

Symbol	Typ	Titel
F	Sektion	SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING
F17	Klasse	STORING OR DISTRIBUTING GASES OR LIQUIDS (water supply E03B)
F17D	Unterklasse	PIPE-LINE SYSTEMS; PIPE-LINES (pumps or compressors F04; fluid dynamics F15D; valves or the like F16K; pipes, laying pipes, supports, joints, branches, repairing, work on the entire line, accessories F16L; steam traps or the like F16T; fluid-pressure electric cables H01B 9/06)
F17D 1/00	Hauptgruppe	Pipe-line systems (conveying articles or materials through a pipe-line by means of a fluid carrier B65G 51/00, B65G 53/00; dispensing, delivering or transferring liquids B67D; special devices for transferring liquids from bulk storage containers into vehicles or boats or <i>vice versa</i>, e.g. loading or unloading vehicles or portable containers B67D 5/00; conveying material which has been excavated by a dredger or soil shifter through a pipe-line E02F 7/10; sewer pipe-line systems E03F 3/00; thermal insulation of pipe-lines F16L 59/00; central heating systems F24D) [2]
F17D 1/02	1-Punkt Untergruppe	. for gases or vapours
F17D 1/04	2-Punkt Untergruppe	. . for distribution of gas
F17D 1/05	3-Punkt Untergruppe	. . . Preventing freezing (by heating F16L 53/00)
F17D 1/06	2-Punkt Untergruppe	. . for steam
F17D 1/065	2-Punkt Untergruppe	. . Arrangements for producing propulsion of gases or vapours [2]
F17D 1/07	3-Punkt Untergruppe	. . . by compression [2]
F17D 1/075	3-Punkt Untergruppe	. . . by mere expansion from an initial pressure level, e.g. by arrangement of a flow-control valve [2]
F17D 1/08	1-Punkt Untergruppe	. for liquids or viscous products (water-main or service pipe systems E03B 7/04; domestic hot-water supply systems F24D 17/00) [2]
F17D 1/12	2-Punkt Untergruppe	. . Conveying liquids or viscous products by pressure of another fluid [2]
F17D 1/13	2-Punkt Untergruppe	. . Conveying liquids or viscous products by gravity [2]
F17D 1/14	2-Punkt Untergruppe	. . Conveying liquids or viscous products by pumping [2]
F17D 1/16	2-Punkt Untergruppe	. . Facilitating the conveyance of liquids or effecting the conveyance of viscous products by modification of their viscosity [2]
F17D 1/17	3-Punkt Untergruppe	. . . by mixing with another liquid [2]
F17D 1/18	3-Punkt Untergruppe	. . . by heating [2]
F17D 1/20	1-Punkt Untergruppe	. Arrangements or systems of devices for influencing or altering dynamic characteristics of the systems, e.g. for damping pulsations caused by opening or closing of valves (fluid dynamics F15D; damping pulsations in fluids in pipes in general F16L 55/04) [2]
F17D 3/00	Hauptgruppe	Arrangements for supervising or controlling working operations
F17D 3/01	1-Punkt Untergruppe	. for controlling, signalling, or supervising the conveyance of a product [2]
F17D 3/03	1-Punkt Untergruppe	. for controlling, signalling, or supervising the conveyance of several different products following one another in the same conduit, e.g. for switching from one receiving tank to another [2]
F17D 3/05	2-Punkt Untergruppe	. . the different products not being separated (separation of contaminants by distillation B01D 3/00) [2]
F17D 3/08	2-Punkt Untergruppe	. . the different products being separated by "go-devils", e.g. spheres (cleaning devices moved along the inside of pipe-lines by a fluid B08B 9/053) [2]

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F17D 3/10	1-Punkt Untergruppe	. for taking out the product in the line (investigating or analysing materials by determining their chemical or physical properties G01N) [2]
F17D 3/12	1-Punkt Untergruppe	. for injecting a composition into the line [2]
F17D 3/14	1-Punkt Untergruppe	. for eliminating water (separation of liquids B01D, e.g. B01D 17/00; separation of gases or vapours B01D 53/00) [2]
F17D 3/16	1-Punkt Untergruppe	. for eliminating particles in suspension (from liquids by sedimentation B01D 21/00; separation by filtration or otherwise B01D 24/00-B01D 51/00; centrifugal apparatus B04) [2]
F17D 3/18	1-Punkt Untergruppe	. for measuring the quantity of conveyed product (measuring volume or volume flow, in general G01F) [2]
F17D 5/00	Hauptgruppe	Protection or supervision of installations (arrangements for protecting foundations E02D 31/00; protecting pipes from damage or internal or external wear F16L 57/00, against corrosion or scale F16L 58/00; investigation of the fluid-tightness of structures G01M 3/00) [2]
F17D 5/02	1-Punkt Untergruppe	. Preventing, monitoring, or locating loss [2]
F17D 5/04	2-Punkt Untergruppe	. . by means of a signalling fluid enclosed in a double wall [2]
F17D 5/06	2-Punkt Untergruppe	. . using electric or acoustic means [2]
F17D 5/08	1-Punkt Untergruppe	. Protection of installations or persons from the effects of high voltage induced in the pipe-line (emergency protective circuit arrangements H02H) [2]