • • Bilge knees; Beam knees [1, 2006.01]
1/34 • • by reducing surface friction [1, 2006.01]	3/32	• • • • Web frames; Web beams [1, 2006.01]
1/36 • • • using mechanical means [1, 2006.01]	3/34	• • • • of longitudinal type; Bulkhead connections [1, 2006.01]
1/38 • • • using air bubbles or air layers [1, 2006.01]	3/36	• • • • Combined frame systems [1, 2006.01]
1/40 • • by diminishing wave resistance [1, 2006.01]	3/38	• • Keels (movable keels B63B 41/00) [1, 2006.01]
<b>3/00 Constructions of hulls</b> (non-metallic hulls B63B 5/00) [1, 2006.01]	3/40	• • Stern posts; Stern frames [1, 2006.01]
	3/42	• • Shaft brackets [1, 2006.01]

- 3/44 • • Bilge keels (stabilising aspect B63B 39/06) [1, 2006.01]
- 3/46 • • Stems [1, 2006.01]
- 3/48 • • Decks (planking B63B 5/06) [1, 2006.01]
- 3/50 • • • of vaulted type [1, 2006.01]
- 3/52 • • • Pillars; Deck girders [1, 2006.01]
- 3/54 • • • Hatch openings [1, 2006.01]
- 3/56 • • Bulkheads; Bulkhead reinforcements (arrangements of watertight doors B63B 43/24) [1, 2006.01]
- 3/58 • • • with flat plating [1, 2006.01]
- 3/60 • • • with curved or corrugated plating [1, 2006.01]
- 3/62 • • Double bottoms; Tank tops [1, 2006.01]
- 3/64 • • • Keelsons [1, 2006.01]
- 3/66 • • Gratings [1, 2006.01]
- 3/68 • • Panellings; Linings, e.g. for insulating purposes [1, 2006.01]
- 3/70 • • Reinforcements for carrying localised loads, e.g. propulsion plant, guns [1, 2006.01]
- 5/00 Hulls characterised by their construction of non-metallic material [1, 2006.01]**
- 5/02 • made predominantly of wood [1, 2006.01]
- 5/04 • • Carcasses [1, 2006.01]
- 5/06 • • Decks; Shells [1, 2006.01]
- 5/08 • • • with single-layer planking [1, 2006.01]
- 5/10 • • • with multiple-layer planking [1, 2006.01]
- 5/12 • made predominantly of wood with metal reinforcement, i.e. composite construction [1, 2006.01]
- 5/14 • made predominantly of concrete, e.g. reinforced [1, 2006.01]
- 5/16 • • monolithic [1, 2006.01]
- 5/18 • • built-up from elements [1, 2006.01]
- 5/20 • • • in combination with elements of other materials [1, 2006.01]
- 5/22 • • with reinforcing members external to shell [1, 2006.01]
- 5/24 • made predominantly of plastics [1, 2006.01]
- 7/00 Collapsible, foldable, inflatable, or like vessels (foldable pontoons B63B 35/36) [1, 2006.01]**
- 7/02 • comprising only rigid parts [1, 2006.01]
- 7/04 • • sectionalised [1, 2006.01]
- 7/06 • having parts of non-rigid material [1, 2006.01]
- 7/08 • • inflatable (inflatable buoys B63B 22/22; inflatable life-rafts B63C 9/04) [1, 2006.01]
- 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) [1, 2, 2006.01]**
- 9/02 • using towing tanks or model basins for designing [1, 2006.01]
- 9/04 • Rebuilding ships, e.g. increasing tonnage [1, 2006.01]
- 9/06 • Methods of building hulls [2, 2006.01]
- 9/08 • Determining vessel properties with respect to stability or balance [2, 2006.01]
- 11/00 Interior subdivision of hulls (bulkhead space construction B63B 3/56) [1, 2006.01]**
- 11/02 • Arrangement of bulkheads, e.g. defining cargo spaces [1, 2006.01]
- 11/04 • Constructional features of bunkers or ballast tanks, e.g. with elastic walls [1, 2006.01]
- 11/06 • Propeller-shaft tunnels [1, 2006.01]
- 13/00 Conduits for emptying or ballasting; Self-bailing equipment; Scuppers [1, 2006.01]**
- 13/02 • Ports for passing water through vessels' sides [1, 2006.01]
- 15/00 Superstructures; Arrangements or adaptations of masts [1, 2006.01]**
- 15/02 • Staying of masts or of other superstructures [1, 2006.01]
- 17/00 Vessels parts, details, or accessories, not otherwise provided for [1, 2006.01]**
- 17/02 • Awnings [1, 2006.01]
- 17/04 • Stanchions; Guard-rails [1, 2006.01]
- 17/06 • Refuse discharge, e.g. for ash [1, 2006.01]
- 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) [1, 2006.01]**
- 19/02 • Windows specially adapted for ships or other waterborne vessels, e.g. clear-view screens or portholes [1, 2006.01]
- 19/04 • Air-catching equipment related to windows or port-holes [1, 2006.01]
- 19/06 • • readily detachable [1, 2006.01]
- 19/08 • Ports or like openings in vessels' sides (ports for passing water through vessels' sides B63B 13/02) [1, 2006.01]
- 19/10 • • Coal ports [1, 2006.01]
- 19/12 • Hatches; Hatchways (hatch coamings B63B 3/54) [1, 2006.01]
- 19/14 • • Hatch covers [1, 2006.01]
- 19/16 • • • with detachable boards [1, 2006.01]
- 19/18 • • • slidable [1, 2006.01]
- 19/19 • • • foldable [3, 2006.01]
- 19/197 • • • actuated by fluid pressure [3, 2006.01]
- 19/203 • • • actuated by cables or the like [3, 2006.01]
- 19/21 • • • of roll-up type [3, 2006.01]
- 19/22 • • Hatch beams [1, 2006.01]
- 19/24 • • Hatch fastenings, e.g. cleats [1, 2006.01]
- 19/26 • • Gaskets; Draining means [1, 2006.01]
- 19/28 • • Other safety devices [1, 2006.01]
- 21/00 Tying-up; Shifting, towing, or pushing equipment; Anchoring (dynamic anchoring B63H 25/00) [1, 4, 2006.01]**
- 21/02 • Magnetic mooring equipment [1, 2006.01]
- 21/04 • Fastening or guiding equipment for chains, ropes, hawsers, or the like [1, 2006.01]
- 21/06 • • Bollards [1, 2006.01]
- 21/08 • • Clamping devices [1, 2006.01]
- 21/10 • • Fairleads [1, 2006.01]
- 21/12 • • Rat guards [1, 2006.01]
- 21/14 • • Hawse-holes; Hawse-pipes; Hawse-hole closures [1, 2006.01]
- 21/16 • using winches [1, 2006.01]
- 21/18 • Stoppers for anchor chains [1, 2006.01]
- 21/20 • Adaptations of chains, ropes, hawsers, or the like, or of parts thereof [1, 2006.01]
- 21/22 • Handling or lashing anchors [1, 2006.01]
- 21/24 • Anchors [1, 2006.01]
- 21/26 • • securing to bed [1, 2006.01]
- 21/27 • • • by suction [2, 2006.01]

- 21/28 • • • driven-in by explosive charge [1, 2006.01]
- 21/29 • • • by weight, e.g. flukeless weight anchors [2, 2006.01]
- 21/30 • • • rigid when in use [1, 3, 2006.01]
- 21/32 • • • with one fluke [1, 2006.01]
- 21/34 • • • with two or more flukes [1, 2006.01]
- 21/36 • • • • foldable [1, 2006.01]
- 21/38 • • • pivoting when in use [1, 3, 2006.01]
- 21/40 • • • with one fluke [1, 2006.01]
- 21/42 • • • • of ploughshare type [1, 2006.01]
- 21/44 • • • with two or more flukes [1, 2006.01]
- 21/46 • • • with variable, e.g. sliding, connection to chain [1, 2, 2006.01]
- 21/48 • • • Sea-anchors; Drogues [1, 2006.01]
- 21/50 • • Anchoring arrangements for special vessels, e.g. for floating drilling platforms or dredgers [1, 2006.01]
- 21/54 • • Boat-hooks or the like [1, 2006.01]
- 21/56 • • Towing or pushing equipment (tugs B63B 35/66) [1, 2006.01]
- 21/58 • • • Adaptations of hooks for towing; Towing-hook mountings [1, 2006.01]
- 21/60 • • • Quick releases [1, 2006.01]
- 21/62 • • • characterised by moving of more than one vessel [1, 2006.01]
- 21/64 • • • Equipment for towing or pushing vessels by vehicles or beings moving forward on ground-based paths along water-way (boat-hooks or the like B63B 21/54) [2, 2006.01]
- 21/66 • • • Equipment specially adapted for towing underwater objects or vessels, e.g. fairings for tow-cables [3, 2006.01]
- 22/00 Buoys** (means for indicating the location of underwater objects B63C 7/26; life-buoys, e.g. rings, B63C 9/08) [4, 2006.01]
- 22/02 • • • specially adapted for mooring a vessel [4, 2006.01]
- 22/04 • • • Anchoring arrangements [4, 2006.01]
- 22/06 • • • with means to cause the buoy to surface in response to a transmitted signal [4, 2006.01]
- 22/08 • • • having means to release or urge to the surface a buoy on submergence thereof, e.g. to mark location of a sunken object [4, 2006.01]
- 22/10 • • • • Water soluble or water weakened means, i.e. buoy released by buoy-to-object securing means being destroyed on contact with water [4, 2006.01]
- 22/12 • • • the surfacing of the buoy being assisted by a gas released or generated on submergence of the buoy [4, 2006.01]
- 22/14 • • • Buoy-to-object securing means responsive to hydrostatic pressure [4, 2006.01]
- 22/16 • • • specially adapted for marking a navigational route [4, 2006.01]
- 22/18 • • • having means to control attitude or position, e.g. reaction surfaces or tether [4, 2006.01]
- 22/20 • • • Ballast means [4, 2006.01]
- 22/22 • • • Inflatable buoys with gas generating means (B63B 22/12 takes precedence) [4, 2006.01]
- 22/24 • • • container type, i.e. having provision for the storage of material [4, 2006.01]
- 22/26 • • • having means to selectively release contents, e.g. swivel couplings [4, 2006.01]
- 22/28 • • • submerged when not in use [4, 2006.01]
- 23/00 Equipment for handling lifeboats or the like** [1, 2006.01]
- 23/02 • • • Davits, i.e. devices having arms for lowering boats by cables or the like [1, 2006.01]
- 23/04 • • • with arms pivoting on substantially-horizontal axes, e.g. gravity type [1, 2006.01]
- 23/06 • • • • with actual pivots [1, 2006.01]
- 23/08 • • • • the arms being articulated [1, 2006.01]
- 23/10 • • • • with positive drive of the arms [1, 2006.01]
- 23/12 • • • • with simulated pivots [1, 2006.01]
- 23/14 • • • • using linkages [1, 2006.01]
- 23/16 • • • • using guide tracks [1, 2006.01]
- 23/18 • • • with arms pivoting on substantially-vertical axes [1, 2006.01]
- 23/20 • • • • Davits with single arms [1, 2006.01]
- 23/22 • • • • Slings or the like therefor [1, 2006.01]
- 23/24 • • • • Slewing equipment therefor [1, 2006.01]
- 23/26 • • • with rectilinear translation of boat before lowering [1, 2006.01]
- 23/28 • • • Devices for projecting or releasing boats for free fall [1, 2006.01]
- 23/30 • • • Devices for guiding boats to water surface [1, 2006.01]
- 23/32 • • • Rigid guides, e.g. having arms pivoted near waterline [1, 2006.01]
- 23/34 • • • Guiding means for lowering by cables, e.g. for listing ships [1, 2006.01]
- 23/36 • • • • Skid fenders [1, 2006.01]
- 23/38 • • • Transport of boats to davits or the like [1, 2006.01]
- 23/40 • • • Use of lowering or hoisting gear [1, 2006.01]
- 23/42 • • • with braking equipment [1, 2006.01]
- 23/44 • • • • on the ship [1, 2006.01]
- 23/46 • • • • in the boat [1, 2006.01]
- 23/48 • • • • using winches for boat handling [1, 2006.01]
- 23/50 • • • • with tensioning gear [1, 2006.01]
- 23/52 • • • • with control of winches from boat [1, 2006.01]
- 23/54 • • • • with trimming equipment [1, 2006.01]
- 23/56 • • • • controlled from boat [1, 2006.01]
- 23/58 • • • • with tackle-engaging or release gear [1, 2006.01]
- 23/60 • • • • Additional connections between boat and davit [1, 2006.01]
- 23/62 • • • Fastening or storing of boats on deck [1, 2006.01]
- 23/64 • • • Lashings; Covers [1, 2006.01]
- 23/66 • • • Blocks; Chocks [1, 2006.01]
- 23/68 • • • • for stacking boats [1, 2006.01]
- 23/70 • • • Condition-responsive handling equipment, e.g. automatic release of boat from lowering tackle upon contact with water [4, 2006.01]
- 25/00 Load-accommodating arrangements, e.g. stowing or trimming; Vessels characterised thereby** (fishing vessel fish holds B63B 35/24; trimming otherwise than by cargo division. e.g. by use of ballast, B63B 43/06, B63B 43/08) [1, 2006.01]
- 25/02 • • • for bulk goods [1, 2006.01]
- 25/04 • • • solid [1, 2006.01]
- 25/06 • • • • for cereals [1, 2006.01]
- 25/08 • • • fluid [1, 2006.01]
- 25/10 • • • • open to ambient air [1, 2006.01]
- 25/12 • • • • closed [1, 2006.01]
- 25/14 • • • • • pressurised [1, 2006.01]
- 25/16 • • • • • heat-insulated [1, 2006.01]
- 25/18 • • • Detachable decks [1, 2006.01]
- 25/20 • • • for motor vehicles or the like [1, 2006.01]
- 25/22 • • • for palletised articles [1, 2006.01]
- 25/24 • • • Means for preventing unwanted cargo movement, e.g. dunnage [1, 2006.01]

## B63B

- 25/26 • for frozen goods [1, 2006.01]
- 25/28 • for deck loads [1, 2006.01]
- 27/00 Arrangement of ship-based loading or unloading equipment for cargo or passengers** (self-discharging barges or lighters B63B 35/30; floating cranes B66C 23/52) [1, 3, 2006.01]
  - Note(s) [3]**
  - Groups B63B 27/30-B63B 27/36 take precedence over groups B63B 27/04-B63B 27/28.
  - 27/04 • of derricks [1, 3, 2006.01]
  - 27/08 • of winches [1, 3, 2006.01]
  - 27/10 • of cranes [1, 3, 2006.01]
  - 27/12 • • of gantry type [1, 3, 2006.01]
  - 27/14 • of ramps, gangways or outboard ladders [1, 3, 2006.01]
  - 27/16 • of lifts or hoists [1, 3, 2006.01]
  - 27/18 • of cableways, e.g. with breeches-buoys [1, 3, 2006.01]
  - 27/22 • of conveyors, e.g. of endless-belt or screw-type [1, 3, 6, 2006.01]
  - 27/24 • of pipe-lines [1, 3, 2006.01]
  - 27/25 • • for fluidised bulk material [3, 2006.01]
  - 27/26 • of devices with throwing action [1, 3, 2006.01]
  - 27/28 • of chutes [1, 3, 2006.01]
  - 27/30 • for transfer at sea between ships or between ships and off-shore structures [3, 2006.01]
  - 27/32 • • using cableways [3, 2006.01]
  - 27/34 • • using pipe-lines [3, 2006.01]
  - 27/36 • for floating cargo [3, 2006.01]
- 29/00 Accommodation for crew or passengers not otherwise provided for** [1, 2006.01]
  - 29/02 • Cabins or other living spaces; Construction or arrangement thereof [1, 2006.01]
  - 29/04 • • Furniture specially adapted for vessels [1, 2006.01]
  - 29/06 • • • Fastening to floors [1, 2006.01]
  - 29/08 • • • Storm guards on tables, e.g. fiddles [1, 2006.01]
  - 29/10 • • • Berths; Mounting ladders therefor [1, 2006.01]
  - 29/12 • • • Self-levelling mountings [1, 2006.01]
  - 29/14 • • Closet or like flushing arrangements; Washing or bathing facilities peculiar to ships [1, 2006.01]
  - 29/16 • Soil-water discharges [1, 2006.01]
  - 29/18 • Arrangements or adaptations of swimming pools [1, 2006.01]
  - 29/20 • Arrangements or adaptations of ladders (mounting ladders for berths B63B 29/10) [1, 2006.01]
  - 29/22 • Galleys [2, 2006.01]
- 35/00 Vessels or like floating structures adapted for special purposes** (vessels characterised by load-accommodating arrangements B63B 25/00; mine-laying or mine-sweeping vessels, submarines, aircraft carriers or other vessels characterised by their offensive or defensive arrangements B63G) [1, 5, 2006.01]
  - 35/03 • Pipe-laying vessels [5, 2006.01]
  - 35/04 • Cable-laying vessels [1, 5, 2006.01]
  - 35/06 • • for moving cable-ends from ship to shore [1, 5, 2006.01]
  - 35/08 • Ice-breakers [1, 5, 2006.01]
  - 35/10 • • having forced pitching or rolling equipment [1, 5, 2006.01]
  - 35/12 • • having ice-cutters [1, 5, 2006.01]
  - 35/14 • Fishing vessels [1, 5, 2006.01]
  - 35/16 • • Trawlers [1, 5, 2006.01]
  - 35/18 • • • adapted to dragging nets aboard [1, 5, 2006.01]
  - 35/20 • • • adapted to hoisting nets aboard [1, 5, 2006.01]
  - 35/22 • • Whale catchers; Whale factory vessels [1, 5, 2006.01]
  - 35/24 • • Fish holds [1, 5, 2006.01]
  - 35/26 • • • for live fish [1, 5, 2006.01]
  - 35/28 • Barges or lighters [1, 5, 2006.01]
  - 35/30 • • self-discharging [1, 5, 2006.01]
  - 35/32 • for collecting pollution from open water [1, 5, 2006.01]
  - Note(s) [5]**
  - If the apparatus for collecting pollution from open water is of interest apart from ship construction aspects, it is also classified in group E02B 15/00.
  - 35/34 • Pontoons [1, 5, 2006.01]
  - 35/36 • • foldable [1, 5, 2006.01]
  - 35/38 • • Rigidly-interconnected pontoons [1, 5, 2006.01]
  - 35/40 • for transporting marine vessels [1, 5, 2006.01]
  - 35/42 • • with adjustable draught [1, 5, 2006.01]
  - 35/44 • Floating buildings, stores, drilling platforms, or workshops, e.g. carrying water-oil separating devices [1, 5, 2006.01]
  - 35/50 • Vessels or floating structures for aircraft (aircraft carriers B63G 11/00) [1, 5, 2006.01]
  - 35/52 • • Nets, slipways or the like, for recovering aircraft from the water [1, 5, 2006.01]
  - 35/53 • • Floating runways [3, 5, 2006.01]
  - 35/54 • Ferries [1, 5, 2006.01]
  - 35/56 • Lightships (marking of navigational route with anchored lightships B63B 51/02) [1, 5, 2006.01]
  - 35/58 • Rafts, i.e. free floating waterborne vessels, of shallow draft, with little or no freeboard, and having a platform or floor for supporting a user (life-rafts or the like B63C 9/02) [1, 4, 5, 2006.01]
  - 35/607 • • having a platform or floor below the level of the buoyancy means, e.g. suspended basket type [4, 5, 2006.01]
  - 35/613 • • with tubular shaped flotation members [4, 5, 2006.01]
  - 35/62 • • formed from logs or the like [4, 5, 2006.01]
  - 35/66 • Tugs [1, 5, 2006.01]
  - 35/68 • • for towing [1, 5, 2006.01]
  - 35/70 • • for pushing [1, 5, 2006.01]
  - 35/71 • Canoes, kayaks or the like [4, 5, 2006.01]
  - 35/73 • Other vessels or like floating structures for pleasure or sport [5, 2006.01]
  - 35/74 • • Body supporting buoyant devices with seat [4, 5, 2006.01]
  - 35/76 • • • Ring-shaped buoyant members (ring-shaped life-buoys B63C 9/08) [4, 5, 2006.01]
  - 35/78 • • • U-shaped buoyant members [4, 5, 2006.01]
  - 35/79 • • Surf-boards, e.g. sailboards [5, 2006.01]
  - 35/81 • • Water skis; Water sledges [5, 2006.01]
  - 35/83 • • Water shoes; Bog shoes [5, 2006.01]
  - 35/85 • • Accessories not otherwise provided for, e.g. sticks for water skiing [5, 2006.01]
- 38/00 Vessels or like floating structures not otherwise provided for** [5, 2006.01]
- 39/00 Equipment to decrease pitch, roll, or like unwanted vessel movements; Apparatus for indicating vessel attitude** [1, 2006.01]

- 39/02 • to decrease vessel movements by displacement of masses [1, 2, 2006.01]
- 39/03 • • by transferring liquids [2, 2006.01]
- 39/04 • to decrease vessel movements by using gyroscopes directly [1, 2006.01]
- 39/06 • to decrease vessel movements by using foils acting on ambient water (constructional aspects of bilge keels B63B 3/44) [1, 2006.01]
- 39/08 • to decrease vessel movements by using auxiliary jets or propellers (using auxiliary jets or propellers for steering or dynamic anchoring B63H 25/00) [1, 2006.01]
- 39/10 • to decrease vessel movements by damping the waves, e.g. by pouring oil on water [1, 2, 2006.01]
- 39/12 • for indicating draught or load [1, 2006.01]
- 39/14 • for indicating inclination or duration of roll [1, 2006.01]
- 41/00 Drop keels, e.g. centre boards or side boards [1, 2006.01]**
- 43/00 Improving safety of vessels, e.g. damage control, not otherwise provided for [1, 2006.01]**
- 43/02 • reducing risk of capsizing or sinking (by means of watertight doors in bulkheads B63B 43/24) [1, 2006.01]
- 43/04 • • by improving stability [1, 2006.01]
- 43/06 • • • using ballast tanks [1, 2006.01]
- 43/08 • • • by transfer of solid ballast [1, 2006.01]
- 43/10 • • • by improving buoyancy [1, 2006.01]
- 43/12 • • • using inboard air containers [1, 2006.01]
- 43/14 • • • using outboard floating members [1, 2006.01]
- 43/16 • • • Temporary equipment for stopping leaks, e.g. collision mats [1, 2006.01]
- 43/18 • preventing collision; reducing collision damage [1, 2006.01]
- 43/20 • • Feelers [1, 2006.01]
- 43/24 • Arrangements of watertight doors in bulkheads [1, 2006.01]
- 43/26 • • of sliding type [1, 2006.01]
- 43/28 • • • with mechanical drive [1, 2006.01]
- 43/30 • • • with fluid drive [1, 2006.01]
- 43/32 • • of non-sliding type [1, 2006.01]
- 45/00 Arrangements or adaptations of signalling or lighting devices** (life-buoys, life-belts, life-jackets, life-suits or the like, characterised by signalling means B63C 9/20) [1, 4, 2006.01]
- 45/02 • the devices being intended to illuminate the way ahead or other areas of environments [1, 2006.01]
- 45/04 • the devices being intended to indicate the vessel or parts thereof [1, 2006.01]
- 45/06 • the devices being intended to illuminate vessels' decks or interior [1, 2006.01]
- 45/08 • the devices being acoustic [1, 2006.01]
- 49/00 Arrangements of nautical instruments or navigational aids [1, 2006.01]**
- 51/00 Marking of navigational routes otherwise than with buoys [1, 4, 2006.01]**
- 51/02 • with anchored lightships; by use of lighthouses [1, 4, 2006.01]
- 51/04 • with free-floating flares [1, 2006.01]
- 57/00 Tank cleaning specially adapted for vessels [1, 2006.01]**
- 57/02 • by washing [1, 2006.01]
- 57/04 • by ventilating [1, 2006.01]
- 59/00 Hull protection specially adapted for vessels; Cleaning devices specially adapted for vessels [1, 2006.01]**
- 59/02 • Fenders integral with waterborne vessels or specially adapted therefor; Rubbing-strakes (skid fenders for lifeboats B63B 23/36) [1, 2006.01]
- 59/04 • Preventing hull fouling [3, 2006.01]
- 59/06 • Cleaning devices for hulls [3, 2006.01]
- 59/08 • • of underwater surfaces while afloat (B63B 59/10 takes precedence) [3, 2006.01]
- 59/10 • • using trolleys or the like driven along the surface [3, 2006.01]
- 69/00 Equipment for shipping not otherwise provided for [2013.01]**

**B63C LAUNCHING, HAULING-OUT, OR DRY-DOCKING OF VESSELS; LIFE-SAVING IN WATER; EQUIPMENT FOR DWELLING OR WORKING UNDER WATER; MEANS FOR SALVAGING OR SEARCHING FOR UNDERWATER OBJECTS** (floating nets, floating slipways, or the like for recovering aircraft from the water B63B 35/52)

**Subclass index**

LANDING, LAUNCHING

- Dry-docking; storing on land; launching or hauling-out.....1/00, 15/00, 3/00
- Transporting overland.....13/00
- Slipway and dry-dock equipment.....5/00

- SALVAGE, SEARCHING UNDER WATER; LIFE-SAVING.....7/00, 11/00, 9/00
- WORKING UNDER WATER.....11/00

- 1/00 Dry-docking of vessels or flying-boats** (storing of vessels on land otherwise than by dry-docking B63C 15/00; mooring of vessels B63B 21/00; hydraulic-engineering aspects E02B) [1, 2006.01]
- 1/02 • Floating dry-docks (ship transporters with adjustable draught B63B 35/42) [1, 2006.01]
- 1/04 • • self-docking [1, 2006.01]
- 1/06 • • Arrangements of pumping or filling equipment for raising or lowering docks [1, 2006.01]
- 1/08 • Dry docks (locks E02C 1/00) [1, 2, 2006.01]
- 1/10 • Centring devices [1, 2006.01]
- 1/12 • Docks adapted for special vessels, e.g. submarines [1, 2006.01]

- 3/00 Launching or hauling-out, e.g. by landborne slipways; Slipways** (ship-borne guides for handling lifeboats or the like B63B 23/30; cranes, winches, or the like B66; ship-lifting for adapting to different water levels E02C) **[1, 2006.01]**
- 3/02 • by longitudinal movement of vessel **[1, 2006.01]**
- 3/04 • by sideways movement of vessel **[1, 2006.01]**
- 3/06 • by vertical movement of vessel, e.g. by crane **[1, 2006.01]**
- 3/08 • Tracks on slipways **[1, 2006.01]**
- 3/10 • using releasing devices **[1, 2006.01]**
- 3/12 • using cradles (vehicles in general for transporting boats or the like B60P) **[1, 2006.01]**
- 3/14 • using braking means **[1, 2006.01]**
- 5/00 Equipment usable both on slipways and in dry docks [1, 2006.01]**
- 5/02 • Stagings; Scaffolding; Shores or struts **[1, 2006.01]**
- 5/04 • • Bilge or keel blocks **[1, 2006.01]**
- 7/00 Salvaging of disabled, stranded, or sunken vessels; Salvaging of vessel parts or furnishings, e.g. of safes; Salvaging of other underwater objects** (means for searching for underwater objects B63C 11/48) **[1, 2006.01]**
- 7/02 • in which the lifting is done by hauling **[1, 2006.01]**
- 7/04 • • using pontoons or the like **[1, 2006.01]**
- 7/06 • in which lifting action is generated in, or adjacent to, vessels or objects **[1, 2006.01]**
- 7/08 • • using rigid floats **[1, 2006.01]**
- 7/10 • • using inflatable floats external to vessels or objects **[1, 2006.01]**
- 7/12 • • by bringing air or floating bodies or material into vessels or objects **[1, 2006.01]**
- 7/14 • using freezing for closing holes or for strengthening the vessel or the like **[1, 2006.01]**
- 7/16 • Apparatus engaging vessels or objects **[1, 2006.01]**
- 7/18 • • using nets **[1, 2006.01]**
- 7/20 • • using grabs **[1, 2006.01]**
- 7/22 • • using electromagnets or suction devices **[1, 2006.01]**
- 7/24 • Apparatus for passing chains or the like under vessels or objects **[1, 2006.01]**
- 7/26 • Means for indicating the location of underwater objects, e.g. sunken vessels (means for searching for underwater objects B63C 11/48; buoys in general B63B 22/00) **[1, 2006.01]**
- 7/28 • Refloating stranded vessels **[1, 2006.01]**
- 7/30 • Floatable safes (safes in general E05G) **[1, 2006.01]**
- 9/00 Life-saving in water** (life-saving in general A62B; arrangement or adaptation of signalling or lighting devices for ships, other waterborne vessels or for equipment for shipping B63B 45/00; rescue equipment specially adapted for submarine personnel B63G 8/40) **[1, 2006.01]**
- 9/01 • Air-sea rescue devices, i.e. equipment carried by, and capable of being dropped from, an aircraft (inflatable vessels B63B 7/00; inflatable buoys B63B 22/22) **[5, 2006.01]**
- 9/02 • Lifeboats, life-rafts or the like, specially adapted for life-saving (B63C 9/01 takes precedence; floatable furniture B63C 9/30; boats in general B63B; inflatable vessels B63B 7/00; equipment for handling lifeboats or the like B63B 23/00; rafts B63B 35/58) **[1, 4, 5, 2006.01]**
- 9/03 • • enclosed **[5, 2006.01]**
- 9/04 • • Life-rafts **[1, 2006.01]**
- 9/05 • Shark screens, e.g. buoyant means combined with means to surround or otherwise enclose the user (B63C 9/06 takes precedence) **[5, 2006.01]**
- 9/06 • Floatable closed containers with accommodation for one or more persons inside (B63C 9/01 takes precedence) **[1, 5, 2006.01]**
- 9/08 • Life-buoys, e.g. rings; Life-belts, jackets, suits, or the like (B63C 9/01 takes precedence; equipment for swimming A63B, e.g. swimming aids A63B 31/00) **[1, 5, 2006.01]**
- 9/087 • • Body suits, i.e. substantially covering the user's body (diving suits B63C 11/04, B63C 11/10) **[5, 2006.01]**
- 9/093 • • • using solid buoyant material **[5, 2006.01]**
- 9/105 • • • having gas-filled compartments (connection of valves to inflatable elastic bodies B60C 29/00) **[5, 2006.01]**
- 9/11 • • covering the torso, e.g. harnesses **[5, 2006.01]**
- 9/115 • • • using solid buoyant material **[5, 2006.01]**
- 9/125 • • • having gas-filled compartments (connection of valves to inflatable elastic bodies B60C 29/00) **[5, 2006.01]**
- 9/13 • • attachable to a body member, e.g. arm, neck, head or waist **[5, 2006.01]**
- 9/135 • • • using solid buoyant material **[5, 2006.01]**
- 9/15 • • • having gas-filled compartments (connection of valves to inflatable elastic bodies B60C 29/00) **[5, 2006.01]**
- 9/18 • • Inflatable equipment characterised by the gas-generating device **[1, 5, 2006.01]**
- 9/19 • • • Arrangements for puncturing gas-generating cartridges **[5, 2006.01]**
- 9/20 • • characterised by signalling means, e.g. lights (arrangement or adaptation of signalling or lighting devices for ships or other waterborne vessels B63B 45/00) **[1, 2006.01]**
- 9/22 • Devices for holding or launching life-buoys, inflatable life-rafts, or other floatable life-saving equipment (equipment for handling life-boats or the like B63B 23/00) **[1, 2006.01]**
- 9/23 • • Containers for inflatable life-saving equipment **[5, 2006.01]**
- 9/26 • Cast or life lines; Attachments thereto; Containers therefor (adaptations of aerial cableways to shipboard use B63B 27/18; guns for line-throwing F41F; line-carrying missiles F42B 12/68) **[1, 2006.01]**
- 9/28 • Adaptations of vessel parts or furnishings to life-saving purposes **[1, 2006.01]**
- 9/30 • • Floatable furniture **[1, 2006.01]**
- 9/32 • Equipment adapted to use on ice **[1, 2006.01]**
- 11/00 Equipment for dwelling or working under water; Means for searching for underwater objects** (composition of chemical substances for use in breathing apparatus A62D 9/00; swimming aids or equipment A63B 31/00-A63B 35/00; submarines B63G 8/00) **[1, 2006.01]**
- 11/02 • Divers' equipment **[1, 2006.01]**
- 11/04 • • Resilient suits **[1, 2006.01]**
- 11/06 • • • with rigid helmet **[1, 2006.01]**
- 11/08 • • • Control of air pressure within suit, e.g. for controlling buoyancy **[1, 2006.01]**
- 11/10 • • Rigid suits **[1, 2006.01]**
- 11/12 • • Diving masks **[1, 2006.01]**
- 11/14 • • • with forced air supply **[1, 2006.01]**

- 11/16 • • • with air supply by suction from diver, e.g. snorkels [1, 2006.01]
- 11/18 • • Air supply (for diving masks B63C 11/14, B63C 11/16; respiratory apparatus in general A62B) [1, 2006.01]
- 11/20 • • • from water surface [1, 2006.01]
- 11/22 • • • carried by diver [1, 2006.01]
- 11/24 • • • • in closed circulation [1, 2006.01]
- 11/26 • • Communication means (electric communication in general H04) [1, 2006.01]
- 11/28 • • Heating, e.g. of divers' suits, of breathing air [1, 2006.01]
- 11/30 • • Ballast [1, 2006.01]
- 11/32 • • Decompression arrangements; Exercise equipment [1, 2006.01]
- 11/34 • Diving chambers with mechanical link, e.g. cable, to a base (manipulators B25J; diving chambers without mechanical link to a base B63G 8/00; caissons adapted to laying foundations E02D 23/00-E02D 27/00) [1, 2006.01]
- 11/36 • • of closed type [1, 2006.01]
- 11/38 • • • with entrance above water surface [1, 2006.01]
- 11/40 • • • adapted to specific work [1, 2006.01]
- 11/42 • • • with independent propulsion or directional control [1, 2006.01]
- 11/44 • • of open type, e.g. diving-bells [1, 2006.01]
- 11/46 • Divers' sleds or like craft, i.e. craft on which man in diving-suit rides [1, 2006.01]
- 11/48 • Means for searching for underwater objects (means for indicating the location of sunken objects B63C 7/26; locating by use of the reflection or reradiation of radio or other waves G01S) [1, 2006.01]
- 11/49 • • Floating structures with underwater viewing devices, e.g. with windows [5, 2006.01]
- 11/50 • • using grapnels [1, 2006.01]
- 11/52 • Tools specially adapted for working underwater, not otherwise provided for [3, 2006.01]
- 13/00 **Equipment forming part of, or attachable to, vessels, facilitating transport over land** (harnesses attachable to vessels for personal carrying A45F; amphibious craft, land vehicles convertible for use on water B60F; land vehicles for carrying boats B60P) [1, 2006.01]
- 15/00 **Storing of vessels on land otherwise than by dry-docking** [1, 2006.01]

**B63G OFFENSIVE OR DEFENSIVE ARRANGEMENTS ON VESSELS; MINE-LAYING; MINE-SWEEPING; SUBMARINES; AIRCRAFT CARRIERS** (means of attack or defence in general, e.g. turrets, F41H)

**Subclass index**

OFFENSIVE OR DEFENSIVE INSTALLATIONS OR ARRANGEMENTS

Guns, missile launchers.....	1/00
Launching torpedoes; defence against torpedoes.....	5/00, 9/00
Defence or attack against sub- marines, by depth charges or otherwise.....	6/00, 9/00
Mines: laying; sweeping; other defence.....	6/00, 7/00, 9/00
Other defensive or offensive arrangements.....	13/00
Ammunition handling or storing.....	3/00
SUBMARINES; AIRCRAFT CARRIERS.....	8/00, 11/00

- 1/00 **Arrangements of guns or missile launchers; Vessels characterised thereby** (submarines B63G 8/00; guns, missile launchers F41) [1, 2006.01]
- 3/00 **Arrangements of ammunition stores or handlers** (specially for submarines B63G 8/00; feeding ammunition missiles or projectiles to guns in general F41A 9/00); **Vessels characterised thereby** (general cargo aspects B63B) [1, 2006.01]
- 3/02 • for torpedoes [1, 2006.01]
- 3/04 • for missiles [1, 2006.01]
- 3/06 • for mines or depth charges [1, 2006.01]
- 5/00 **Vessels characterised by adaptation to torpedo-launching** (submarines B63G 8/00; torpedo-launching per se F41F 3/00) [1, 2006.01]
- 6/00 **Laying of mines or depth charges; Vessels characterised thereby** (arrangements on submarines for mine-laying B63G 8/33) [1, 2, 2006.01]
- 7/00 **Mine-sweeping; Vessels characterised thereby** [1, 2006.01]
- 7/02 • Mine-sweeping means; Means for destroying mines [1, 2006.01]
- 7/04 • • by means of cables [1, 2006.01]
- 7/06 • • of electromagnetic type [1, 2006.01]
- 7/08 • • of acoustic type [1, 2006.01]
- 8/00 **Underwater vessels, e.g. submarines** (submarine hulls B63B 3/13; diving chambers with mechanical link, e.g. cable, to a base B63C 11/34; divers' sleds B63C 11/46; torpedoes F42B 19/00) [1, 2006.01]
- 8/04 • Superstructure [1, 2006.01]
- 8/06 • • Conning-towers [1, 2006.01]
- 8/08 • Propulsion (nuclear propulsion B63H 21/18; submerged exhausting apparatus F01N 13/12; propulsion power plants or units per se, see the relevant classes) [1, 2006.01]
- 8/10 • • using steam plant [1, 2006.01]
- 8/12 • • using internal-combustion engines [1, 2006.01]
- 8/14 • Control of attitude or depth (of torpedoes F42B 19/00) [1, 2006.01]
- 8/16 • • by direct use of propellers or jets [1, 2006.01]
- 8/18 • • by hydroplanes [1, 2006.01]
- 8/20 • • Steering equipment (B63G 8/16, B63G 8/18 take precedence; steering of vessels in general B63H 25/00) [1, 2, 2006.01]
- 8/22 • • Adjustment of buoyancy by water ballasting; Emptying equipment for ballast tanks (stabilising vessels using ballast tanks B63B 43/06) [1, 2006.01]

**B63G**

- 8/24 • • Automatic depth adjustment; Safety equipment for increasing buoyancy, e.g. detachable ballast, floating bodies [1, 2006.01]
- 8/26 • • Trimming equipment [1, 2006.01]
- 8/28 • Arrangement of offensive or defensive equipment [1, 2006.01]
- 8/30 • • of artillery or missile-launching means [1, 2006.01]
- 8/32 • • of torpedo-launching means (torpedo-launching means *per se* F41F 3/00); of torpedo stores or handlers [1, 2, 2006.01]
- 8/33 • • of mine-laying means (mine-laying vessels other than submarines B63G 6/00) [2, 2006.01]
- 8/34 • • Camouflage (for other vessels B63G 13/02; in general F41H 3/00) [1, 2006.01]
- 8/36 • Adaptations of ventilation, cooling, heating, or air-conditioning (reconditioning air in sealed chambers A62B 11/00; for vessels in general B63J 2/00; air-conditioning in general F24F) [1, 2006.01]
- 8/38 • Arrangement of visual or electronic watch equipment, e.g. of periscopes, of radar [1, 2006.01]
- 8/39 • Arrangements of sonic watch equipment, e.g. low-frequency, sonar [1, 2006.01]
- 8/40 • Rescue equipment for personnel (life-saving in water, not specially adapted for submarine personnel B63C) [1, 2006.01]
- 8/41 • • Capsules, chambers, water-tight boats, or the like, detachable from the submarine [2, 2006.01]
- 8/42 • Towed underwater vessels [2, 2006.01]
- 9/00 Other offensive or defensive arrangements on vessels against submarines, torpedoes, or mines [1, 2006.01]**
- 9/02 • Means for protecting vessels against torpedo attack (armoured hulls B63B 3/10) [1, 2006.01]
- 9/04 • • Nets or the like (net barriers for harbour defence F41H 11/00) [1, 2006.01]
- 9/06 • for degaussing vessels (demagnetising in general H01F 13/00) [1, 2006.01]
- 11/00 Aircraft carriers, i.e. warships equipped with a flight deck on which airplanes can be launched and landed and with a hangar deck for servicing airplanes** (other vessels or floating structures for aircraft B63B 35/50; aircraft-carrier-deck installations B64F 1/00) [1, 2006.01]
- 13/00 Other offensive or defensive arrangements on vessels; Vessels characterised thereby [1, 2006.01]**
- 13/02 • Camouflage (for submarines B63G 8/34; in general F41H 3/00) [2, 2006.01]

**B63H MARINE PROPULSION OR STEERING** (propulsion of air-cushion vehicles B60V 1/14; peculiar to submarines, other than nuclear propulsion, B63G; peculiar to torpedoes F42B 19/00)

**Subclass index**

PROPULSIVE ELEMENTS; ARRANGEMENTS THEREOF

- Acting directly on water: elements; arrangements..... 1/00, 3/00, 5/00
- Arrangements of means acting directly on air..... 7/00
- Acted on by wind propulsive devices..... 9/00

PARTICULAR MEANS

- by reaction; by muscle power; by anchored cable; wind motors driving water-engaging devices..... 11/00, 16/00, 15/00, 13/00
- Other..... 19/00

OUTBOARD PROPULSION UNITS..... 20/00

PROPULSION POWER PLANT..... 21/00

TRANSMISSION FROM POWER PLANT TO PROPULSIVE ELEMENTS..... 23/00

STEERING, DYNAMIC ANCHORING..... 25/00

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- 1/00 Propulsive elements directly acting on water** (jet propulsion B63H 11/00; attachment of propellers on shafts B63H 23/34) [1, 2006.01]
  - 1/02 • of rotary type (endless-track type B63H 1/34) [1, 2006.01]
  - 1/04 • • with rotation axis substantially at right angles to propulsive direction, e.g. paddle wheels [1, 2006.01]
  - 1/06 • • • with adjustable vanes or blades [1, 2006.01]
  - 1/08 • • • • with cyclic adjustment [1, 2006.01]
  - 1/10 • • • • • with blades extending axially from a disc-shaped rotary body [1, 2006.01]
  - 1/12 • • with rotation axis substantially in propulsive direction [1, 2006.01]
  - 1/14 • • • Propellers (pitch changing B63H 3/00) [1, 2006.01]
  - 1/15 • • • • having vibration damping means (anti-vibration mounting of propulsion plant B63H 21/30; means for damping vibration in general F16F) [4, 2006.01]
  - 1/16 • • • • having a shrouding ring attached to blades [1, 2006.01]
  - 1/18 • • • • with means for diminishing cavitation, e.g. supercavitation [1, 2006.01]
  - 1/20 • • • • Hubs; Blade connections [1, 2006.01]
  - 1/22 • • • • • the blades being foldable [1, 2006.01]
  - 1/24 • • • • • • automatically foldable or unfoldable [1, 2006.01]
  - 1/26 • • • • • Blades [1, 2006.01]
  - 1/28 • • • • • Other means for improving propeller efficiency (water-guiding elements formed by shape of hull B63H 5/00) [1, 2006.01]
  - 1/30 • of non-rotary type [1, 2006.01]
  - 1/32 • • Flaps, pistons, or the like, reciprocating in propulsive direction [1, 2006.01]
  - 1/34 • • of endless-track type [1, 2006.01]
  - 1/36 • • • Swinging flaps, e.g. fishtail type [1, 4, 2006.01]
  - 1/37 • • • • Moving-wave propellers, i.e. wherein the propelling means comprise a flexible undulating structure [4, 2006.01]



- 1/38 • characterised solely by flotation properties, e.g. drums [1, 2006.01]
- 3/00 Propeller-blade pitch changing [1, 2006.01]**
- 3/02 • actuated by control element coaxial with propeller shaft, e.g. the control element being rotary [1, 2006.01]
- 3/04 • • the control element being reciprocable [1, 2006.01]
- 3/06 • characterised by use of non-mechanical actuating means, e.g. electrical [1, 2006.01]
- 3/08 • • fluid [1, 2006.01]
- 3/10 • characterised by having pitch control conjoint with propulsion-plant control [1, 2006.01]
- 3/12 • the pitch being adjustable only when propeller is stationary [1, 2006.01]
- 5/00 Arrangements on vessels of propulsion elements directly acting on water [1, 2006.01]**
- 5/02 • of paddle wheels, e.g. of stern wheels [1, 2006.01]
- 5/03 • • movably mounted with respect to the hull, e.g. having means to reposition paddle wheel assembly, or to retract paddle or to change paddle attitude [4, 2006.01]
- 5/04 • • with stationary water-guiding elements [1, 2006.01]
- 5/07 • of propellers (forming part of outboard propulsion units B63H 20/00) [6, 2006.01]
- 5/08 • • of more than one propeller [1, 2006.01]
- 5/10 • • • of coaxial type, e.g. of counter-rotative type [1, 2006.01]
- 5/125 • • movably mounted with respect to hull, e.g. adjustable in direction (movably mounted for steering purposes only B63H 25/42) [6, 2006.01]
- 5/14 • • characterised by being mounted in non-rotating ducts or rings, e.g. adjustable for steering purposes (shrouding ring attached to blades B63H 1/16; jet propulsion B63H 11/00) [1, 2006.01]
- 5/15 • • • Nozzles, e.g. Kort-type [4, 2006.01]
- 5/16 • • characterised by being mounted in recesses; with stationary water-guiding elements; Means to prevent fouling of the propeller, e.g. guards, cages or screens (anti-fouling paints C09D 5/16) [1, 2006.01]
- 5/18 • • of emergency propellers, e.g. arranged at the side of the vessel [1, 2006.01]
- 5/20 • • • movable from a working position to a non-working position [4, 2006.01]
- 7/00 Arrangements of propulsive devices directly acting on air (jet propulsion B63H 11/00) [1, 2006.01]**
- 7/02 • using propellers (air-screws of aircraft type B64C) [1, 2006.01]
- 9/00 Propulsive devices directly acted on by wind; Arrangements thereof (air-driven propellers driving underwater propulsive elements B63H 13/00) [1, 2006.01]**
- 9/02 • using Magnus effect [1, 2006.01]
- 9/04 • using sails or like wind-catching surfaces (sailing sledges or ice boats B62B 15/00) [1, 2006.01]
- 9/06 • • Construction or types of sails; Arrangements thereof on vessels [1, 2006.01]
- 9/08 • • Connections of sails to masts, spars, or the like [1, 2006.01]
- 9/10 • • • Spars; Running rigging, e.g. reefing equipment (staying of masts B63B 15/02) [1, 2006.01]
- 11/00 Effecting propulsion by jets, i.e. reaction principle (steering by jet action B63H 25/46; power plant per se, see the relevant classes) [1, 2006.01]**
- 11/01 • having means to prevent foreign material from clogging fluid passageway [4, 2006.01]
- 11/02 • the propulsive medium being ambient water [1, 2006.01]
- 11/04 • • by means of pumps [1, 2006.01]
- 11/06 • • • of reciprocating type [1, 2006.01]
- 11/08 • • • of rotary type [1, 2006.01]
- 11/09 • • • by means of pressure pulses applied to a column of liquid, e.g. by ignition of an air/gas or vapour mixture [4, 2006.01]
- 11/10 • • having means for deflecting jet or influencing cross-section thereof [1, 2006.01]
- 11/103 • • • having means to increase efficiency of propulsive fluid, e.g. discharge pipe provided with means to improve the fluid flow [4, 2006.01]
- 11/107 • • • Direction control of propulsive fluid [4, 2006.01]
- 11/11 • • • • with bucket or clamshell-type reversing means [4, 2006.01]
- 11/113 • • • • Pivoted outlet [4, 2006.01]
- 11/117 • • • • Pivoted vane [4, 2006.01]
- 11/12 • the propulsive medium being steam or other gas [1, 2006.01]
- 11/14 • • the gas being produced by combustion [1, 2006.01]
- 11/16 • • the gas being produced by other chemical processes [1, 2006.01]
- 13/00 Effecting propulsion by wind motors driving water-engaging propulsive elements [1, 2006.01]**
- 15/00 Effecting propulsion by use of vessel-mounted driving mechanisms co-operating with anchored chains or the like [1, 2006.01]**
- 16/00 Effecting propulsion by muscle power (swimming frameworks with swimmer-operated driving mechanisms A63B 35/00; land-based training equipment for rowing or sculling A63B 69/06) [1, 2006.01]**
- 16/02 • Movable thwarts; Foot-rests [1, 2006.01]
- 16/04 • Oars; Sculls; Paddles; Poles [1, 2006.01]
- 16/06 • Rowlocks; Mountings therefor [1, 2006.01]
- 16/067 • • Rowlocks mounted on a structure extending beyond the gunwale of the vessel [4, 2006.01]
- 16/073 • • having oar shaft restraining means [4, 2006.01]
- 16/08 • Other apparatus for converting muscle power into propulsive effort (general features of propulsion elements, see the relevant groups) [1, 2006.01]
- 16/10 • • for bow-facing rowing [1, 2006.01]
- 16/16 • • using reciprocating pull cable, i.e. a strand-like member movable alternately backward and forward [4, 2006.01]
- 16/18 • • using sliding handle or pedal, i.e. the motive force being transmitted to a propelling means by means of a lever operated by the hand or foot of the occupant [4, 2006.01]
- 16/20 • • using rotary cranking arm [4, 2006.01]
- 19/00 Effecting propulsion of vessels, not otherwise provided for [1, 2006.01]**
- 19/02 • by using energy derived from movement of ambient water, e.g. from rolling or pitching of vessels [1, 2006.01]
- 19/04 • • propelled by water current [1, 2006.01]

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- 19/06 • by discharging gas into ambient water (with jet action B63H 11/12; for reducing surface friction B63B 1/38) [1, 2006.01]
- 19/08 • by direct engagement with water-bed or ground [1, 2006.01]
- 20/00 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 (power plants per se, see the relevant classes); Arrangements thereof on vessels [6, 2006.01]**
- 20/02 • Mounting of propulsion units (B63H 20/08 takes precedence) [6, 2006.01]
- 20/04 • • in a well [6, 2006.01]
- 20/06 • • on an intermediate support [6, 2006.01]
- 20/08 • Means enabling movement of the position of the propulsion element, e.g. for trim, tilt, or steering (transmissions allowing movement of the propulsion element B63H 20/14); Control of trim or tilt (initiating means for steering B63H 25/02) [6, 2006.01]
- 20/10 • • Means enabling trim or tilt, or lifting of the propulsion element when an obstruction is hit; Control of trim or tilt [6, 2006.01]
- 20/12 • • Means enabling steering [6, 2006.01]
- 20/14 • Transmission between propulsion power unit and propulsion element [6, 2006.01]
- 20/16 • • allowing movement of the propulsion element in a horizontal plane only, e.g. for steering [6, 2006.01]
- 20/18 • • allowing movement of the propulsion element about a longitudinal axis, e.g. the through transom shaft (B63H 20/22 takes precedence) [6, 2006.01]
- 20/20 • • with provision for reverse drive [6, 2006.01]
- 20/22 • • allowing movement of the propulsion element about at least a horizontal axis without disconnection of the drive, e.g. using universal joints [6, 2006.01]
- 20/24 • Exhaust gas outlets [6, 2006.01]
- 20/26 • • passing through the propeller or its hub [6, 2006.01]
- 20/28 • Cooling-water intakes [6, 2006.01]
- 20/30 • • for flushing [6, 2006.01]
- 20/32 • Housings [6, 2006.01]
- 20/34 • • comprising stabilising fins [6, 2006.01]
- 20/36 • Transporting or testing stands; Protection of power legs [6, 2006.01]
- 21/00 Use of propulsion power plant or units on vessels (use of outboard propulsion units B63H 20/00; hull reinforcements for carrying propulsion power plant or units B63B 3/70; propulsion power plant or units per se, see the relevant classes) [1, 6, 2006.01]**
- Note(s)**
- This group covers:
  - arrangements of propulsion power plant or units on vessels;
  - to some extent, adaptations of such plant or units to facilitate such arrangements.
- 21/02 • the vessels being steam-driven (B63H 21/18 takes precedence) [1, 2006.01]
- 21/04 • • relating to positive-displacement steam engines [1, 2006.01]
- 21/06 • • relating to steam turbines [1, 2006.01]
- 21/08 • • relating to steam boilers [1, 2006.01]
- 21/10 • • relating to condensers or engine-cooling fluid heat-exchangers [1, 2006.01]
- 21/12 • the vessels being motor-driven (B63H 21/175, B63H 21/18 take precedence) [1, 4, 2006.01]
- 21/14 • • relating to internal-combustion engines [1, 2006.01]
- 21/16 • • relating to gas turbines [1, 2006.01]
- 21/165 • • by hydraulic fluid motor, i.e. wherein a liquid under pressure is utilised to rotate the propelling means [4, 2006.01]
- 21/17 • • by electric motor (electrically-propelled vehicles B60L) [4, 2006.01]
- 21/175 • the vessel being powered by land vehicle supported by vessel [4, 2006.01]
- 21/18 • the vessels being powered by nuclear energy [1, 2006.01]
- 21/20 • the vessels being powered by combinations of different types of propulsion units [1, 2006.01]
- 21/21 • Control means for engine or transmission, specially adapted for use on marine vessels [4, 2006.01]
- 21/22 • the propulsion power units being controlled from exterior of engine room, e.g. from navigation bridge; Arrangements of order telegraphs (order telegraphs per se G08B 9/00) [1, 2006.01]
- 21/30 • Mounting of propulsion plant or unit, e.g. for anti-vibration purposes (hull reinforcements therefor B63B 3/70; vibration-dampers, suppression of vibration in systems F16F; engine beds F16M) [1, 2006.01]
- 21/32 • Arrangements of propulsion power-unit exhaust uptakes; Funnels peculiar to vessels (engine exhausts in general F01N; flue devices for furnaces in general F23J) [1, 2006.01]
- 21/34 • • having exhaust-gas deflecting means [1, 2006.01]
- 21/36 • Covers or casing arranged to protect plant or unit from marine environment (hull construction B63B 3/00) [4, 2006.01]
- 21/38 • Apparatus or methods specially adapted for use on marine vessels, for handling power plant or unit liquids, e.g. lubricants, coolants, fuels or the like [4, 2006.01]
- 23/00 Transmitting power from propulsion power plant to propulsive elements (changing pitch of propellers B63H 3/00; adaptation of transmission to allow adjustment in direction of propellers B63H 5/125; transmission between wind motors and propulsive elements B63H 13/00, in outboard propulsion units B63H 20/14; adaptation of transmission to allow adjustment of location of propellers B63H 20/08; for vehicles in general B60K; driving auxiliary machinery B63J; transmission elements per se F16) [1, 2006.01]**
- 23/02 • with mechanical gearing [1, 2006.01]
- 23/04 • • the main transmitting element, e.g. shaft, being substantially vertical [1, 2006.01]
- 23/06 • • for transmitting drive from a single propulsion power unit [1, 2006.01]
- 23/08 • • • with provision for reversing drive [1, 2006.01]
- 23/10 • • for transmitting drive from more than one propulsion power unit (for synchronisation of propulsive elements B63H 23/28) [1, 2006.01]
- 23/12 • • • allowing combined use of the propulsion power units [1, 2006.01]
- 23/14 • • • • with unidirectional drive or where reversal is immaterial [1, 2006.01]
- 23/16 • • • • characterised by provision of reverse drive [1, 2006.01]
- 23/18 • • • for alternative use of the propulsion power units [1, 2006.01]

- 23/20 • • • with separate forward and astern propulsion power units, e.g. turbines [1, 2006.01]
- 23/22 • with non-mechanical gearing [1, 2006.01]
- 23/24 • • electric [1, 2006.01]
- 23/26 • • fluid [1, 2006.01]
- 23/28 • with synchronisation of propulsive elements [1, 2006.01]
- 23/30 • characterised by use of clutches [1, 2006.01]
- 23/32 • Other parts [1, 2006.01]
- 23/34 • • Propeller shafts; Paddle-wheel shafts; Attachment of propellers on shafts (shafts in general F16C; attachment of a member on a shaft in general F16D 1/06) [1, 2006.01]
- 23/35 • • • Shaft braking or locking, i.e. means to slow or stop the rotation of the propeller shaft or to prevent the shaft from initial rotation [4, 2006.01]
- 23/36 • • Shaft tubes (propeller-shaft tunnels B63B 11/06; shaft-tube seals F16J) [1, 2006.01]
- 25/00 Steering; Slowing-down otherwise than by use of propulsive elements** (using adjustably-mounted propeller ducts or rings for steering B63H 5/14; using movably-installed outboard propulsion units B63H 20/00); **Dynamic anchoring, i.e. positioning vessels by means of main or auxiliary propulsive elements** (anchoring, other than dynamic, B63B 21/00; equipment to decrease pitch, roll, or like unwanted vessel movements by auxiliary jets or propellers B63B 39/08) [1, 2006.01]
- 25/02 • Initiating means for steering [1, 2006.01]
- 25/04 • • automatic, e.g. reacting to compass [1, 2006.01]
- 25/06 • Steering by rudders (by rudders carrying propellers B63H 25/42) [1, 2006.01]
- 25/08 • • Steering gear [1, 2006.01]
- 25/10 • • • with mechanical transmission [1, 2006.01]
- 25/12 • • • with fluid transmission [1, 2006.01]
- 25/14 • • • power assisted; power driven, i.e. using steering engine [1, 2006.01]
- 25/16 • • • • with alternative muscle or power-operated steering [1, 2006.01]
- 25/18 • • • • Transmitting of movement of initiating means to steering engine [1, 2006.01]
- 25/20 • • • • • by mechanical means [1, 2006.01]
- 25/22 • • • • • by fluid means [1, 2006.01]
- 25/24 • • • • • by electrical means [1, 2006.01]
- 25/26 • • • • • Steering engines [1, 2006.01]
- 25/28 • • • • • of fluid type [1, 2006.01]
- 25/30 • • • • • • hydraulic [1, 2006.01]
- 25/32 • • • • • • steam [1, 2006.01]
- 25/34 • • • • • Transmitting of movement of engine to rudder, e.g. using quadrants, brakes [1, 2006.01]
- 25/36 • • Rudder-position indicators [1, 2006.01]
- 25/38 • • Rudders (stern posts B63B 3/40) [1, 2006.01]
- 25/40 • • • using Magnus effect [1, 2006.01]
- 25/42 • Steering or dynamic anchoring by propulsive elements (by jets B63H 25/46); Steering or dynamic anchoring by propellers used therefor only; Steering or dynamic anchoring by rudders carrying propellers [1, 2, 2006.01]
- 25/44 • Steering or slowing-down by extensible flaps or the like [1, 2006.01]
- 25/46 • Steering or dynamic anchoring by jets [1, 2, 2006.01]
- 25/48 • Steering or slowing-down by deflection of propeller slip-stream otherwise than by rudder [1, 2006.01]
- 25/50 • Slowing-down means not otherwise provided for [1, 2006.01]
- 25/52 • Parts for steering not otherwise provided for [1, 2006.01]

## B63J AUXILIARIES ON VESSELS

### Note(s)

In this subclass, the following term is used with the meaning indicated:

- "auxiliaries" means only apparatus specially arranged for rendering vessels, in general, habitable or operative, in so far as such apparatus is not specifically provided for in another subclass of class B63.
- 1/00 Arrangements of installations for producing fresh water, e.g. by evaporation and condensation of sea water** [1, 2006.01]
- 2/00 Arrangements of ventilation, heating, cooling, or air-conditioning** (for vehicles in general B60H; ventilating for cleaning tanks B63B 57/04; for underwater vessels, e.g. submarines, B63G 8/36) [1, 2006.01]
- 2/02 • Ventilation; Air-conditioning [1, 2006.01]
- 2/04 • • of living spaces [1, 2006.01]
- 2/06 • • of engine rooms [1, 2006.01]
- 2/08 • • of holds (heating or cooling of liquid-freight-carrying tanks B63J 2/14; arrangements for stowing frozen goods in vessels B63B 25/26) [1, 2006.01]
- 2/10 • • Ventilating-shafts; Air-scoops (for port-holes B63B 19/04) [1, 2006.01]
- 2/12 • Heating; Cooling [1, 2006.01]
- 2/14 • • of liquid-freight-carrying tanks [1, 2006.01]
- 3/00 Driving of auxiliaries** (transmission elements per se F16) [1, 2006.01]
- 3/02 • from propulsion power plant [1, 2006.01]
- 3/04 • from power plant other than propulsion power plant [1, 2006.01]
- 4/00 Arrangements of installations for treating waste-water or sewage** (soil-water discharges B63B 29/16) [3, 2006.01]
- 99/00 Subject matter not provided for in other groups of this subclass** [2009.01]