

## B63 SHIPS OR OTHER WATERBORNE VESSELS; RELATED EQUIPMENT

**B63B SHIPS OR OTHER WATERBORNE VESSELS; EQUIPMENT FOR SHIPPING** (air-cushion vehicles B60V; arrangements of vessel ventilation, heating, cooling, or air-conditioning B63J 2/00) [2]

### Subclass Index

HULLS		ACCOMMODATION FOR CARGO OR PERSONS .....	25/00, 27/00, 29/00
Study; general characteristics .....	9/00; 1/00		
General; adjustable keels; protection .....	3/00; 41/00; 59/00	ARRANGEMENTS OR ADAPTATIONS OF SIGNALLING OR LIGHTING DEVICES OR OF NAUTICAL INSTRUMENTS .....	45/00, 49/00
Particular types .....	5/00, 7/00	DETAILS AND ACCESSORIES FOR SHIPS .....	17/00
Subdivision; cleaning of tanks .....	11/00; 57/00	CONSTRUCTION, MAINTENANCE, CONVERSION, NOT OTHERWISE PROVIDED FOR .....	9/00
SUPERSTRUCTURES; HULL OR SUPERSTRUCTURE OPENINGS .....	15/00; 19/00	PARTICULAR KINDS OF SHIPS OR FLOATING STRUCTURES NOT OTHERWISE PROVIDED FOR .....	35/00, 38/00
EMPTYING, BALLASTING; STABILITY; SAFETY .....	13/00, 29/16; 39/00; 43/00	BUOYS; MARKING NAVIGATION ROUTES .....	22/00; 51/00
MOORING, SHIFTING; HANDLING			
LIFEBOATS .....	21/00; 23/00		

<b>1/00</b>	<b>Hydrodynamic or hydrostatic features of hulls or of hydrofoils</b> (hulls peculiar to submarines B63B 3/13; keels B63B 3/38; determining hydrodynamic or hydrostatic features B63B 9/00; decreasing pitch, roll, or like unwanted vessel movements by using foils acting on ambient water B63B 39/06)	<b>3/10</b>	Armoured hulls
<b>1/02</b>	deriving lift mainly from water displacement (B63B 1/16 takes precedence)	<b>3/12</b>	Frameless hulls
<b>1/04</b>	with single hull	<b>3/13</b>	Hulls built to withstand hydrostatic pressure when fully submerged, e.g. submarine hulls
<b>1/06</b>	Shape of fore part	<b>3/14</b>	Hull parts (hull armour B63B 3/10)
<b>1/08</b>	Shape of aft part	<b>3/16</b>	Shells (ports or closures therefor B63B 19/00)
<b>1/10</b>	with multiple hulls	<b>3/18</b>	characterised by being formed predominantly of parts that may be developed into plane surfaces
<b>1/12</b>	the hulls being interconnected rigidly	<b>3/20</b>	of double type
<b>1/14</b>	the hulls being interconnected resiliently	<b>3/22</b>	with corrugations
<b>1/16</b>	deriving additional lift from hydrodynamic forces	<b>3/24</b>	Means for diminishing external ridges or protrusions
<b>1/18</b>	of hydroplane type (controlling submarine attitude or depth by hydroplanes B63G 8/18)	<b>3/26</b>	Frames
<b>1/20</b>	having more than one planing surface (B63B 1/22 takes precedence)	<b>3/28</b>	of transverse type; Stringers
<b>1/22</b>	with adjustable planing surfaces	<b>3/30</b>	Bilge knees; Beam knees
<b>1/24</b>	of hydrofoil type	<b>3/32</b>	Web frames; Web beams
<b>1/26</b>	having more than one hydrofoil (B63B 1/28 takes precedence)	<b>3/34</b>	of longitudinal type; Bulkhead connections
<b>1/28</b>	with movable hydrofoils	<b>3/36</b>	Combined frame systems
<b>1/30</b>	retracting or folding	<b>3/38</b>	Keels (movable keels B63B 41/00)
<b>1/32</b>	Other means for varying the inherent hydrodynamic characteristics of hulls	<b>3/40</b>	Stern posts; Stern frames
<b>1/34</b>	by reducing surface friction	<b>3/42</b>	Shaft brackets
<b>1/36</b>	using mechanical means	<b>3/44</b>	Bilge keels (stabilising aspect B63B 39/06)
<b>1/38</b>	using air bubbles or air layers	<b>3/46</b>	Stems
<b>1/40</b>	by diminishing wave resistance	<b>3/48</b>	Decks (planking B63B 5/06)
<b>3/00</b>	<b>Constructions of hulls</b> (non-metallic hulls B63B 5/00; designing, building, maintaining, or repairing methods B63B 9/00)	<b>3/50</b>	of vaulted type
<b>3/02</b>	Hulls assembled from prefabricated sub-units	<b>3/52</b>	Pillars; Deck girders
<b>3/04</b>	with permanently-connected sub-units	<b>3/54</b>	Hatch openings
<b>3/06</b>	the sub-units being substantially identical	<b>3/56</b>	Bulkheads; Bulkhead reinforcements (arrangements of watertight doors B63B 43/24)
<b>3/08</b>	with detachably-connected sub-units	<b>3/58</b>	with flat plating
<b>3/09</b>	Hulls constructed of non-magnetic metal	<b>3/60</b>	with curved or corrugated plating
		<b>3/62</b>	Double bottoms; Tank tops
		<b>3/64</b>	Keelsons
		<b>3/66</b>	Gratings
		<b>3/68</b>	Panellings; Linings, e.g. for insulating purposes
		<b>3/70</b>	Reinforcements for carrying localised loads, e.g. propulsion plant, guns

<b>5/00</b>	<b>Hulls characterised by their construction of non-metallic material</b>
5/02	• made predominantly of wood
5/04	• • Carcasses
5/06	• • Decks; Shells
5/08	• • • with single-layer planking
5/10	• • • with multiple-layer planking
5/12	• made predominantly of wood with metal reinforcement, i.e. composite construction
5/14	• made predominantly of concrete, e.g. reinforced
5/16	• • monolithic
5/18	• • built-up from elements
5/20	• • • in combination with elements of other materials
5/22	• • with reinforcing members external to shell
5/24	• made predominantly of plastics
<b>7/00</b>	<b>Collapsible, foldable, inflatable, or like vessels</b> (foldable pontoons B63B 35/36)
7/02	• comprising only rigid parts
7/04	• • sectionalised
7/06	• having parts of non-rigid material
7/08	• • inflatable (connection of valves to inflatable elastic bodies B60C 29/00)
<b>9/00</b>	<b>Methods of designing, building, maintaining, converting, refitting, repairing, or determining properties of, vessels, not otherwise provided for</b> (shuttering for building concrete vessels E04G) [2]
9/02	• using towing tanks or model basins for designing
9/04	• Rebuilding ships, e.g. increasing tonnage
9/06	• Methods of building hulls [2]
9/08	• Determining vessel properties with respect to stability or balance [2]
<b>11/00</b>	<b>Interior subdivision of hulls</b> (bulkhead space construction B63B 3/56)
11/02	• Arrangement of bulkheads, e.g. defining cargo spaces
11/04	• Constructional features of bunkers or ballast tanks, e.g. with elastic walls (cleaning of tanks B63B 57/00)
11/06	• Propeller-shaft tunnels
<b>13/00</b>	<b>Conduits for emptying or ballasting; Self-bailing equipment; Scuppers</b> (draining means for hatches B63B 19/26; centrifugal bilge-water separators B04; pipes in general F16L)
13/02	• Ports for passing water through vessels' sides
<b>15/00</b>	<b>Superstructures; Arrangements or adaptations of masts</b> (loading or unloading equipment B63B 27/00; sails, running rigging B63H; masts or staying in general E04H)
15/02	• Staying of masts or of other superstructures
<b>17/00</b>	<b>Vessels parts, details, or accessories, not otherwise provided for</b>
17/02	• Awnings
17/04	• Stanchions; Guard-rails
17/06	• Refuse discharge, e.g. for ash (removal of domestic or like refuse B65F)
<b>19/00</b>	<b>Arrangements or adaptations of ports, doors, windows, port-holes, or other openings or covers</b> (scuppers B63B 13/00; arrangements of watertight doors in bulkheads B63B 43/24)
19/02	• Clear-view screens
19/04	• Air-catching equipment related to windows or port-holes (ventilation B63J 2/00)
19/06	• • readily detachable
19/08	• Ports or like openings in vessels' sides

19/10	• • Coal ports
19/12	• Hatches; Hatchways (hatch coamings B63B 3/54)
19/14	• • Hatch covers (opening devices in general E05F)
19/16	• • • with detachable boards
19/18	• • • slidable
19/19	• • • foldable [3]
19/197	• • • • actuated by fluid pressure [3]
19/203	• • • • actuated by cables or the like [3]
19/21	• • • of roll-up type [3]
19/22	• • Hatch beams
19/24	• • Hatch fastenings, e.g. cleats
19/26	• • Gaskets; Draining means
19/28	• • Other safety devices
<b>21/00</b>	<b>Tying-up; Shifting, towing, or pushing equipment; Anchoring</b> (dynamic anchoring B63H 25/00; equipment for shipping on coasts, in harbours or on other fixed marine structures, e.g. for landing purposes, E02B) [4]
21/02	• Magnetic mooring equipment
21/04	• Fastening or guiding equipment for chains, ropes, hawsers, or the like
21/06	• • Bollards
21/08	• • Clamping devices (in general F16B)
21/10	• • Fairleads
21/12	• • Rat guards
21/14	• • Hawse-holes; Hawse-pipes; Hawse-hole closures
21/16	• using winches (winches <i>per se</i> B66D)
21/18	• Stoppers for anchor chains
21/20	• Adaptations of chains, ropes, hawsers, or the like, or of parts thereof (chains, ropes or hawsers in general, <i>see</i> the relevant subclasses, e.g. F16G)
21/22	• Handling or lashing anchors
21/24	• Anchors
21/26	• • securing to bed
21/27	• • • by suction [2]
21/28	• • • driven-in by explosive charge
21/29	• • • by weight, e.g. flukeless weight anchors [2]
21/30	• • rigid when in use [3]
21/32	• • • with one fluke
21/34	• • • with two or more flukes
21/36	• • • • foldable
21/38	• • pivoting when in use [3]
21/40	• • • with one fluke
21/42	• • • • of ploughshare type
21/44	• • • with two or more flukes
21/46	• • with variable, e.g. sliding, connection to chain [2]
21/48	• • Sea-anchors; Drogues
21/50	• Anchoring arrangements for special vessels, e.g. for floating drilling platforms or dredgers
21/54	• Boat-hooks or the like
21/56	• Towing or pushing equipment (tugs B63B 35/66)
21/58	• • Adaptations of hooks for towing; Towing-hook mountings (hooks in general F16B)
21/60	• • • Quick releases
21/62	• • characterised by moving of more than one vessel (rigid interconnections between pontoons B63B 35/38)

- 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; shore- or ground-based equipment per se, e.g. vehicles, rails, see the relevant classes) [2]
- 21/66 . . Equipment specially adapted for towing underwater objects or vessels, e.g. fairings for tow-cables (salvaging underwater vessels or objects B63C 7/00; towed underwater vessels B63G 8/42) [3]
- 22/00 **Buoys** (means for indicating the location of underwater objects B63C 7/26; life-buoys, e.g. rings, B63C 9/08) [4]
  - 22/02 . specially adapted for mooring a vessel [4]
  - 22/04 . Anchoring arrangements [4]
  - 22/06 . . with means to cause the buoy to surface in response to a transmitted signal [4]
  - 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]
  - 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]
  - 22/12 . . . the surfacing of the buoy being assisted by a gas released or generated on submergence of the buoy [4]
  - 22/14 . . . Buoy-to-object securing means responsive to hydrostatic pressure [4]
  - 22/16 . specially adapted for marking a navigational route (signalling or lighting devices B63B 45/00) [4]
  - 22/18 . having means to control attitude or position, e.g. reaction surfaces or tether [4]
  - 22/20 . . Ballast means [4]
  - 22/22 . inflatable, including gas generating means (B63B 22/12 takes precedence; connection of valves to inflatable elastic bodies B60C 29/00) [4]
  - 22/24 . container type, i.e. having provision for the storage of material [4]
  - 22/26 . . having means to selectively release contents, e.g. swivel couplings (arrangements between ships and off-shore structures for loading or unloading, using pipe-lines B63B 27/34; pipe joints or couplings, in general F16L) [4]
  - 22/28 . . submerged when not in use [4]
- 23/00 **Equipment for handling lifeboats or the like**
  - 23/02 . Davits, i.e. devices having arms for lowering boats by cables or the like
    - 23/04 . . with arms pivoting on substantially-horizontal axes, e.g. gravity type
      - 23/06 . . . with actual pivots
      - 23/08 . . . . the arms being articulated
      - 23/10 . . . . with positive drive of the arms
      - 23/12 . . . with simulated pivots
        - 23/14 . . . . using linkages
        - 23/16 . . . . using guide tracks
      - 23/18 . . with arms pivoting on substantially-vertical axes
      - 23/20 . . . Davits with single arms (cranes in general B66C)
        - 23/22 . . . . Slings or the like therefor
        - 23/24 . . . . Slewing equipment therefor
        - 23/26 . . with rectilinear translation of boat before lowering
        - 23/28 . Devices for projecting or releasing boats for free fall
        - 23/30 . Devices for guiding boats to water surface
- 23/32 . . Rigid guides, e.g. having arms pivoted near waterline
- 23/34 . . Guiding means for lowering by cables, e.g. for listing ships
  - 23/36 . . . Skid fenders
  - 23/38 . Transport of boats to davits or the like
  - 23/40 . Use of lowering or hoisting gear
    - 23/42 . . with braking equipment
      - 23/44 . . . on the ship
      - 23/46 . . . in the boat
    - 23/48 . . using winches for boat handling (winches per se B66D)
      - 23/50 . . . with tensioning gear
      - 23/52 . . . with control of winches from boat
      - 23/54 . . with trimming equipment
        - 23/56 . . . controlled from boat
      - 23/58 . . with tackle-engaging or release gear
      - 23/60 . . Additional connections between boat and davit
      - 23/62 . Fastening or storing of boats on deck
        - 23/64 . . Lashings; Covers
        - 23/66 . . Blocks; Chocks
          - 23/68 . . . for stacking boats
      - 23/70 . Condition-responsive handling equipment, e.g. automatic release of boat from lowering tackle upon contact with water [4]
  - 25/00 **Load-accommodating arrangements, e.g. stowing, trimming; Vessels characterised thereby** (constructive aspects of cargo-spaces B63B 11/00; hatches, hatchways B63B 19/12; trimming otherwise than by cargo division. e.g. by use of ballast, B63B 43/06, B63B 43/08)
    - 25/02 . for bulk goods
      - 25/04 . . solid
        - 25/06 . . . for cereals
        - 25/08 . . fluid
          - 25/10 . . . open to ambient air
          - 25/12 . . . closed
            - 25/14 . . . . pressurised
            - 25/16 . . . . heat-insulated (insulating panellings B63B 3/68; heating or cooling B63J)
      - 25/18 . Detachable decks
        - 25/20 . . for motor vehicles or the like
        - 25/22 . for palletised articles
        - 25/24 . Means for preventing unwanted cargo movement, e.g. dunnage
          - 25/26 . for frozen goods
          - 25/28 . for deck loads
    - 27/00 **Arrangement of ship-based loading or unloading equipment for cargo or passengers** (self-discharging barges or lighters B63B 35/30; shore-based equipment B65G 67/60; 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) [3]

**Note**

Groups B63B 27/30 to B63B 27/36 take precedence over groups B63B 27/04 to B63B 27/28. [3]

    - 27/04 . of derricks (derricks per se B66C 23/60) [3]
    - 27/08 . of winches (winches per se B66D) [3]
    - 27/10 . of cranes (cranes per se B66C) [3]
    - 27/12 . . of gantry type [3]

- 27/14 . of ramps, gangways or outboard ladders (inboard ladders B63B 29/20; loading ramps per se B65G 69/28; ladders per se E06C) [3]
- 27/16 . of lifts or hoists [3]
- 27/18 . of cableways, e.g. with breeches-buoys (cableways per se B65G) [3]
- 27/22 . of conveyers, e.g. of endless-belt or screw-type (arrangement of devices with throwing action B63B 27/26; arrangement of chutes B63B 27/28; conveyers per se B65G) [3,6]
- 27/24 . of pipe-lines (pipe-lines per se F17D) [3]
- 27/25 . . for fluidised bulk material [3]
- 27/26 . of devices with throwing action (mechanical throwing machines for articles or solid materials per se B65G 31/00) [3]
- 27/28 . of chutes (chutes per se B65G 11/00) [3]
- 27/30 . for transfer at sea between ships or between ships and off-shore structures [3]
- 27/32 . . using cableways [3]
- 27/34 . . using pipe-lines [3]
- 27/36 . for floating cargo (devices for facilitating retrieval of floating objects per se B66C 13/02) [3]
- 29/00 Accommodation for crew or passengers not otherwise provided for**
- 29/02 . Cabins or other living spaces; Construction or arrangement thereof
- 29/04 . . Furniture peculiar to vessels (floatable furniture B63C 9/30)
- 29/06 . . . Fastening to floors
- 29/08 . . . Storm guards on tables, e.g. fiddles
- 29/10 . . . Berths; Mounting ladders therefor
- 29/12 . . . Self-levelling mountings
- 29/14 . . Closet or like flushing arrangements; Washing or bathing facilities peculiar to ships
- 29/16 . Soil-water discharges
- 29/18 . Arrangements or adaptations of swimming pools
- 29/20 . Arrangements or adaptations of ladders (mounting ladders for berths B63B 29/10)
- 29/22 . Galleys [2]
- 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) [5]
- 35/03 . Pipe-laying vessels (laying pipes under water F16L 1/12) [5]
- 35/04 . Cable-laying vessels [5]
- 35/06 . . for moving cable-ends from ship to shore [5]
- 35/08 . Ice-breakers [5]
- 35/10 . . having forced pitching or rolling equipment [5]
- 35/12 . . having ice-cutters [5]
- 35/14 . Fishing vessels (fishing A01K 69/00 to A01K 97/00) [5]
- 35/16 . . Trawlers [5]
- 35/18 . . . adapted to dragging nets aboard [5]
- 35/20 . . . adapted to hoisting nets aboard [5]
- 35/22 . . Whale catchers; Whale factory vessels [5]
- 35/24 . . Fish holds [5]
- 35/26 . . . for live fish [5]
- 35/28 . Barges or lighters [5]
- 35/30 . . self-discharging [5]
- 35/32 . for collecting pollution from open water [5]

**Note**

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. [5]

- 35/34 . Pontoons (floating bridges E01D 15/14) [5]
- 35/36 . . foldable [5]
- 35/38 . . Rigidly-interconnected pontoons [5]
- 35/40 . for transporting marine vessels [5]
- 35/42 . . with adjustable draught [5]
- 35/44 . Floating buildings, stores, drilling platforms, or workshops, e.g. carrying water-oil separating devices [5]
- 35/50 . Vessels or floating structures for aircraft (aircraft carriers B63G 11/00; flying-boat hulls, other flotation means for aircraft B64) [5]
- 35/52 . . Nets, slipways or the like, for recovering aircraft from the water [5]
- 35/53 . . Floating runways [3,5]
- 35/54 . Ferries (propulsion of chain ferries B63H) [5]
- 35/56 . Lightships (marking of navigational route B63B 51/00) [5]
- 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 (lifeboats, life-rafts or the like B63C 9/02) [4,5]
- 35/607 . . having a platform or floor below the level of the buoyancy means, e.g. suspended basket type [4,5]
- 35/613 . . with tubular shaped flotation members [4,5]
- 35/62 . . formed from logs or the like [4,5]
- 35/66 . Tugs (towing or pushing equipment B63B 21/56) [5]
- 35/68 . . for towing [5]
- 35/70 . . for pushing [5]
- 35/71 . Canoes, kayaks or the like (collapsible, foldable, inflatable or like vessels B63B 7/00) [4,5]
- 35/73 . Other vessels or like floating structures for pleasure or sport [5]
- 35/74 . . Body supporting buoyant devices with seat [4,5]
- 35/76 . . . Ring-shaped buoyant member [4,5]
- 35/78 . . . U-shaped buoyant member [4,5]
- 35/79 . . Surf-boards, e.g. sailboards [5]
- 35/81 . . Water skis; Water sledges [5]
- 35/83 . . Water shoes; Bog shoes [5]
- 35/85 . . Accessories not otherwise provided for, e.g. sticks for water skiing [5]
- 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) [5]
- 39/00 Equipment to decrease pitch, roll, or like unwanted vessel movements; Apparatus for indicating vessel attitude**
- 39/02 . to decrease vessel movements by displacement of masses [2]
- 39/03 . . by transferring liquids [2]
- 39/04 . to decrease vessel movements by using gyroscopes directly
- 39/06 . to decrease vessel movements by using foils acting on ambient water (constructional aspects of bilge keels B63B 3/44)

- 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)
- 39/10 . to decrease vessel movements by damping the waves, e.g. by pouring oil on water [2]
- 39/12 . for indicating draught or load
- 39/14 . for indicating inclination or duration of roll
- 41/00 Drop keels, e.g. centre boards, side boards** (keels integral with hull B63B 3/38; stabilising foils B63B 39/06)
- 43/00 Improving safety of vessels, e.g. damage control, not otherwise provided for** (fire-fighting in ships A62C 3/10)
- 43/02 . reducing risk of capsizing or sinking (by means of watertight doors in bulkheads B63B 43/24)
- 43/04 . . by improving stability
- 43/06 . . . using ballast tanks (conduits for emptying or ballasting B63B 13/00)
- 43/08 . . . by transfer of solid ballast
- 43/10 . . by improving buoyancy
- 43/12 . . . using inboard air containers
- 43/14 . . . using outboard floating members
- 43/16 . . . Temporary equipment for stopping leaks, e.g. collision mats
- 43/18 . preventing collision; reducing collision damage
- 43/20 . . Feelers
- 43/24 . Arrangements of watertight doors in bulkheads
- 43/26 . . of sliding type
- 43/28 . . . with mechanical drive
- 43/30 . . . with fluid drive
- 43/32 . . of non-sliding type
- 45/00 Arrangement or adaptation 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) [4]
- 45/02 . the devices being intended to illuminate the way ahead or other areas of environments
- 45/04 . the devices being intended to indicate the vessel or parts thereof
- 45/06 . the devices being intended to illuminate vessels' decks or interior
- 45/08 . the devices being acoustic
- 49/00 Arrangements of nautical instruments or navigational aids** (nautical measuring instruments G01C; radio navigation, analogous arrangements using other waves G01S)
- 51/00 Marking of navigational route other than with buoys** (buoys specially adapted for marking a navigational route B63B 22/16) [4]
- 51/02 . with anchored lightships; by use of lighthouses [4]
- 51/04 . with free-floating flares
- 57/00 Tank cleaning specially adapted for vessels** (tank cleaning in general B08B 9/08)
- 57/02 . by washing
- 57/04 . by ventilating
- 59/00 Hull protection peculiar to vessels; Cleaning devices peculiar to vessels** (cleaning in general B08B; cleaning of vehicles in general, e.g. windscreen wipers, B60S; inhibiting corrosion of metals by anodic or cathodic protection C23F 13/00)
- 59/02 . Fenders integral with waterborne vessels or specially adapted therefor; Rubbing-strakes (fenders on coasts, in harbours or on other fixed marine structures E02B 3/26)
- 59/04 . Preventing hull fouling (anti-fouling paints C09D 5/16) [3]
- 59/06 . Cleaning devices for hulls [3]
- 59/08 . . of underwater surfaces while afloat (B63B 59/10 takes precedence) [3]
- 59/10 . . using trolleys or the like driven along the surface [3]

**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)
- 1/02 . Floating dry-docks (ship transporters with adjustable draught B63B 35/42)
- 1/04 . . self-docking
- 1/06 . . Arrangements of pumping or filling equipment for raising or lowering docks

- 1/08 . Dry docks (locks E02C 1/00) [2]
- 1/10 . Centring devices
- 1/12 . Docks adapted for special vessels, e.g. submarines
- 3/00 Launching or hauling-out 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)
- 3/02 . by longitudinal movement of vessel

- 3/04 . by sideways movement of vessel
- 3/06 . by vertical movement of vessel, e.g. by crane
- 3/08 . Tracks on slipways
- 3/10 . using releasing devices
- 3/12 . using cradles (vehicles in general for transporting boats or the like B60P)
- 3/14 . using braking means
- 5/00 Equipment usable both on slipways and in dry docks**
- 5/02 . Stagings; Scaffolding; Shores or struts
- 5/04 . . Bilge or keel blocks
- 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)
- 7/02 . in which the lifting is done by hauling
- 7/04 . . using pontoons or the like
- 7/06 . in which lifting action is generated in, or adjacent to, vessels or objects
- 7/08 . . using rigid floats
- 7/10 . . using inflatable floats external to vessels or objects
- 7/12 . . by bringing air or floating bodies or material into vessels or objects
- 7/14 . using freezing for closing holes or for strengthening the vessel or the like
- 7/16 . Apparatus engaging vessels or objects
- 7/18 . . using nets
- 7/20 . . using grabs
- 7/22 . . using electromagnets or suction devices
- 7/24 . Apparatus for passing chains or the like under vessels or objects
- 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)
- 7/28 . Refloating stranded vessels
- 7/30 . Floatable safes (safes in general E05G)
- 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)
- 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]
- 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) [4,5]
- 9/03 . . enclosed [5]
- 9/04 . . Life-rafts
- 9/05 . Shark screens, e.g. buoyant means combined with means to surround or otherwise enclose the user (B63C 9/06 takes precedence) [5]
- 9/06 . Floatable closed containers with accommodation for one or more persons inside (B63C 9/01 takes precedence) [5]
- 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) [5]
- 9/087 . . Body suits, i.e. substantially covering the user's body (diving suits B63C 11/04, B63C 11/10) [5]
- 9/093 . . . using solid buoyant material [5]
- 9/105 . . . having gas-filled compartments (connection of valves to inflatable elastic bodies B60C 29/00) [5]
- 9/11 . . covering the torso, e.g. harnesses [5]
- 9/115 . . . using solid buoyant material [5]
- 9/125 . . . having gas-filled compartments (connection of valves to inflatable elastic bodies B60C 29/00) [5]
- 9/13 . . attachable to a body member, e.g. arm, neck, head or waist [5]
- 9/135 . . . using solid buoyant material [5]
- 9/15 . . . having gas-filled compartments (connection of valves to inflatable elastic bodies B60C 29/00) [5]
- 9/18 . . Inflatable equipment characterised by the gas-generating device [5]
- 9/19 . . . Arrangements for puncturing gas-generating cartridges [5]
- 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)
- 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)
- 9/23 . . Containers for inflatable life-saving equipment [5]
- 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)
- 9/28 . Adaptations of vessel parts or furnishings to life-saving purposes
- 9/30 . . Floatable furniture
- 9/32 . Equipment adapted to use on ice
- 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 to A63B 35/00; submarines B63G 8/00)
- 11/02 . Divers' equipment
- 11/04 . . Resilient suits
- 11/06 . . . with rigid helmet
- 11/08 . . . Control of air pressure within suit, e.g. for controlling buoyancy
- 11/10 . . Rigid suits
- 11/12 . . Diving masks (swimming helmets, swimming goggles A63B 33/00)
- 11/14 . . . with forced air supply
- 11/16 . . . with air supply by suction from diver, e.g. schnorkels
- 11/18 . . Air supply (for diving masks B63C 11/14, B63C 11/16; respiratory apparatus in general A62B)
- 11/20 . . . from water surface
- 11/22 . . . carried by diver
- 11/24 . . . . in closed circulation
- 11/26 . . Communication means (electric communication in general H04)
- 11/28 . . Heating, e.g. of divers' suits, of breathing air
- 11/30 . . Ballast
- 11/32 . . Decompression arrangements; Exercise equipment

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 to E02D 27/00)	11/49	. . Floating structures with underwater viewing devices, e.g. with windows [5]
11/36	. . of closed type	11/50	. . using grapnels
11/38	. . . with entrance above water surface	11/52	. Tools specially adapted for working underwater, not otherwise provided for [3]
11/40	. . . adapted to specific work		
11/42	. . . with independent propulsion or directional control	13/00	<b>Equipment forming part of, or attachable to, vessels, facilitating transport over land</b> (harnesses attachable to vessels for personal carrying A45F; amphibious craft, land vehicles convertible for use on water B60F; land vehicles for carrying boats B60P)
11/44	. . of open type, e.g. diving-bells		
11/46	. Divers' sleds or like craft, i.e. craft on which man in diving-suit rides	15/00	<b>Storing of vessels on land otherwise than by dry-docking</b>
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)		

## 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	<b>Arrangements of guns or missile launchers; Vessels characterised thereby</b> (submarines B63G 8/00; guns, missile launchers F41)	8/08	. Propulsion (nuclear propulsion B63H 21/18; submerged exhausting apparatus F01N 7/12; propulsion power plants or units <u>per se</u> , <u>see</u> the relevant classes)
3/00	<b>Arrangements of ammunition stores or handlers</b> (specially for submarines B63G 8/00; feeding ammunition missiles or projectiles to guns in general F41A 9/00); <b>Vessels characterised thereby</b> (general cargo aspects B63B)	8/10	. . using steam plant
3/02	. for torpedoes	8/12	. . using internal-combustion engines
3/04	. for missiles	8/14	. Control of attitude or depth (of torpedoes F42B 19/00)
3/06	. for mines or depth charges	8/16	. . by direct use of propellers or jets
		8/18	. . by hydroplanes
5/00	<b>Vessels characterised by adaptation to torpedo-launching</b> (submarines B63G 8/00; torpedo-launching <u>per se</u> F41F 3/00)	8/20	. Steering equipment (B63G 8/16, B63G 8/18 take precedence; steering of vessels in general B63H 25/00) [2]
		8/22	. . Adjustment of buoyancy by water ballasting; Emptying equipment for ballast tanks (stabilising vessels using ballast tanks B63B 43/06)
6/00	<b>Laying of mines or depth charges; Vessels characterised thereby</b> (arrangements on submarines for mine-laying B63G 8/33) [2]	8/24	. . Automatic depth adjustment; Safety equipment for increasing buoyancy, e.g. detachable ballast, floating bodies
7/00	<b>Mine-sweeping; Vessels characterised thereby</b>	8/26	. . Trimming equipment
7/02	. Mine-sweeping means; Means for destroying mines	8/28	. Arrangement of offensive or defensive equipment
7/04	. . by means of cables	8/30	. . of artillery or missile-launching means
7/06	. . of electromagnetic type	8/32	. . of torpedo-launching means (torpedo-launching means <u>per se</u> F41F 3/00); of torpedo stores or handlers [2]
7/08	. . of acoustic type		
8/00	<b>Underwater vessels, e.g. submarines</b> (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)	8/33	. . of mine-laying means (mine-laying vessels other than submarines B63G 6/00) [2]
8/04	. Superstructure	8/34	. . Camouflage (for other vessels B63G 13/02; in general F41H 3/00)
8/06	. . Conning-towers		

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)	9/04	. . . Nets or the like (net barriers for harbour defence F41H 11/00)
8/38	. Arrangement of visual or electronic watch equipment, e.g. of periscopes, of radar	9/06	. for degaussing vessels (demagnetising in general H01F 13/00)
8/39	. Arrangements of sonic watch equipment, e.g. low-frequency, sonar	11/00	<b>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</b> (other vessels or floating structures for aircraft B63B 35/50; aircraft-carrier-deck installations B64F 1/00)
8/40	. Rescue equipment for personnel (life-saving in water, not specially adapted for submarine personnel B63C)	13/00	<b>Other offensive or defensive arrangements on vessels; Vessels characterised thereby</b>
8/41	. . . Capsules, chambers, water-tight boats, or the like, detachable from the submarine [2]	13/02	. Camouflage (for submarines B63G 8/34; in general F41H 3/00) [2]
8/42	. Towed underwater vessels [2]		
9/00	<b>Other offensive or defensive arrangements on vessels against submarines, torpedoes, or mines</b>		
9/02	. Means for protecting vessels against torpedo attack (armoured hulls B63B 3/10)		

**B63H MARINE PROPULSION OR STEERING** (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

1/00	<b>Propulsive elements directly acting on water</b> (jet propulsion B63H 11/00; attachment of propellers on shafts B63H 23/34)	1/30	. of non-rotary type
1/02	. of rotary type (endless-track type B63H 1/34)	1/32	. . . Flaps, pistons, or the like, reciprocating in propulsive direction
1/04	. . . with rotation axis substantially at right angles to propulsive direction, e.g. paddle wheels	1/34	. . . of endless-track type
1/06	. . . . with adjustable vanes or blades	1/36	. . . Swinging flaps, e.g. fishtail type [4]
1/08	. . . . with cyclic adjustment	1/37	. . . Moving-wave propellers, i.e. wherein the propelling means comprise a flexible undulating structure [4]
1/10	. . . . with blades extending axially from a disc-shaped rotary body	1/38	. characterised solely by flotation properties, e.g. drums
1/12	. . . with rotation axis substantially in propulsive direction	3/00	<b>Propeller-blade pitch changing</b>
1/14	. . . . Propellers (pitch changing B63H 3/00)	3/02	. actuated by control element coaxial with propeller shaft, e.g. the control element being rotary
1/15	. . . . having vibration damping means (anti-vibration mounting of propulsion plant B63H 21/30; means for damping vibration in general F16F) [4]	3/04	. . . the control element being reciprocable
1/16	. . . . having a shrouding ring attached to blades	3/06	. characterised by use of non-mechanical actuating means, e.g. electrical
1/18	. . . . with means for diminishing cavitation, e.g. supercavitation	3/08	. . . fluid
1/20	. . . . Hubs; Blade connections	3/10	. characterised by having pitch control conjoint with propulsion-plant control
1/22	. . . . . the blades being foldable	3/12	. the pitch being adjustable only when propeller is stationary
1/24	. . . . . automatically foldable or unfoldable	5/00	<b>Arrangements on vessels of propulsion elements directly acting on water</b>
1/26	. . . . . Blades	5/02	. of paddle wheels, e.g. of stern wheels
1/28	. . . . . Other means for improving propeller efficiency (water-guiding elements formed by shape of hull B63H 5/00)		



- 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]
- 5/04 . . with stationary water-guiding elements
- 5/07 . of propellers (forming part of outboard propulsion units B63H 20/00) [6]
- 5/08 . . of more than one propeller
- 5/10 . . . of coaxial type, e.g. of counter-rotative type
- 5/125 . . movably mounted with respect to hull, e.g. adjustable in direction (movably mounted for steering purposes only B63H 25/42) [6]
- 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)
- 5/15 . . . Nozzles, e.g. Kort-type [4]
- 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)
- 5/18 . . of emergency propellers, e.g. arranged at the side of the vessel
- 5/20 . . . movable from a working position to a non-working position [4]
- 7/00 **Arrangements of propulsive devices directly acting on air** (jet propulsion B63H 11/00)
- 7/02 . using propellers (air-screws of aircraft type B64C)
- 9/00 **Propulsive devices directly acted on by wind; Arrangements thereof** (air-driven propellers driving underwater propulsive elements B63H 13/00)
- 9/02 . using Magnus effect
- 9/04 . using sails or like wind-catching surfaces (sailing sledges or ice boats B62B 15/00)
- 9/06 . . Construction or types of sails; Arrangements thereof on vessels
- 9/08 . . Connections of sails to masts, spars, or the like
- 9/10 . . . Spars; Running rigging, e.g. reefing equipment (staying of masts B63B 15/02)
- 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)
- 11/01 . having means to prevent foreign material from clogging fluid passageway [4]
- 11/02 . the propulsive medium being ambient water
- 11/04 . . by means of pumps
- 11/06 . . . of reciprocating type
- 11/08 . . . of rotary type
- 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]
- 11/10 . . having means for deflecting jet or influencing cross-section thereof
- 11/103 . . . having means to increase efficiency of propulsive fluid, e.g. discharge pipe provided with means to improve the fluid flow [4]
- 11/107 . . . Direction control of propulsive fluid [4]
- 11/11 . . . with bucket or clamshell-type reversing means [4]
- 11/113 . . . . Pivoted outlet [4]
- 11/117 . . . . Pivoted vane [4]
- 11/12 . the propulsive medium being steam or other gas
- 11/14 . the gas being produced by combustion
- 11/16 . the gas being produced by other chemical processes
- 13/00 **Effecting propulsion by wind motors driving water-engaging propulsive elements**
- 15/00 **Effecting propulsion by use of vessel-mounted driving mechanisms co-operating with anchored chains or the like**
- 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)
- 16/02 . Movable thwarts; Foot-rests
- 16/04 . Oars; Sculls; Paddles; Poles
- 16/06 . Rowlocks; Mountings therefor
- 16/067 . . Rowlocks mounted on a structure extending beyond the gunwale of the vessel [4]
- 16/073 . . having oar shaft restraining means [4]
- 16/08 . Other apparatus for converting muscle power into propulsive effort (general features of propulsion elements, see the relevant groups)
- 16/10 . . for bow-facing rowing
- 16/16 . . using reciprocating pull cable, i.e. a strand-like member movable alternately backward and forward [4]
- 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]
- 16/20 . . using rotary cranking arm [4]
- 19/00 **Effecting propulsion of vessels, not otherwise provided for**
- 19/02 . by using energy derived from movement of ambient water, e.g. from rolling or pitching of vessels
- 19/04 . . propelled by water current
- 19/06 . by discharging gas into ambient water (with jet action B63H 11/12; for reducing surface friction B63B 1/38)
- 19/08 . by direct engagement with water-bed or ground
- 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]
- 20/02 . Mounting of propulsion units (B63H 20/08 takes precedence) [6]
- 20/04 . . in a well [6]
- 20/06 . . on an intermediate support [6]
- 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]
- 20/10 . . Means enabling trim or tilt, or lifting of the propulsion element when an obstruction is hit; Control of trim or tilt [6]
- 20/12 . . Means enabling steering [6]
- 20/14 . Transmission between propulsion power unit and propulsion element [6]
- 20/16 . . allowing movement of the propulsion element in a horizontal plane only, e.g. for steering [6]
- 20/18 . . allowing movement of the propulsion element about a longitudinal axis, e.g. the through transom shaft (B63H 20/22 takes precedence) [6]
- 20/20 . . with provision for reverse drive [6]

## B63H

- 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]
- 20/24 . Exhaust gas outlets [6]
- 20/26 . . passing through the propeller or its hub [6]
- 20/28 . Cooling-water intakes [6]
- 20/30 . . for flushing [6]
- 20/32 . Housings [6]
- 20/34 . . comprising stabilising fins [6]
- 20/36 . Transporting or testing stands; Protection of power legs [6]
- 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) [6]

### Note

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)
- 21/04 . . relating to positive-displacement steam engines
- 21/06 . . relating to steam turbines
- 21/08 . . relating to steam boilers
- 21/10 . . relating to condensers or engine-cooling fluid heat-exchangers
- 21/12 . the vessels being motor-driven (B63H 21/175, B63H 21/18 take precedence) [4]
- 21/14 . . relating to internal-combustion engines
- 21/16 . . relating to gas turbines
- 21/165 . . by hydraulic fluid motor, i.e. wherein a liquid under pressure is utilised to rotate the propelling means [4]
- 21/17 . . by electric motor (electrically-propelled vehicles B60L) [4]
- 21/175 . the vessel being powered by land vehicle supported by vessel [4]
- 21/18 . the vessels being powered by nuclear energy
- 21/20 . the vessels being powered by combinations of different types of propulsion units
- 21/21 . Control means for engine or transmission, specially adapted for use on marine vessels [4]
- 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)
- 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)
- 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)
- 21/34 . . having exhaust-gas deflecting means

- 21/36 . Covers or casing arranged to protect plant or unit from marine environment (hull construction B63B 3/00) [4]
- 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 (lubricating or cooling engines in general F01 to F04) [4]
- 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)
- 23/02 . with mechanical gearing
- 23/04 . . the main transmitting element, e.g. shaft, being substantially vertical
- 23/06 . . for transmitting drive from a single propulsion power unit
- 23/08 . . . with provision for reversing drive
- 23/10 . . for transmitting drive from more than one propulsion power unit (for synchronisation of propulsive elements B63H 23/28)
- 23/12 . . . allowing combined use of the propulsion power units
- 23/14 . . . with unidirectional drive or where reversal is immaterial
- 23/16 . . . characterised by provision of reverse drive
- 23/18 . . . for alternative use of the propulsion power units
- 23/20 . . . with separate forward and astern propulsion power units, e.g. turbines
- 23/22 . with non-mechanical gearing
- 23/24 . . electric
- 23/26 . . fluid
- 23/28 . with synchronisation of propulsive elements
- 23/30 . characterised by use of clutches
- 23/32 . Other parts
- 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)
- 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]
- 23/36 . . Shaft tubes (propeller-shaft tunnels B63B 11/06; shaft-tube seals F16J)
- 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)
- 25/02 . Initiating means for steering
- 25/04 . . automatic, e.g. reacting to compass
- 25/06 . Steering by rudders (by rudders carrying propellers B63H 25/42)
- 25/08 . . Steering gear
- 25/10 . . . with mechanical transmission

25/12	. . . with fluid transmission	25/36	. . Rudder-position indicators
25/14	. . . power assisted; power driven, i.e. using steering engine	25/38	. . Rudders (stern posts B63B 3/40)
25/16	. . . . with alternative muscle or power- operated steering	25/40	. . . using Magnus effect
25/18	. . . . Transmitting of movement of initiating means to steering engine	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 [2]
25/20	. . . . . by mechanical means	25/44	. Steering or slowing-down by extensible flaps or the like
25/22	. . . . . by fluid means	25/46	. Steering or dynamic anchoring by jets [2]
25/24	. . . . . by electrical means	25/48	. Steering or slowing-down by deflection of propeller slip-stream otherwise than by rudder
25/26	. . . . . Steering engines	25/50	. Slowing-down means not otherwise provided for
25/28	. . . . . of fluid type	25/52	. Parts for steering not otherwise provided for
25/30	. . . . . hydraulic		
25/32	. . . . . steam		
25/34	. . . . Transmitting of movement of engine to rudder, e.g. using quadrants, brakes		

## B63J AUXILIARIES ON VESSELS

### Note

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	<b>Arrangements of installations for producing fresh water, e.g. by evaporation and condensation of sea water</b>	2/10	. . Ventilating-shafts; Air-scoops (for port-holes B63B 19/04)
2/00	<b>Arrangements of ventilation, heating, cooling, or air-conditioning</b> (for vehicles in general B60H; ventilating for cleaning tanks B63B 57/04; for underwater vessels, e.g. submarines, B63G 8/36)	2/12	. Heating; Cooling
2/02	. Ventilation; Air-conditioning	2/14	. . of liquid-freight-carrying tanks
2/04	. . of living spaces	3/00	<b>Driving of auxiliaries</b> (transmission elements <u>per se</u> F16)
2/06	. . of engine rooms	3/02	. from propulsion power plant
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)	3/04	. from power plant other than propulsion power plant
		4/00	<b>Arrangements of installations for treating waste-water or sewage</b> (soil-water discharges B63B 29/16) [3]
		5/00	<b>Vessel auxiliaries, not otherwise provided for</b>