

Universal Decimal Classification —

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UDC 626/627 Hydraulic (water)
construction works

UDC 025.45:[626/627]

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Foreword

The English version of the Universal Decimal Classification (UDC) is being prepared and published as BS 1000 by the British Standards Institution (BSI) at the original joint request of the British Society for International Bibliography (BSIB) and the Association of Special Libraries and Information Bureaux (ASLIB), now amalgamated as Aslib. It has the approval of the Lake Placid Education Foundation, New York, proprietors of the Dewey Decimal Classification, from which the UDC derives. The first English Full Edition is the fourth International edition authorized by the International Federation for Documentation (FID), The Hague, Netherlands.

This section is part of the English Full Edition. It should be used in conjunction with the Abridged English Edition, BS 1000A, which refers to many other subjects of interest not listed in this schedule, and provides a conspectus of the whole scheme together with an introduction to its use. For further practical information about the principles, application and utilization of the scheme, users should refer to BS 1000C.

This edition of UDC 626/627 includes modifications authorized in "Extensions and Corrections to the UDC" up to and including Series 8, No. 2, dated March 1976. Subsequent issues of "Extensions and Corrections to the UDC" should be consulted to keep the schedules up to date. Further information about this and other UDC publications is given on page 32. British Standards related to this part of BS 1000 are listed on the inside back cover.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 32, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Scope

Under 626 is classed information about the general principles of hydraulic (water) construction works, including the construction, maintenance and operation of canals and locks, and agricultural hydraulics (irrigation, drainage, reclamation and improvement of wasteland).

Under 627 is classed information about the reclamation of inundated land, the design and construction of dykes, dams, reservoirs and hydraulic power plant works, as well as natural inland waters and their improvement, coasts and coastal works such as ports and harbours, and their navigational, salvage and rescue facilities.

Related subjects

532	Mechanics of fluids in general. Mechanics of liquids.
551.3.053	Erosion. Corrosion and weathering in general — Geology.
551.35	Marine formations — Geology.
556.3	Groundwater hydrology. Geohydrology. Hydrogeology.
621.22	Hydraulic energy. Water power. Hydraulic machinery.
621.311.21	Hydroelectric power stations.
621.65	Pumps. Pumping in general.
621.86	Materials handling in general.
621.879	Digging machinery. Excavating machinery. Dredging machinery.
623.81	Naval dockyards and workshop establishments. Coastal and floating installations and forts — Naval engineering.
624.1	Substructures. Geotechnics. Earthwork. Foundations. Tunnelling.
628.1	Water: supply, treatment, consumption and use.
629	Transport vehicle engineering.
631.4	Soil science. Soil research.
631.6	Rural engineering. Land reclamation, drainage, irrigation — Agriculture.
639.2	Fishing.
654	Telecommunication services: organization, administration and operation.
656.6	Transport by water.
69	Building.
725.3	Buildings for transport, traffic, storage — Architecture.

Auxiliary signs and subdivisions

Full information about the common and special auxiliary signs and subdivisions (often abbreviated to “common and special auxiliaries”) will be found in BS 1000A and BS 1000C.

Colon signs of relation. For the classification of information for the public, as in abstracts and bibliographies, maximum use of colon combinations rather than of common or special auxiliaries is recommended. The use of the colon sign of relation: is preferable for multiple entry systems, as it will help prevent the concealment of information. This usually results in longer notation, however, and for information for more restricted use, the application of auxiliaries, where available, may be simpler and more convenient provided that there is an adequate alphabetical subject index.

Common auxiliaries. The common auxiliaries of language = . . . , form (0 . . .), place (1/9), race and nationality (= . . .), time “. . . ”, point of view .00 . . . , materials – 03 . . . and persons – 05 . . . are applicable throughout the UDC. However, they should be used mainly to express concepts not otherwise provided for in the schedules.

Special auxiliaries. The – 3 special auxiliaries listed under 626 and the .01/.09 special auxiliaries listed under 627 may be detached and applied to any subdivision of the number at which they are listed where the result forms a meaningful combination. Special auxiliaries are also provided under 627.8. With certain exceptions which are noted in the schedule (– 3 at 626 and – 1 at 627.8), the –1/–9 special auxiliaries listed under 62 are applicable at 626/627. It should be noted that the .01/.027 subdivisions of 626 are principal divisions, not special auxiliaries. They must not be attached to the subdivisions of 626.

Typographic presentation

Small type is used for cancelled numbers and text. The arrow → means either “see” or “see also” according to the context. The symbol ≅ “subdivide as” means that the number preceding it may be subdivided in the same way as, and with meanings analogous to the subdivisions of, the number which follows it.

SCHEDULE

626/627 Hydraulic (water) construction works

626 General hydraulic engineering. Canal engineering. Agricultural hydraulics

Details of hydraulic construction work etc may be denoted by the –1/–2 and –4/–9 special auxiliaries listed at 62 (the 62-3 special auxiliaries are not applicable to 626)

Special auxiliary subdivisions		626.1	INLAND NAVIGABLE WATERWAYS: CANALS
626–3	PARTS OF HYDRAULIC STRUCTURES		<i>Individual canals may be denoted by addition of (282.5) [from Table I e)] and alphabetic subdivision, e.g.</i>
–31	Upstream parts, approaches		626.1 (282.5) Grand Union Grand Union Canal
–311	Splayed sidewalls		→626.9 Ship canals
–312	Permeable floor		627.4 River protection, regulation (straightening) and other improvement
–313	Impermeable floor		
–315	Stream control installations		
.1	Sheet piling. Sluice gates		
.2	Wells		
.3	Other installations	.11	Generalities. Types of canal
–318	Scouring of foundations. Settlement of floor and apron	.112	Canals without locks
–33	Downstream parts	.113	Canals with locks
–331	Splayed sidewalls	.114	Lateral canals
–332	Permeable floor	.12	Preliminary survey work. Longitudinal sections. Bends. Enlargement, widening at bends
–333	Impermeable floor	.13	Canal construction
–335	Stream control installations	.131	Excavation of canal bed. Embankments. Cuttings
.1	Sheet piling. Sluice gates	.3	Excavation of soil. Blasting
.2	Wells		626.131.3 ≈ 622.23
.3	Other installations	.4	Special plant for excavating long trenches
–337	Energy dissipators, e.g. baffle walls, blocks	.5	Earth removal
–338	Scouring of foundations. Settlement of floor and apron	.6	Dredging
			<i>For dredging machines</i> →621.879
		.132	Canal tunnels. Aqueducts
		.4	Canal tunnels
			→624.196 Water-carrying tunnels
		.5	Aqueducts
		.133	Means of access. Crossings of roads and watercourses. Means of emptying canals
		.134	Sealing of the canal bed to prevent loss of water through seepage, by means of mortar, concrete, reinforced concrete mats, clay puddle, slurry etc
		.14	Maintenance of canals
		.141	Repairs. Closures (temporary)
		.142	Maintenance dredging works
			<i>For dredging machines</i> →621.879
		.143	Cleaning-out, e.g. of weeds. Flushing
		.144	Removal of ice
		.15	Planting of canal slopes and embankments
		.17	Protection of canal slopes and embankments
		.172	With paving
		.173	With unbonded stone, e.g. rip-rap
		.174	With plain or reinforced concrete
		.175	With asphalt coatings
		.18	Filling-in canals
		626.2	WATER SUPPLY FOR CANALS
			<i>For water supply, treatment, consumption and use</i> →628.1
		.21	Water consumption. Water losses
		.212	Bed losses. Evaporation losses. Seepage losses
		.213	Losses at sluices and locks
		.22/.25	Water intake

Principal divisions

The following .01/.027 subdivisions are not special auxiliaries. They must not be attached, therefore, to the subdivisions of 626

626.01	FUNDAMENTAL PRINCIPLES
626.02	UNDERWATER WORK IN GENERAL. DIVERS' WORK
	→626.157 Foundations under water
.021	Underwater work: tools and implements
.022	Equipment for underwater work
.1	Diving bells
	→624.157.39 Foundation by means of diving bells
.2	Divers' shafts. Diving vessels
.3	Tunnels
.024	Divers' work
.025	Divers' equipment. Diving suits
.2	Flexible diving suits
.3	Rigid (armour-plated) diving suits
.5	Breathing apparatus, e.g. aqualungs
.7	Ancillary equipment. Servicing of divers
.027	Working methods. Use of tools under water

626.22	From natural watercourses and lakes	626.422.45	Sluices, valves for filling and emptying
.23	From artificial storage reservoirs	.423	Buildings for lock machinery
.24	By pumping (from wells and boreholes)	.43	Construction of chamber locks
.25	Feeder ditches, channels, weirs, sluices	.44	Equipment: towing installations, ladders, mooring rings, bollards, fenders, arrester chains etc
.26	Discharge installations		
.28	Special canal structures	.45	Operation. Maintenance. Lock operation time. Water consumption. Water losses
	→626.132 Canal tunnels. Aqueducts	.46	Installations for saving water: floats, balancing ponds, reservoirs. Locks without water wastage
	<i>Further particulars may be denoted by colon combination, e.g.</i>	.49	Locks without a chamber
	626.28:627.341.4 Bollards		
.281	Lock and sluice approaches and basins. Passing places. Turning basins. Lead-in piers, jetties	626.5	VESSEL-LIFTING GEAR. INCLINED PLANES FOR VESSELS
.283	Safety gates	.51	Vertical lifts
626.3	SHAPE AND PRINCIPAL DIMENSIONS OF CANAL CROSS-SECTIONS	.511	Hydraulic lifts
.31	Principal dimensions of the water cross-section. Canal depth, width. Wetted cross-section. Mean depth of water. Headroom under bridges	.512	Lifts with vertical or horizontal floats. Submersible locks
.311	Wetted perimeter	.513	Lifts with counterweights
.312	Wetted cross-section	.519	Other types
.313	Width	.52/.54	Inclined planes for vessels
.314	Depth	.52	Haulage in the dry by means of cradles
.4	Mean depth of water	.53/.54	Haulage in water-filled tanks or chambers
.316	Width of the canal bed or bottom	.53	On longitudinally inclined planes
.317	Headroom under bridges	.54	On transversely inclined planes
.318	Slope of bank	626.7	TOWAGE AND PROPULSION ON RIVERS AND CANALS
.32	Tow paths		<i>Only installations are classed here</i>
.33	Canals with little freeboard		<i>For the vessels themselves and shipbuilding →629.12</i>
.34	Side drainage ditches for overflow and seepage	.71	Factors governing the movement of vessels. Power requirements. Water resistance. Speed of vessels
.35	Bank protection	.72	Propulsion by human power: oars, sculls, quants etc
626.4	LOCKS:LOCATION, DIMENSIONS	.73	Towage
	<i>The type of motive power may be denoted by the -8 special auxiliaries listed at 62</i>	.731	By human beings, animals
.41/.46	Chamber locks	.732/.733	By mechanical power
.41	Chamber locks in general: types	.732	With chain or endless rope
.413	Single locks	.733	Electrically
.414	Double, twin locks. Locks for two or more vessels lying next to each other		<i>For electric tractors→621.335.52/.53</i>
.415	Locks for trains of barges	.74	Drifting with the current. Sailing
.416	Locks for overcoming a large difference in level. Flights of locks. Shaft locks	.75/.76	Towage and propulsion by tugs, tractors etc
.419	Other lock types. By-pass locks. Staircase locks, with upper and lower gates side by side, to join two reaches of the same canal meeting at an acute angle. Safety gates	.75	→629.124 Tugs. Trains. Special-purpose craft — Transport vehicle engineering
.42	Principal parts of lock structure	.76	Towage and propulsion by tugs
.421	Fixed parts	.76	Towage by chain, rope, e.g. with tractor or windlass
.2	Chamber floor, walls	.78	Self-propelled vessels
.4	Head bays. Installations for filling and emptying	626.8	AGRICULTURAL HYDRAULICS. IRRIGATION ENGINEERING. LAND RECLAMATION ENGINEERING. LAND DRAINAGE ENGINEERING
.422	Moving parts		<i>Further particulars may be denoted by colon combination with the subdivisions of 631.4, e.g.</i>
.2	Lock gates	626.8:631.41	Chemical and physicochemical properties of soil
.21	Mitre gates	:631.415	Soil reaction. Soil acidity. pH
.22	Flap gates	:631.42	Soil analysis
.23	Radial gates	:631.43	Physical properties of soil
.24	Vertical lift gates	→627.1	Natural inland waters
.25	Roller gates		
.29	Other types		
.3	Caissons		
.4	Gate accessories		
.42	Bearings. Anchorages		
.43	Operating gear		

	627.5	Structures for protection and improvement of watercourses and coasts. Dike construction. Reclamation of land	626.823.66	Stepped
			.69	Other types
	627.8	Dams. Hydraulic power plant works	.7	Details of conduits and pipes (couplings, valves etc)
	631.61	Land reclamation — Agriculture		→621.643.4 Pipe connections. Fittings
626.80		SIGNIFICANCE OF WATER FOR LAND CULTIVATION	621.646	Devices for opening and closing pipes. Valves. Regulating and safety devices
		<i>For precipitation (rain, snow, etc)</i>	.8	Crossings
		→551.577/.578	.82	Aqueducts
		<i>For soil moisture and hydrology, hydrometeorology</i> →551.579	.83	Siphons
		<i>For general hydrology</i> →556, especially 556.18, 556.38	.84	Level crossings
			.85	Tunnels
			.88	Inlets
626.81/.84		IRRIGATION	.89	Other crossings
		→631.67 Irrigation — Agriculture	.9	Other ancillary works
.81		Water sources for irrigation	.91	Linings
.810		Effect and quality of the water. Water requirements	.912	Brick
.3		Saline. Brackish	.913	Stone and rubble
.811/.816		Water sources, supply	.914	Concrete. Reinforced concrete
.811		From groundwater (springs, wells, artesian wells)	.915	Asphalt
.812		From natural watercourses	.916	Plastics
.813		From effluent, drainage channels (sewers)	.917	Vegetative
.814		From lakes, reservoirs, navigation canals	.92	Overflow and relief devices
.816		Extraction by means of wells, weirs and other special structures	.93	Safety appliances. Life-saving equipment
.82		Irrigation canals, channels, conduits	.824	Distribution, apportionment of water. Re-use of water
		→621.643 Fluid distribution and transport devices. Conduits. Pipes. Pipe fittings	.826	Water losses
.821		Route survey. Dimensioning of the cross-section. Types of canal, channel	.83	Pumping stations
.1		Route survey of irrigation channels	.831	Capacity
.2		Principal dimensions of the cross-section	.832	Prime movers
		626.821.2 $\cong$ 626.3	.833	Water-raising machinery
.3		Types of canal, channel	.834	Tools. Equipment
.31		Controlled by weirs, sluices	.836	Operation
.311		Continuously	.84	Methods of irrigation
.312		Intermittently	.841	Irrigation by flooding
.32		With spillways	.3	Broad irrigation with effluent, sewage, waste water etc
.822		Construction		→628.361 Application of sewage to land
.823		Ancillary works	.4	American basin or check system
.2		Inverted siphons and culverts	.842	Irrigation by overflow or spillover
.3		Siphons and aqueducts	.2	Spillover from ditches
.4		Devices for excluding and ejecting silt from irrigation canals etc	.3	Supply of water to a system of furrows. Ridge and furrow irrigation
.42		Excluders	.4	Bedwork (horticultural, garden) irrigation. Border strip irrigation
.43		Ejectors	.843	Surface irrigation. Water spreading. Wild flooding. Contour flooding
.45		Sedimentation tanks	.1	Wild flooding. Free flooding
.46		Silt clearance	.2	By overflow from channels on sloping ground. Contour-furrow method
.5		Sluices	.3	By overflow from channels in raised earth-works (embankments etc)
.52		Inlet sluices	.844	Subsurface (subsoil, underground) irrigation
.53		Retaining, distributing sluices	.845	Sprinkling. Evaporation loss from sprinkled areas
.54		Outlet sluices		→621.647 Spraying devices. Sprinkling devices. Atomizers. Flushing devices
.6		Flow-measuring structures	631.347	Watering appliances. Irrigation equipment — Agriculture
.61		Flumes		
.62		Free weirs		
.63		Notched weirs		
.64		Side weirs		
.65		Weirs with slight transverse slope		

626.846	Methods of conservation of moisture of irrigated lands, <i>e.g.</i> straw beds (in horticulture)	626.873.2	Reclamation by burning
.85	Irrigation for different soils and crops [<i>cancelled</i>] <i>use</i> 631.67:633/635	.3	Reclamation involving peat extraction
626.86	REMOVAL OF WATER. DRAINAGE	.4	German system of highland bog reclamation (without peat extraction)
	<i>For drainage at the sea and foreshore</i> →627.532	.5	Mixed cultivation. Blanketing
	<i>For drainage in agriculture</i> →631.62	.6	Colonization (settlement) of highland bogs
.860	Generalities. Preparatory work. Assessment of water regime	.874	Generalities on mineral wastelands
.4	Removal of water	.1	Origin. Composition
.41	Natural methods	.2	Reclamation diseases and other disturbances
.42	Artificial methods	.875	Heaths
.861	Drainage by open channels	.1	Water regulation. Breaking the ground
.1	Layout of network of channels. Determination of cross-section	.2	Cultivation with newly-broken-up soil
.5	Small ditches. Furrows	.876	Wastelands in the mountains
.862	Subsurface drainage	.1	Water regulation. Breaking the ground
.1	Generalities. Methods. Types of drain. Design. Calculation	.2	Cultivation
.2	Excavation and preparation of trenches	.3	Other measures for reclamation
.3	Equipment and components for construction of drains. Bedding and jointing. Junction and inspection of chambers. Outlets. Inlets. Spring inlets	.877	Cultivation of waste heaps
.4	Disposal of drainage water. Drain networks. Horizontal and vertical drainage. Soakaways. Entry of air. Complete and partial drainage	.1	Of cohesionless material
.6	Drainage without pipes. Mole-plough drainage	.2	Of cohesive material
.7	Drainage by machinery	626.88	HYDRAULIC WORKS FOR FISH BREEDING
.9	Other matters		→639.31 Fish culture in fresh water
.91	Blockages of drainpipes, their causes and prevention	.881	Conditions. Purity of water
.94	Success and duration of effect of drainage		→663.63 Water and its improvement for special use — Beverages
.863	Drainage pumping stations. Drainage by pumped wells. Relief wells	.882	Fishways. Fish passes. Fish ladders
626.87	RECLAMATION OF WASTE OR BARREN LAND	.1	Simple fish passes. Fish channels
	→631.61 Land reclamation — Agriculture	.2	Weir-type fishways. Fish ladders
.871	Waterlogged land in general	.3	Natural fish passes
.1	Origin, composition of the soil	.9	Other fishways
.2	Composition of the natural plant cover	.883	Natural and artificial spawning places
.3	Climatic factors. Frost danger	.884	Hatchery apparatus
	→624.139 Frozen ground engineering	.885	Fish breeding basins
	624.14 Snow and ice engineering. Building and building materials in cold climates	.886	Fish ponds
.4	Crumbling of the topsoil	.1	Carp (warm) ponds
.5	Reclamation diseases	.2	Trout (cold) ponds
.872	Reclamation of lowland bogs	.3	Perch ponds
.1	Water regulation	.4	Eel ponds
.2	"Black cultivation"	.9	Other ponds
.3	Covering with sand. Blanketing	.887	Fish reserves
.4	Mixed cultivation	.888	Water requirement, supply and distribution for fish ponds
.873	Reclamation of highland bogs, moorland		→628.17 Water consumption. Water loss and waste prevention — Public health engineering
.1	Water regulation	626.9	SHIP CANALS. MARITIME CANALS
			<i>For construction details</i> →626.1
		.91	Generalities. Route survey. Dimensions. Cross-sections
		.92	Unimpounded canals
		.93	Impounded canals
		.95	Canals with several reaches. Watershed or summit canals

627 Natural waterway, port, harbour and shore engineering. Navigational, dredging, salvage and rescue facilities. Dams and hydraulic power plant

Details of construction work etc may be denoted by the –1/–9 special auxiliaries listed at 62 (but note that –1 has a different meaning at 627.8)

Location may be denoted by addition of the common auxiliaries of place [Table I e)], e.g.

627(26) Marine, sea, ocean works and facilities

627(28) Inland water, river, lake works and facilities

Special auxiliary subdivisions

627.01	FUNDAMENTAL PRINCIPLES
→532	Mechanics of fluids in general. Mechanics of liquids
556	Hydrosphere. Water (in general). General hydrology. Comprehensive works on surface waters and groundwater
627.02	UNDERWATER WORK. DIVERS' WORK
627.02	≅ 626.02
627.03	FORM OF CONSTRUCTION, PROTECTION OF SITE
	<i>For general conditions for port construction and installation →627.22</i>
.032	Fixed construction (on firm foundation)
.033	Temporary, transportable, dismantlable construction
	627.033 ≅ 69.033, e.g.
	627.033.15 Inflatable facilities
.034	Floating. Submerged
.037	Unprotected (open) location
.038	Protected. Safe
627.05	SITE ORGANIZATION, CONSTRUCTION METHODS AND EQUIPMENT
627.05	≅ 69.05
627.06	SPECIAL FEATURES (LIGHTING, CONSTRUCTION ETC)
	<i>This number is further subdivided under certain main numbers, e.g. 627.7, 627.8</i>
627.08	WATERWAYS, PORTS AND HARBOURS IN RELATION TO TIDE AND WATER-LEVEL CONDITIONS
.082	Tidal waterways, ports and harbours
.084	Non-tidal waterways, ports and harbours
627.09	SPECIAL-PURPOSE WATERWAYS, PORTS, HARBOURS AND IN-PORT FACILITIES
.092	Passenger ports and in-port facilities
.093	Freight, cargo ports and facilities
	<i>The type of freight or cargo may be denoted by colon combination, e.g.</i>
	627.093:622 Ports for handling coal, ore etc
	:633 Ports for handling grain, crops etc
	:634.0 Ports for handling timber
	→627.211 Offshore ports and harbours
.094	Fishing ports and facilities
.096	Naval ports and facilities
	→623.81 Naval dockyards
627.098	Refuge, shelter, safety and rescue ports or bases and their facilities
	→627.76 Marine salvage. Refloating, rescue of ships
	627.77 Marine rescue, life-saving. Safety and survival of seafarers

.099 Other special-purpose ports, harbours etc
Further particulars may be denoted by colon combination, e.g.
 627.099:614.46 Quarantine ports etc

Principal divisions

627.1	NATURAL INLAND WATERS
	<i>For hydrology →556</i>
627.11	GENERALITIES ON THE ORIGIN OF NATURAL WATERCOURSES. FEED BASINS (NATURAL WATER BASINS). RAIN. MELTING SNOW. EFFECT OF GROUND CONDITION, PERMEABLE AND IMPERMEABLE. COLLECTING BASINS. WATERCOURSES IN MOUNTAINOUS REGIONS. WATER-COURSES IN LOWLAND. WATERCOURSES IN AREAS OF MIXED CHARACTER
627.12	SPRINGS, HEADWATERS, SOURCES ETC
	<i>Further particulars may be denoted by colon combination with the subdivisions of 556.3, e.g.</i>
	627.12:556.368 Volcanic springs
627.13	HYDRODYNAMIC PROBLEMS OF WATER-WAYS
	<i>Further particulars may be denoted by colon combination with the subdivisions of 532.5 or 556.5, e.g.</i>
	627.13:556.536 River hydraulics and hydrodynamics
	:556.546 Estuarine hydraulics and hydrodynamics
.131	Laws of river flows
	<i>Further particulars may be denoted by colon combination with the subdivisions of 532.5, e.g.</i>
	627.131:532.5.013.5 Uniform flow
.132	Effect of damming watercourses. Movement of solid bodies in water
	<i>Further particulars may be denoted by colon combination with the subdivisions of 532.5, e.g.</i>
	627.132:532.535 Jumps. Standing waves
	:532.553 Energy losses in sluices
	:532.583.4 Hulls. Resistance of boats
.133	Gauging of watercourses (quantity and velocity measurements)
	<i>Further particulars may be denoted by colon combination with the subdivisions of 532.57</i>
	→532.217 Measurement of surface level
	681.121 Fluid meters. Measuring devices for liquids, gases, vapours
.1	Determination of the cross-section

627.133.4	Analysis of the velocity measurements. Distribution of the velocities in cross-section. Lines of equal velocity (isotaches)	627.16	RIVER MOUTHS, ESTUARIES →556.54 River mouths. Estuaries. Deltas — Hydrology
.5	Curves of discharge, water flow and water levels	.160	Generalities. Natural development of river mouths. Condition of discharge into sea. Sediment transport. Formation of bars and islands. Deltas. Tidal channels (estuaries). Effect of tides
627.14	TORRENTS, RAPIDS. UNNAVIGABLE MOUNTAIN STREAMS	.161	Improvement of river mouths with small tidal range. Improvement in discharge, passage of ice and depth of channel. Direct and indirect river mouths
.141	Torrents. Damming of torrents. Obstruction by structures	.163	Improvement of river mouths with large tidal range. Behaviour of the tidal waves in the river. Tidal curves. High and low water marks. Effect of changes in river and sea levels
.1	Torrents in general. Sources. Effect of woodland and its deforestation. Nature. Sediment. Landslides (avalanches). Classification of the course of mountain streams (funnel, ravine, scree cones)	627.17	STAGNANT WATERS. LAKES ETC →(285) Lakes. Swamps — Common auxiliaries of place
.2	Damming of torrents	551.481	Stagnant surface water. Marshes etc — Geology
.21	Damming of defiles	556.55	Lakes, reservoirs and ponds. Limnology — Hydrology
.22	Reinforcement of defile bases and banks	.175	Control of lakes
.23	Security of bottom. Dams	627.18	BANKS (EMBANKMENTS). SLOPES
.24	Damming of sump. Composition in a uniform bed	627.2	PORTS, HARBOURS AND ROAD-STEADS: ENGINEERING CONSTRUCTION WORKS IN GENERAL <i>Further particulars may be denoted by the (26) and (28) common auxiliaries of place [Table I e)]</i>
.142	Control, regulation of mountain streams. Floating timber	627.21	PORTS AND HARBOURS (AS COMPLETE UNITS) <i>Further particulars may be denoted by the .0 special auxiliaries</i>
.1	Determination and improvement of flow course. Removal of obstructions (tree trunks, rocks, mud banks etc). Elimination of subsidiary flows. Dam, dyke construction. Land reclamation (soil deposit). Other constructions	.211	Offshore ports and harbours, e.g. offshore pipeline terminals
.2	Floating timber (logs, rafts etc)	.212	Coastal (open coast) ports and harbours
627.15	GENERALITIES ON RIVERS AND STREAMS →(282) Watercourses. Running water	.213	Estuary (river mouth) ports
551.482	Streams and rivers — Geology	.214	Landing places where boats may be beached
556.52	River systems. Potamogen (general descriptions) — Hydrology	.215	River or canal ports and harbours
556.53	Rivers, streams and canals — Hydrology	.2	River-channel ports
627.4	River protection, regulation (straightening) and other improvement	.3	Creek, river-basin ports (non-channel)
.152	Streams and rivers	.5	Ports on river-channels
.1	Large rivers	.216	Lake, reservoir ports and harbours
.11	Longitudinal sections. Cross-sections	.2	Lake ports
.111	Slope	.4	Ports on reservoirs
.112	Depth	627.22	GENERAL CONDITIONS FOR PORT CONSTRUCTION AND INSTALLATION: HYDROGRAPHIC, HYDROLOGICAL, GEOLOGICAL CONDITIONS; CHOICE OF LOCATION ETC →624.131.3 Soil examination, sampling and tests — Civil and structural engineering
.113	Breadth	627.03	Form of construction, protection of site
.12	Bends. Configuration of the bed	627.24	Construction of maritime structures
.121	Sinuosity. Meanders	.221	Kinds of water and relevant properties
.122	Loops. Formation of islands	.1	Sea water
.123	Sediment transportation	.11	Chemical composition. Density
.15	Discharge of navigable channel	.12	Temperature
.151	Discharge and its fluctuations		
.152	Current (flow) velocity		
.153	Flood water (high water) bed		
.154	Average water level		
.155	Dry weather flow		
.156	Drying up		
.2	Tributaries		
627.152.2	627.152.2		
.3	Mountain streams and torrents		
627.152.3	627.152.3		
.157	Sedimentation. Siltation. Sediment (detritus, coarse gravel, medium gravel, sand, silt) <i>For sand banks in river mouths</i> →627.160, 627.223.7		

627.221 .13	Action on the materials of construction →69 Building	627.23	MAIN PARTS OR ELEMENTS OF PORTS, INCLUDING ROADSTEADS, BREAKWATERS AND INNER HARBOUR →627.33 Mooring, berthing structures. Wharves. Quays. Piers
.2	River water	.231	Roadsteads. Anchorages. Mooring grounds →627.338 Roadstead mooring facilities (buoys etc) <i>Further particulars may be denoted by the .03 special auxiliaries, e.g.</i>
.21	Fresh water	627.231.037	Unprotected roadsteads
.22	Brackish water (mixture of salt water and fresh water)	.038	Protected (safe) roadsteads
.222	State of sea, river or lake bed: condition of shores and banks	.3	Outer roadsteads
.1	Sea bed. Behaviour under water	.6	Inner roadsteads
.11	Sand beaches	.8	Anchorages
.12	Shingle beaches	.232	Port entrances
.13	Stable beaches	.233	Harbours (providing only shelter)
.2	Coastline away from river mouths	.234	Navigable channels
.21	Cliffs. Coastal erosion etc →551.351 Coastal, littoral deposits. Reef, shelf formation. Coastal, shore drift — Geology	.235	Breakwaters. Harbour dams. Deep-water out-works →627.52 Protection of coasts. Defence against the effects of wind, waves <i>Material construction details may be denoted by colon combination with the subdivisions of 693</i>
.22	Dunes <i>For cultivation and protection of dunes →627.524.2</i>	.2	Breakwaters. Moles
.23	Littoral drift. Coastal submergence	.4	Harbour dams
.24	Coastal belts. Reefs. Coral reefs →627.16 River mouths, estuaries	.6	Groynes. Jetties
.3	Flat coasts at river mouths	.236	Inner harbour and basins →627.31 Docks, dock installations in general
.31	Tidal reaches. Estuaries	627.24	CONSTRUCTION OF MARITIME STRUCTURES <i>For details of submarine works →624.157, 626.02</i>
.32	Non-tidal reaches. Deltas	627.25	METHODS AND MEANS OF PROTECTING HYDRAULIC CONSTRUCTION WORKS
.4	Banks of streams and rivers	.252	Use of mechanical devices. Guards etc
.5	Shores of lakes and reservoirs	.254	Use of special structural forms
.223	Sea currents and tides	.257	Anti-corrosion measures 627.257 ≅ 620.197
.1	Generalities on currents. Origin. Effect of trade winds. Large sea (ocean) currents (Gulf stream, Labrador stream, Kuro-sivo etc). Drift and gradient currents	627.26	DETERIORATION OF HARBOUR AND MARINE WORKS. EROSION. DAMAGE FROM MARINE ORGANISMS <i>For the action of sea water on materials of construction →627.221.13</i>
.2	Tidal currents. Meeting of currents. Tidal races, surges (bores)	627.3	IN-PORT FACILITIES. DOCK, WHARF AND QUAY INSTALLATIONS AND EQUIPMENT →725.34 Marine, coastal, waterside buildings and structures — Architecture
.3	Fluvial currents. Currents in rivers. Races, surges	627.31	DOCKS, DOCK INSTALLATIONS IN GENERAL →629.128 Installations for construction and repair of craft. Shipyards. Boatyards. Docks
.4	Tides. Effects of ebb and flow. Low and high tide. Tidal changes. Tidal range. Tidal periods. Port installations to cope with tides	627.32	SERVICE, STORAGE AND ANCILLARY STRUCTURES AND BUILDINGS IN PORTS
.5	Observation and measurement of the tides. Tide gauges. Tidal curves. Mean sea level. Calculation of tides	.322	Sluicing basins (tidal basins)
.6	Sea waves. Open sea. Extent, power. Effect of breakwaters. Coastal surges. Whirlpools. Counter-currents. Tidal waves		
.7	Effect of marine currents at river mouths. Effect of tides. Formation of sand banks, bars, shoals. Siltation		
.224	Port ice condition →627.37 Facilities for temporary closing of ports <i>The season or month may be denoted by the “32/33” common auxiliaries [Table I g]</i>		
.2	Freezing. Icing up		
.3	Break-up, melting of ice		
.5	Free sailing period		
.7	Possibilities and periods of port operation with use of icebreakers →627.73 Icebreaker service, facilities and equipment		
.8	Means (other than icebreakers) of extending navigation into freezing or frozen-up ports		