

E02B

HYDRAULIC ENGINEERING (ship-lifting [E02C](#); dredging [E02F](#))

Definition statement

This subclass/group covers:

Man-made devices for using or controlling natural bodies of water;

Artificial bodies of water.

E02B 1/00

Equipment or apparatus for, or methods of, general hydraulic engineering, [N: e.g. protection of constructions against ice-strains (protection of offshore constructions against ice-loads [E02B 17/0021](#); ice-structures as artificial islands [E02B 17/028](#))]

Definition statement

This subclass/group covers:

Big scale hydraulic projects for controlling water or water level (groundwater, seawater, rivers, lakes) and small scale models for such projects.

Methods and devices relating to use or control of ice, e.g. protection against ice strains or use of ice formation.

Small-scale models for modelling big scale projects.

References relevant to classification in this group

This subclass/group does not cover:

Protection of offshore constructions against ice-loads	E02B 17/0021
Ice-structures as artificial islands	E02B 17/028
Computer-models of water flow	G06F

E02B 3/00

Engineering works in connection with control or use of streams, rivers, coasts, or other marine sites (barrages or weirs [E02B 7/00](#)); Sealing or joints for engineering works in

general

Definition statement

This subclass/group covers:

Protecting, maintaining or preparing waterways or the border between water and land for use.

Relationship between large subject matter areas

Garden ponds per se are classified in [A01K 63/00](#), the constructional features of ponds are classified in [E02B 3/00](#).

References relevant to classification in this group

This subclass/group does not cover:

Methods or apparatus for dredging	E02F
Drilling	E21B , E21D
Barrages or weirs	E02B 7/00

Informative references

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

Garden ponds	A01K 63/00
Foundations under water or at the border between land and water	E02D

E02B 3/04

Structures or apparatus for, or methods of, protecting banks, coasts, or harbours (sealings or joints [E02B 3/16](#); [N: [E02B 1/003](#) takes precedence])

Definition statement

This subclass/group covers:

Structures for protection against beach erosion, in general not completely submerged, but close to shoreline;

Flood protection devices.

References relevant to classification in this group

This subclass/group does not cover:

Artificial reefs specially adapted to fish farming	A01K
Sealings or joints	E02B 3/16
Flood protection for buildings	E04H 9/145
Flood protection for building openings	E06B 9/00

Informative references

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

Breakwaters, which may be similar in construction and effect, but are generally completely submerged in use	E02B 3/06
Sand bags	E02B 3/127

Special rules of classification within this group

Protection by mechanically induced liquid or gas streams is classified in [E02B 1/003](#) and takes precedence.

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

In this group, the following term are used with the meaning indicated:

Quay wall	fixed construction forming the coast line for mooring boats
Groyne	breakwater perpendicular to coast line
Breakwater	construction for coast protection, generally positioned underwater

Pier	fixed construction on pillars perpendicular to coast line
Mole	massive construction perpendicular to coast line

E02B 3/12

Revetment of banks, dams, water-courses, or the like, [N: e.g. the sea-floor] (of slopes in general [E02D 17/20](#))

Definition statement

This subclass/group covers:

Devices for covering water borders or the sea floor for protection.

Relationship between large subject matter areas

Revetment of slopes for other purposes, e.g. roadsides, are classified in [E02D](#).

Informative references

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

Gabions in general	E02D 29/0208
Gabions with vegetation for sound protection	E01F 8/025
Placing concrete under water	E02D 15/06

Special rules of classification within this group

Methods are classified in the group of the corresponding product.

E02B 3/20

Equipment for shipping on coasts, in harbours or on other fixed marine structures, e.g. bollards (tying-up, anchoring [B63B 21/00](#), e.g. bollards for shipping [B63B 21/06](#); buoys [B63B 22/00](#); [N: equipment specially adapted for use in locks

or dry docks [E02C 1/10](#)])

Definition statement

This subclass/group covers:

Devices on shore or fixed in the water for accommodating ships.

References relevant to classification in this group

This subclass/group does not cover:

Similar devices mounted on ships	B63B
Anchoring of ships	B63B 21/00
Buoys	B63B 22/00
Equipment specially adapted for use in locks or dry docks	E02C 1/10

Informative references

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

Net barriers for harbour defence	F41H 11/05
Access bridges for ships	E01D 15/24
Bollards	B63B 21/06

E02B 5/00

Artificial water canals, [N: e.g. irrigation canals] (for water-power plants [E02B 9/02](#); irrigation of soil [E02B 13/00](#))

Definition statement

This subclass/group covers:

Constructional aspects of canals, e.g. irrigation canals or water traffic canals.

References relevant to classification in this group

This subclass/group does not cover:

Water ways for water power plants	E02B 9/02
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Irrigation of soil	E02B 13/00
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Informative references

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

Placing concrete under water	E02D 15/06
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E02B 5/08

Details, e.g. gates, screens

Definition statement

This subclass/group covers:

Devices used in free flow canals for enhancing usability of the canal.

References relevant to classification in this group

This subclass/group does not cover:

Mechanical filtering in general	B01D 29/00 , B01D 33/00
Arresting devices with endlessly moving parts	E02B 8/026
Arresting devices with Archimedean screw	E03F 5/14

E02B 5/085

[N: Arresting devices for waterborne materials, e.g. gratings (fish barrages [E02B 1/006](#); removing sediments [E02B 3/023](#); arresting oil or similar pollutants [E02B15/04B](#); for waste water purification [E02F](#); in sewers [E03F 5/14](#))]

Definition statement

This subclass/group covers:

Gratings without moving parts for separating solid materials from water or sewage.

E02B 7/00

Barrages or weirs; Layout, construction, methods of, or devices for, making same (for protecting banks, coasts, or harbours [E02B 3/04](#); sealings or joints [E02B 3/16](#); handling building or like materials for hydraulic engineering [E02D 15/00](#); foundations in general [E02D 27/00](#))

Definition statement

This subclass/group covers:

Devices placed perpendicularly to stream direction for controlling or temporarily interrupting water flow.

References relevant to classification in this group

This subclass/group does not cover:

High water or flood control devices alongside the river bank	E02B 3/10
Devices for protection of coasts, banks or harbours	E02B 3/04
Sealings or joints specially adapted for hydraulic engineering	E02B 3/16
Foundations in general	E02D

Informative references

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

Making embankments	E02D 17/18
Handling material for hydraulic engineering	E02D 15/00

Special rules of classification within this group

[E02B 7/205](#): automatically functioning barrages, the automatic functioning being essential. Those devices are also classified in the respective subclass **E02B7/20C-E20B7/50** relating to their form.

E02B 8/00

Details of barrages or weirs (cleaning or keeping clear the surface of open water [E02B 15/00](#)); [N: Energy dissipating devices carried by lock or dry-dock gates]

Definition statement

This subclass/group covers:

Subparts of barrages or of the water body created by a barrage, devices for maintaining functioning of barrage or body of water; e.g. energy dissipating devices carried by lock or dry-dock gates.

References relevant to classification in this group

This subclass/group does not cover:

Cleaning or keeping clear the surface of open water	E02B 15/00
Removing sediments from natural waterways	E02B 3/023

Informative references

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

Filters with moving filtering elements	B01D 33/00
Devices for removing solid materials from water using archimedian screws for transporting the removed material out of the canal	E03F 5/14

Special rules of classification within this group

Devices for controlling sedimentation within flowing water, devices for removing sediments from bodies of water behind barrages are classified in [E02B 8/02](#).

Filtering devices for water and sewage having endlessly moving parts are classified in [E02B 8/026](#).

E02B 9/00

Water-power plants; Layout, construction or equipment, methods of, or apparatus for, making same (hydraulic motors [F03B](#))

Definition statement

This subclass/group covers:

Constructional aspects of water power plants and their related water bearing parts.

Informative references

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

Hydraulic motors	F03B
Power stations with machines or engines for liquid	F03B 13/00

Special rules of classification within this group

Documents with details of means for energy production should also to be classified in subclass [F03B](#).

E02B 11/00

Drainage of soil, e.g. for agricultural purposes [N: (draining sports grounds [E01C 13/083](#); for consolidating foundation soil, e.g. sand drain piles [E02D 3/10](#))]

Definition statement

This subclass/group covers:

Methods and devices for horizontal drainage of ground in general.

References relevant to classification in this group

This subclass/group does not cover:

Improving or stabilising soil by managing underground water flow	E02D 3/00
Drainage of sewage into the ground	E03F 1/002

Informative references

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

Perforated pipes for irrigation	A01G
Draining sports grounds	E01C 13/083
Constructional features of pipes, pipe-laying	F16L

E02B 13/00

Irrigation ditches, i.e. gravity flow, open channel water distribution systems ([N: retaining waterborne material in irrigation canals [E02B 5/085](#)]; other distribution systems for watering or spraying gardens, fields, sports grounds, or the like, [A01G 25/00](#); [N: built-in irrigation means for sports grounds [E01C 13/083](#)])

Definition statement

This subclass/group covers:

Open free flow water channels for irrigation;

Devices for sequential water distribution, e.g. between several irrigation channels or seepage drains.

References relevant to classification in this group

This subclass/group does not cover:

Other irrigation methods and systems, e.g. for agriculture, horticulture	A01G 25/00
Built-in irrigation systems for sports fields	E01C 13/083
Retaining waterborne material in irrigation canals	E02B 5/085
Open sewage channels	E03F 3/046

Informative references

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

Retaining waterborne material in irrigation canals	E02B 5/085
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E02B 15/00

Cleaning or keeping clear the surface of open water;
Apparatus therefor (construction of ships or other waterborne vessels [B63B](#), e.g. vessels specially adapted for collecting pollution from open water [B63B 35/32](#); in swimming or splash baths or pools [E04H 4/16](#))

Definition statement

This subclass/group covers:

Floating barriers and devices for controlling and/or collecting oil pollution on open water surfaces, e.g. sea, harbours, lakes, rivers).

References relevant to classification in this group

This subclass/group does not cover:

Separation in general	B01D
General constructional aspects of waterborne vessels	B63B
Emptying sunken ships	B63C7/16B
Covering oil spills on well heads	E21B 43/0122

Informative references

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

Constructional features of waterborne vessels specially adapted for collecting pollution from open water	B63B 35/32
Cleaning of water in swimming or splash baths or pools	E04H 4/16

E02B 17/00

Artificial islands mounted on piles or like supports, e.g. platforms on raisable legs; [N: or offshore constructions]; construction methods therefor ([N: construction methods for floating platforms [B63B 9/065](#)]; anchoring floating platforms [B63B 21/00](#); floating platforms, e.g. anchored, [B63B 35/44](#); [N: underwater reservoirs [B65D 88/78](#)])

Definition statement

This subclass/group covers:

Constructional features of ground-based offshore constructions;

Method for their installation or removal.

References relevant to classification in this group

This subclass/group does not cover:

Construction methods for floating platforms	B63B 9/06
Anchoring floating platforms	B63B 21/00
Floating or semi-submersible offshore platforms	B63B 35/44
Constructional features of underwater reservoirs	B65D 88/78

Informative references

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

Subsea foundations	E02D 27/00
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