SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING

F16 ENGINEERING ELEMENTS OR UNITS; GENERAL MEASURES FOR PRODUCING AND MAINTAINING EFFECTIVE FUNCTIONING OF MACHINES OR INSTALLATIONS; THERMAL INSULATION IN GENERAL

F16L PIPES; JOINTS OR FITTINGS FOR PIPES; SUPPORTS FOR PIPES, CABLES OR PROTECTIVE TUBING; MEANS FOR THERMAL INSULATION IN GENERAL

Note(s) [5, 7]

1. In this subclass, the following terms are used with the meanings indicated:
   - "pipe" means a conduit of closed cross-section, which is specially adapted to convey fluids, materials or objects;
   - "hose" means a pipe, as defined above, which has flexibility as an essential characteristic.
2. Attention is drawn to the following places:

A61M 39/00	Tube connectors, tube couplings or branch units, specially adapted for medical use
B05B 1/20	Perforated pipes
B63B 35/03	Pipe-laying vessels
B64D 39/04	Adaptation of hose constructions for refuelling aircraft during flight
B67D 7/38	Arrangements of hoses in apparatus for transferring liquids, e.g. fuel, from bulk to vehicles or portable containers
E01D 19/10	Fastening of pipes or cables to bridges
E03B	Water supply installations
E03D 11/17	Means for connecting water-closet bowls to the flushing pipe
E03D 11/18	Siphons for water-closets
E03F 3/04	Pipes or fittings specially adapted to sewers
E04D 13/08	Down pipes for roof drainage; Clamping means therefor
E04F 17/00	Vertical ducts, channels in buildings, e.g. chimneys
E21F 1/04	Air ducts for ventilation of mines or tunnels; Connections therefor
E21F 17/02	Suspension devices for tubes or the like in mines or tunnels
F01N	Gas flow silencers or exhaust apparatus for machines or engines
F16N 21/00	Conduits, junctions for lubrication systems
F17C 3/02	Thermal insulation of vessels not under pressure for storing liquified or solidified gases, e.g. Dewar flask
F22B 37/10	Water tubes of steam boilers
F23J 13/04	Joints, connections for chimneys or flues
F24H 9/12	Connecting circulation pipes to heaters
F28F 9/04	Arrangements for sealing elements into header boxes or end plates of heat-exchangers
G21C 15/22	Structural association of coolant tubes with headers or other pipes in nuclear reactors
H02G 3/04	Protective tubing or conduits for electric cables
H02G 3/30	Installations of electric cables or lines on walls, floors or ceilings
H02G 3/36	Installations of electric cables or lines in walls, floors or ceilings

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1/00 **Laying or reclaiming pipes; Repairing or joining pipes on or under water** (soldering or welding B23K; lifting-gear and load-engaging elements B66; hydraulic installations, soil drainage E02B; excavations or underwater constructions E02D; machines for digging trenches in combination with pipe-assembly E02F; laying sewer pipes E03F 3/06; in earth boreholes or wells E21B; tunnelling E21D; laying electric, or combined optical and electric, cables H02G; making special pipe joints, see the relevant groups for the joints) **[1, 2, 5, 6, 2006.01]**

1/024 • Laying or reclaiming pipes on land, e.g. above the ground (F16L 1/12 takes precedence) **[5, 2006.01]**

1/026 • • in or on a frozen surface **[6, 2006.01]**

1/028 • • in the ground (F16L 1/026 takes precedence) **[5, 6, 2006.01]**

1/032 • • • the pipes being continuous (F16L 1/038 takes precedence) **[5, 6, 2006.01]**

1/036 • • • the pipes being composed of sections of short length (F16L 1/038 takes precedence) **[5, 6, 2006.01]**

1/038 • • • the pipes being made in situ **[6, 2006.01]**

1/06 • • Accessories therefor, e.g. anchors **[5, 2006.01]**

1/09 • • • for bringing two tubular members closer to each other **[6, 2006.01]**

1/10 • • • for aligning **[5, 2006.01]**

1/11 • • • for the detection or protection of pipes in the ground **[6, 2006.01]**

1/12 • Laying or reclaiming pipes on or under water (buoyant hoses F16L 11/133) **[5, 2006.01]**

1/14 • • between the surface and the bottom **[5, 2006.01]**

1/15 • • • vertically **[6, 2006.01]**

1/16 • • on the bottom **[5, 2006.01]**

1/18 • • • the pipes being S- or J-shaped and under tension during laying **[5, 2006.01]**

1/19 • • • • the pipes being J-shaped **[6, 2006.01]**

1/20 • • Accessories therefor, e.g. floats, weights (buoys B63B 22/00) **[5, 2006.01]**

1/225 • • • Stingers **[6, 2006.01]**

1/23 • • • Pipe tensioning apparatus **[6, 2006.01]**

1/235 • • • Apparatus for controlling the pipe during laying **[6, 2006.01]**

1/24 • • • Floats; Weights **[5, 2006.01]**

1/26 • Repairing or joining pipes on or under water (buoyant hoses F16L 11/133; joints per se F16L 13/00-F16L 49/00) **[5, 2006.01]**

3/00 **Supports for pipes, cables or protective tubing, e.g. hangers, holders, clamps, cleats, clips, brackets** (anchors for holding pipes on or under the ground F16L 1/06; noise absorbers in the form of specially adapted hangers or supports F16L 55/035; arrangements specially adapted for supporting insulated bodies F16L 59/12) **[1, 5, 7, 2006.01]**

3/01 • for supporting or guiding the pipes, cables or protective tubing, between relatively movable points, e.g. movable channels (hauling- or hoisting-chains with arrangements for holding electric cables, hoses or the like F16G 13/16) **[5, 2006.01]**

3/015 • • using articulated- or supple-guiding elements (arrangements for cranes of means for transmitting pneumatic, hydraulic or electric power to movable parts or devices B66C 13/12) **[6, 2006.01]**

3/02 • partly surrounding the pipes, cables or protective tubing (bands or chains F16L 3/14) **[1, 2006.01]**

3/04 • • and pressing it against a wall or other support **[1, 2006.01]**

3/06 • • with supports for wires **[1, 2006.01]**

3/08 • substantially surrounding the pipe, cable or protective tubing **[1, 2006.01]**

3/10 • • divided, i.e. with two members engaging the pipe, cable or protective tubing **[1, 2006.01]**

3/11 • • • and hanging from a pendant (F16L 3/14 takes precedence) **[5, 2006.01]**

3/12 • • comprising a member substantially surrounding the pipe, cable or protective tubing **[1, 2006.01]**

3/123 • • • and extending along the attachment surface **[5, 2006.01]**

3/127 • • • and extending away from the attachment surface **[5, 2006.01]**

3/13 • • • and engaging it by snap action **[5, 2006.01]**

3/133 • • • and hanging from a pendant (F16L 3/14 takes precedence) **[5, 2006.01]**

3/137 • • • and consisting of a flexible band **[5, 2006.01]**

3/14 • Hangers in the form of bands or chains **[1, 2006.01]**

3/16 • with special provision allowing movement of the pipe (F16L 3/01 takes precedence; supporting pipes or cables inside other pipes or sleeves F16L 7/00) **[1, 5, 2006.01]**

3/18 • • allowing movement in axial direction **[1, 2006.01]**

3/20 • • allowing movement in transverse direction **[1, 2006.01]**

3/202 • • • the transverse movement being converted to a rotational movement (F16L 3/215 takes precedence) **[6, 2006.01]**

3/205 • • • having supporting springs **[5, 2006.01]**

3/21 • • • • providing constant supporting spring force **[5, 2006.01]**

3/215 • • • the movement being hydraulically or electrically controlled **[5, 2006.01]**
3/217 • • • • hydraulically **[6, 2006.01]**
3/22 • specially adapted for supporting a number of parallel pipes at intervals **[1, 6, 2006.01]**
3/223 • • each support having one transverse base for supporting the pipes (F16L 3/23, F16L 3/237 take precedence) **[6, 2006.01]**
3/227 • • • each pipe being supported by a separate element fastened to the base **[6, 2006.01]**
3/23 • • for a bundle of pipes or a plurality of pipes placed side by side in contact with each other (F16L 3/237 takes precedence) **[6, 2006.01]**
3/233 • • • by means of a flexible band **[6, 2006.01]**
3/237 • • for two pipes **[6, 2006.01]**
3/24 • with special member for attachment to profiled girders **[1, 2006.01]**
3/26 • specially adapted for supporting the pipes all along their length, e.g. pipe channels or ducts **[6, 2006.01]**

5/00 Devices for use where pipes, cables or protective tubing pass through walls or partitions (installations of electric cables or lines through walls, floors or ceilings H02G 3/22) **[1, 2006.01]**
5/02 • Sealing **[1, 2006.01]**

Note(s) [6]

Group F16L 5/14 takes precedence over groups F16L 5/04-F16L 5/12.

5/04 • • to form a firebreak device **[6, 2006.01]**
5/06 • • by means of a swivel nut compressing a ring or sleeve **[6, 2006.01]**
5/08 • • by means of axial screws compressing a ring or sleeve **[6, 2006.01]**
5/10 • • by using sealing rings or sleeves only **[6, 2006.01]**
5/12 • • the pipe being cut in two pieces **[6, 2006.01]**
5/14 • • for double-walled or multi-channel pipes **[6, 2006.01]**

7/00 Supporting pipes or cables inside other pipes or sleeves, e.g. for enabling pipes or cables to be inserted or withdrawn from under roads or railways without interruption of traffic (sleeves for supporting pipes, cables or protective tubing, between relatively movable points F16L 3/01) **[1, 5, 2006.01]**
7/02 • and sealing the pipes or cables inside the other pipes, cables or sleeves **[6, 2006.01]**

Pipes

9/00 Rigid pipes [1, 2006.01]
9/01 • of wood (F16L 9/16-F16L 9/22 take precedence) **[6, 2006.01]**
9/02 • of metal (F16L 9/16-F16L 9/22 take precedence; finned pipes F28F) **[1, 2006.01]**
9/04 • • Reinforced pipes **[1, 2006.01]**
9/06 • • Corrugated pipes **[1, 2006.01]**
9/08 • of concrete, cement, or asbestos cement, with or without reinforcement (F16L 9/16-F16L 9/22 take precedence) **[1, 2006.01]**
9/10 • of glass or ceramics, e.g. clay, clay tile, porcelain (F16L 9/16-F16L 9/22 take precedence) **[1, 2006.01]**
9/12 • of plastics with or without reinforcement (F16L 9/16-F16L 9/22 take precedence) **[1, 2006.01]**
9/127 • • the walls consisting of a single layer **[5, 2006.01]**
9/128 • • • Reinforced pipes **[6, 2006.01]**
9/133 • • the walls consisting of two layers **[5, 2006.01]**
9/14 • Compound tubes, i.e. made of materials not wholly covered by any one of the preceding groups (F16L 9/16-F16L 9/22 take precedence) **[1, 2006.01]**
9/147 • • comprising only layers of metal and plastics with or without reinforcement **[6, 2006.01]**
9/153 • • comprising only layers of metal and concrete with or without reinforcement **[6, 2006.01]**
9/16 • wound from sheets or strips, with or without reinforcement **[1, 2006.01]**
9/17 • obtained by bending a sheet longitudinally and connecting the edges **[6, 2006.01]**
9/18 • Double-walled pipes; Multi-channel pipes or pipe assemblies (joints therefor F16L 39/00) **[1, 2006.01]**
9/19 • • Multi-channel pipes or pipe assemblies **[4, 2006.01]**
9/21 • made of sound-absorbing materials or with sound-absorbing structure **[7, 2006.01]**
9/22 • Pipes composed of a plurality of segments **[1, 2006.01]**

11/00 Hoses, i.e. flexible pipes (hose-like supports for pipes, cables or protective tubing, between relatively movable points F16L 3/01; suction-cleaner hoses A47L 9/24) **[1, 5, 2006.01]**
11/02 • made of fibres or threads, e.g. of textile **[1, 2006.01]**
11/04 • made of rubber or flexible plastics **[1, 2006.01]**
11/06 • • with homogeneous wall (F16L 11/11 takes precedence) **[1, 2, 2006.01]**
11/08 • • with reinforcements embedded in the wall (F16L 11/11 takes precedence) **[1, 2, 2006.01]**
11/10 • • with reinforcements not embedded in the wall (F16L 11/11 takes precedence) **[1, 2, 2006.01]**
11/11 • • with corrugated wall **[2, 2006.01]**
11/112 • • • having reinforcements embedded in the wall **[5, 2006.01]**
11/115 • • • having reinforcements not embedded in the wall **[5, 2006.01]**
11/118 • • • having arrangements for particular purposes, e.g. electrically conducting **[5, 2006.01]**
11/12 • • with arrangements for particular purposes, e.g. specially profiled, with protecting layer, heated, electrically conducting (F16L 11/11 takes precedence) **[1, 2, 2006.01]**
11/127 • • • electrically conducting **[5, 2006.01]**
11/133 • • • buoyant **[5, 2006.01]**
11/14 • made of rigid material, e.g. metal or hard plastics **[1, 2006.01]**
11/15 • • corrugated (F16L 11/16 takes precedence) **[5, 2006.01]**
11/16 • • wound from profiled strips or bands **[1, 2006.01]**
11/18 • • Articulated hoses, e.g. composed of a series of rings **[1, 2006.01]**
11/20 • Double-walled hoses **[5, 2006.01]**
11/22 • Multi-channel hoses **[5, 2006.01]**
11/24 • wound from strips or bands (F16L 11/16 takes precedence) **[5, 2006.01]**
11/26 • made of sound-absorbing materials or with sound-absorbing structure **[7, 2006.01]**

Pipe joints; Hose nipples [2]

13/00 Non-disconnectable pipe joints, e.g. soldered, adhesive, or caulked joints (joints for rigid pipes of plastics F16L 47/00) **[1, 2006.01]**
13/007 • specially adapted for joining pipes of dissimilar materials **[5, 2006.01]**

13/013 • • Accessories therefor **[5, 2006.01]**
13/02 • Welded joints **[1, 2006.01]**
13/04 • • with arrangements preventing overstressing **[1, 2006.01]**
13/06 • • • with tension-relief of the weld by means of detachable members, e.g. divided tensioning rings, bolts in flanges **[1, 2006.01]**
13/08 • Soldered joints **[1, 2006.01]**
13/10 • Adhesive or cemented joints **[1, 2006.01]**
13/11 • • using materials which fill the space between parts of a joint before hardening **[2, 2006.01]**
13/12 • with a seal made of lead, caulked packing, or the like **[1, 2006.01]**
13/14 • made by plastically deforming the material of the pipe, e.g. by flanging, rolling **[1, 2006.01]**
13/16 • • the pipe joint consisting of overlapping extremities having mutually co-operating collars **[5, 2006.01]**

15/00 **Screw-threaded joints** (casing joints used in deep-drilling E21B 17/08; joints sealed primarily by means other than engagement of screw-threads, see the relevant groups characterised by the sealing arrangements)**; Forms of screw-threads for such joints [1, 2006.01]**
15/02 • allowing substantial longitudinal adjustment by the use of a long screw-threaded part **[1, 2006.01]**
15/04 • with additional sealings **[2, 2006.01]**
15/06 • characterised by the shape of the screw-thread **[5, 2006.01]**
15/08 • with supplementary elements (F16L 15/04 takes precedence) **[5, 2006.01]**

17/00 **Joints with packing adapted to sealing by fluid pressure** (compensating devices F16L 51/00) **[1, 2006.01]**
17/02 • with sealing rings arranged between outer surface of pipe and inner surface of sleeve or socket **[1, 2006.01]**
17/025 • • the sealing rings having radially directed ribs **[5, 2006.01]**
17/03 • • having annular axial lips **[2, 2006.01]**
17/035 • • • the sealing rings having two lips parallel to each other **[5, 2006.01]**
17/04 • • with longitudinally split or divided sleeve **[1, 2006.01]**
17/06 • with sealing rings arranged between the end surfaces of the pipes or flanges or arranged in recesses in the pipe ends or flanges **[1, 2006.01]**
17/067 • • Plastics sealing rings **[6, 2006.01]**
17/073 • • • the sealing rings having two lips parallel to each other **[6, 2006.01]**
17/08 • • Metal sealing rings **[5, 2006.01]**
17/10 • the packing being sealed by the pressure of a fluid other than the fluid in or surrounding the pipe (expansion-compensation arrangements for pipe-lines F16L 51/00) **[5, 2006.01]**

19/00 **Joints in which sealing surfaces are pressed together by means of a member, e.g. a swivel nut, screwed on, or into, one of the joint parts** (F16L 17/00 takes precedence; if using bolts or equivalent connecting means F16L 23/00; connecting arrangements or other fittings specially adapted to be made of plastics or to be used with pipes made of plastics F16L 47/00) **[1, 2006.01]**
19/02 • Pipe ends provided with collars or flanges, integral with the pipe or not, pressed together by a screwed member **[1, 2006.01]**
19/025 • • the pipe ends having integral collars or flanges **[5, 2006.01]**
19/028 • • • the collars or flanges being obtained by deformation of the pipe wall **[6, 2006.01]**
19/03 • • with flexible sealing rings between the sealing surfaces **[2, 2006.01]**
19/04 • using additional rigid rings, sealing directly on at least one pipe end, which is flared either before or during the making of the connection **[1, 2006.01]**
19/05 • • with a rigid pressure ring between the screwed member and the exterior of the flared pipe end **[5, 2006.01]**
19/06 • in which radial clamping is obtained by wedging action on non-deformed pipe ends **[1, 2006.01]**
19/065 • • the wedging action being effected by means of a ring **[5, 2006.01]**
19/07 • • adapted for use in socket or sleeve connections **[2, 2006.01]**
19/075 • • specially adapted for spigot-and-socket joints **[5, 2006.01]**
19/08 • with metal rings which bite into the wall of the pipe **[1, 2006.01]**
19/10 • • the profile of the ring being altered **[5, 2006.01]**
19/12 • • • with additional sealing means **[5, 2006.01]**
19/14 • • • the rings being integral with one of the connecting parts **[6, 2006.01]**

21/00 **Joints with sleeve or socket** (F16L 13/00, F16L 17/00, F16L 19/00 take precedence; connecting arrangements or other fittings specially adapted to be made of plastics or to be used with pipes made of plastics F16L 47/00; specially adapted for pipes of brittle material F16L 49/00) **[1, 2006.01]**
21/02 • with elastic sealing rings between pipe and sleeve or between pipe and socket, e.g. with rolling or other prefabricated profiled rings (F16L 21/06, F16L 21/08 take precedence; if adjustability is essential F16L 27/00) **[1, 2006.01]**
21/025 • • Rolling sealing rings **[5, 2006.01]**
21/03 • • placed in the socket before connection (F16L 21/025 takes precedence) **[5, 2006.01]**
21/035 • • placed around the spigot end before connection (F16L 21/025 takes precedence) **[5, 2006.01]**
21/04 • • in which sealing rings are compressed by axially-movable members **[1, 2006.01]**
21/05 • • comprising a first ring being placed on a male part and a second ring in the sleeve or socket **[6, 2006.01]**
21/06 • with a divided sleeve or ring clamping around the pipe ends (flanged joints F16L 23/00; couplings of the quick-acting type F16L 37/00) **[1, 2006.01]**
21/08 • with additional locking means (F16L 21/06 takes precedence; couplings of the quick-acting type F16L 37/00) **[1, 2006.01]**

23/00 **Flanged joints** (F16L 13/00, F16L 17/00, F16L 19/00 take precedence; adjustable joints F16L 27/00; for hoses F16L 33/00; couplings of the quick-acting type F16L 37/00; for double-walled or multi-channel pipes, or pipe assemblies F16L 39/00; connecting arrangements or other fittings specially adapted to be made of plastics or to be used with pipes made of plastics F16L 47/00; specially adapted for pipes of brittle material F16L 49/00) **[1, 2006.01]**
23/02 • the flanges being connected by members tensioned axially (F16L 23/12 takes precedence) **[2, 5, 2006.01]**
23/024 • • characterised by how the flanges are joined to, or form an extension of, the pipes **[5, 2006.01]**

23/026 • • • by welding **[6, 2006.01]**
23/028 • • • the flanges being held against a shoulder **[5, 2006.01]**
23/032 • • characterised by the shape or composition of the flanges **[5, 2006.01]**
23/036 • • characterised by the tensioning members, e.g. specially adapted bolts or C-clamps **[5, 2006.01]**
23/04 • the flanges being connected by members tensioned in the radial plane (F16L 23/12 takes precedence) **[2, 5, 2006.01]**
23/06 • • connected by toggle-action levers (quick acting couplings tightened by toggle-action levers F16L 37/20) **[5, 2006.01]**
23/08 • • connection by tangentially arranged pin and nut **[5, 2006.01]**
23/10 • • • with a pivoting or swinging pin **[5, 2006.01]**
23/12 • specially adapted for particular pipes **[5, 2006.01]**
23/14 • • for rectangular pipes **[5, 2006.01]**
23/16 • characterised by the sealing means **[5, 2006.01]**
23/18 • • the sealing means being rings **[6, 2006.01]**
23/20 • • • made exclusively of metal **[6, 2006.01]**
23/22 • • • made exclusively of a material other than metal **[6, 2006.01]**
23/24 • • specially adapted for unequal expansion of the parts of the joint **[6, 2006.01]**

25/00 Construction or details of pipe joints not provided for in, or of interest apart from, groups F16L 13/00-F16L 23/00 (adjustable or allowing movement F16L 27/00; with fluid cut-off means F16L 29/00; quick-acting F16L 37/00; for double-walled or multi-channel pipes F16L 39/00; connecting arrangements or other fittings specially adapted to be made of plastics or to be used with pipes made of plastics F16L 47/00; specially adapted for pipes of brittle material F16L 49/00) **[1, 2006.01]**
25/01 • specially adapted for realising electrical conduction between the two pipe ends of the joint or between parts thereof (electrically-conductive connections between or with tubular conductors H01R 4/60) **[7, 2006.01]**
25/02 • specially adapted for electrically insulating the two pipe ends of the joint from each other **[2, 2006.01]**
25/03 • • in non-disconnectable pipe joints **[7, 2006.01]**
25/04 • comprising a collar or ring having a threaded pin rigid with the pipe-encircling member **[5, 2006.01]**
25/06 • comprising radial locking means **[5, 2006.01]**
25/08 • • in the form of screws, nails or the like **[6, 2006.01]**
25/10 • Sleeveless joints between two pipes, one being introduced into the other **[7, 2006.01]**
25/12 • Joints for pipes being spaced apart axially **[7, 2006.01]**
25/14 • Joints for pipes of different diameters or cross-section **[7, 2006.01]**

27/00 Adjustable joints; Joints allowing movement (of the quick-acting type F16L 37/50; for double-walled or multi-channel pipes or pipe assemblies F16L 39/04; swivel joints in hose lines used for flushing boreholes E21B 21/02) **[1, 5, 2006.01]**
27/02 • Universal joints, i.e. with mechanical connection allowing angular movement or adjustment of the axes of the parts in any direction **[1, 2006.01]**
27/04 • • with partly-spherical engaging surfaces **[1, 2006.01]**
27/047 • • • held in place by a screwed member having an internal spherical surface **[5, 2006.01]**
27/053 • • • held in place by bolts passing through flanges **[5, 2006.01]**
27/06 • • • with special sealing means between the engaging surfaces **[1, 2006.01]**
27/067 • • • • the sealing means being actuated by the medium pressure **[5, 2006.01]**
27/073 • • • • one of the cooperating surfaces forming the sealing means **[5, 2006.01]**
27/08 • allowing adjustment or movement only about the axis of one pipe **[1, 2006.01]**
27/087 • • Joints with radial fluid passages **[6, 2006.01]**
27/093 • • • of the "banjo" type, i.e. pivoting right-angle couplings **[6, 2006.01]**
27/10 • comprising a flexible connection only **[1, 2006.01]**
27/103 • • in which a flexible element, e.g. a rubber-metal laminate, which undergoes constraints consisting of shear and flexure, is sandwiched between partly curved surfaces **[6, 2006.01]**
27/107 • • the ends of the pipe being interconnected by a flexible sleeve **[5, 2006.01]**
27/108 • • • the sleeve having the form of a bellows with only one corrugation **[6, 2006.01]**
27/11 • • • the sleeve having the form of a bellows with multiple corrugations **[6, 2006.01]**
27/111 • • • • the bellows being reinforced **[6, 2006.01]**
27/113 • • the ends of the pipe being interconnected by a rigid sleeve **[5, 2006.01]**
27/12 • allowing substantial longitudinal adjustment or movement (by use of screw-thread F16L 15/02) **[1, 2006.01]**

29/00 Joints with fluid cut-off means (quick-acting joints with cut-off means F16L 37/28) **[1, 2006.01]**
29/02 • with a cut-off device in one of the two pipe ends, the cut-off device being automatically opened when the coupling is applied **[5, 2006.01]**
29/04 • with a cut-off device in each of the two pipe ends, the cut-off devices being automatically opened when the coupling is applied **[5, 2006.01]**

31/00 Arrangements for connecting hoses to one another or to flexible sleeves (F16L 33/00 takes precedence) **[1, 2006.01]**
31/02 • for branching hoses **[6, 2006.01]**

33/00 Arrangements for connecting hoses to rigid members (hand tools for inserting fittings into hoses B25B 27/10)**; Rigid hose-connectors, i.e. single members engaging both hoses** (connecting arrangements or other fittings specially adapted to be made of plastics or to be used with pipes made of plastics F16L 47/00) **[1, 2006.01]**

Note(s) [7]

Groups F16L 33/01 and F16L 33/26 take precedence over other subgroups

33/01 • specially adapted for hoses having a multi-layer wall **[2, 2006.01]**
33/02 • Hose-clips **[1, 2006.01]**
33/025 • • tightened by deforming radially extending loops or folds **[7, 2006.01]**
33/03 • • Self-locking elastic clips **[7, 2006.01]**
33/035 • • fixed by means of teeth or hooks **[7, 2006.01]**
33/04 • • tightened by tangentially-arranged threaded pin and nut **[1, 2006.01]**
33/06 • • • in which the threaded pin is rigid with the hose-encircling member **[1, 2006.01]**

33/08 • • in which a worm coacts with a part of the hose-encircling member that is toothed like a worm-wheel **[1, 2006.01]**
33/10 • • with a substantially-radial tightening member **[1, 2006.01]**
33/12 • • with a pivoted or swinging tightening or securing member, e.g. toggle lever **[1, 2006.01]**
33/14 • • with a taping-bolt, i.e. winding up the end of the hose-encircling member **[1, 2006.01]**
33/16 • with sealing or securing means using fluid pressure **[1, 2006.01]**
33/18 • characterised by the use of additional sealing means **[1, 2006.01]**
33/20 • Undivided rings, sleeves, or like members contracted on the hose or expanded inside the hose by means of tools; Arrangements using such members **[1, 2006.01]**
33/207 • • only a sleeve being contracted on the hose **[5, 2006.01]**
33/213 • • only a sleeve being expanded inside the hose **[5, 2006.01]**
33/22 • with means not mentioned in the preceding groups for gripping the hose between inner and outer parts **[1, 2006.01]**
33/23 • • the outer parts being segmented, the segments being pressed against the hose by tangentially arranged members **[2, 2006.01]**
33/24 • with parts screwed directly on or into the hose (F16L 33/22 takes precedence) **[1, 2006.01]**
33/26 • specially adapted for hoses made of metal **[1, 2006.01]**
33/28 • for hoses with one end terminating in a radial flange or collar **[5, 2006.01]**
33/30 • comprising parts inside the hoses only (F16L 33/24 takes precedence) **[7, 2006.01]**
33/32 • comprising parts outside the hoses only (F16L 33/24 takes precedence) **[7, 2006.01]**
33/34 • with bonding obtained by vulcanisation, gluing, melting, or the like **[7, 2006.01]**

35/00 Special arrangements used in connection with end fittings of hoses, e.g. safety or protecting devices [1, 2006.01]

37/00 Couplings of the quick-acting type (radially-binding sleeves F16L 17/04, F16L 21/06; connecting hoses to rigid members F16L 33/00; connections made automatically when vehicles are brought together B60D, B61G; specially adapted for lubricating devices F16N 21/00) **[1, 2006.01]**
37/02 • in which the connection is maintained only by friction of the parts being joined (F16L 37/22 takes precedence) **[1, 2006.01]**
37/04 • • with an elastic outer part pressing against an inner part by reason of its elasticity (with locking members F16L 37/08) **[1, 2006.01]**
37/05 • • • tightened by the pressure of a mechanical organ **[5, 2006.01]**
37/06 • • • tightened by fluid pressure **[1, 2006.01]**
37/08 • in which the connection between abutting or axially-overlapping ends is maintained by locking members (F16L 37/22-F16L 37/26 take precedence) **[1, 2006.01]**
37/084 • • combined with automatic locking **[5, 2006.01]**
37/086 • • • by means of latching members pushed radially by spring-like elements **[7, 2006.01]**
37/088 • • • by means of a split elastic ring **[5, 2006.01]**
37/091 • • • by means of a ring provided with teeth or fingers **[7, 2006.01]**
37/092 • • • by means of elements wedged between the pipe and the frusto-conical surface of the body of the connector **[5, 2006.01]**
37/096 • • • by means of hooks hinged about an axis **[5, 2006.01]**
37/098 • • • by means of flexible hooks **[7, 2006.01]**
37/10 • • using a rotary external sleeve or ring on one part **[1, 2006.01]**
37/107 • • • Bayonet-type couplings **[7, 2006.01]**
37/113 • • • the male part having lugs on its periphery penetrating into the corresponding slots provided in the female part **[7, 2006.01]**
37/12 • • using hooks, pawls, or other movable or insertable locking members (F16L 37/084 takes precedence) **[1, 5, 2006.01]**
37/124 • • • using bolts, fixed to a flange, which are able to tilt in slots of another flange, and being maintained there by the tightening of nuts **[7, 2006.01]**
37/127 • • • using hooks hinged about an axis **[5, 2006.01]**
37/133 • • • using flexible hooks **[5, 2006.01]**
37/138 • • • using an axially movable sleeve **[7, 2006.01]**
37/14 • • • Joints secured by inserting between mating surfaces an element, e.g. a piece of wire, a pin, a chain **[1, 2006.01]**
37/15 • • • • the element being a wedge **[7, 2006.01]**
37/16 • • • Joints tightened by the action of wedge-shaped hinged hooks **[1, 2006.01]**
37/18 • • • Joints tightened by eccentrics or rotatable cams **[1, 2006.01]**
37/20 • • • Joints tightened by toggle-action levers **[1, 2006.01]**
37/22 • in which the connection is maintained by means of balls, rollers, or helical springs under radial pressure between the parts **[1, 2006.01]**
37/23 • • by means of balls **[5, 2006.01]**
37/24 • in which the connection is made by inserting one member axially into the other and rotating it to a limited extent, e.g. with bayonet-action **[1, 2006.01]**
37/244 • • the coupling being co-axial with the pipe **[5, 2006.01]**
37/248 • • • Bayonet-type couplings **[5, 2006.01]**
37/252 • • • the male part having lugs on its periphery penetrating into the corresponding slots provided in the female part **[5, 2006.01]**
37/256 • • the coupling not being coaxial with the pipe **[5, 2006.01]**
37/26 • in which the connection is made by transversely moving the parts together, with or without their subsequent rotation **[1, 2006.01]**
37/28 • with fluid cut-off means **[1, 2006.01]**
37/30 • • with fluid cut-off means in each of two pipe-end fittings **[5, 2006.01]**
37/32 • • • at least one of two lift valves being opened automatically when the coupling is applied **[5, 2006.01]**
37/33 • • • • the lift valves being of the ball type **[7, 2006.01]**
37/34 • • • • at least one of the lift valves being of the sleeve type, i.e. a sleeve being telescoped over an inner cylindrical wall **[5, 2006.01]**
37/35 • • • • at least one of the valves having an axial bore communicating with lateral apertures **[7, 2006.01]**

37/36 • • • with two lift valves being actuated to initiate the flow through the coupling after the two coupling parts are locked against withdrawal **[5, 2006.01]**
37/367 • • • with two gate valves or sliding valves **[7, 2006.01]**
37/373 • • • with two taps or cocks **[7, 2006.01]**
37/38 • • with fluid cut-off means in only one of two pipe-end fittings **[5, 2006.01]**
37/40 • • • with a lift valve being opened automatically when the coupling is applied **[5, 2006.01]**
37/407 • • • • the lift valve being of the ball type **[7, 2006.01]**
37/413 • • • • the lift valve being of the sleeve type, i.e. a sleeve being telescoped over an inner cylindrical wall **[7, 2006.01]**
37/42 • • • • the valve having an axial bore communicating with lateral apertures **[5, 2006.01]**
37/44 • • • with one lift valve being actuated to initiate the flow through the coupling after the two coupling parts are locked against withdrawal **[5, 2006.01]**
37/46 • • • with a gate valve or sliding valve **[5, 2006.01]**
37/47 • • • with a tap or cock **[7, 2006.01]**
37/48 • for fastening a pipe on the end of a tap **[5, 2006.01]**
37/50 • adjustable; allowing movement of the parts joined **[5, 2006.01]**
37/52 • • Universal joints, i.e. with a mechanical connection allowing angular movement or adjustment of the axes of the parts in any direction **[5, 2006.01]**
37/53 • • allowing adjustment or movement only about the axis of one pipe **[7, 2006.01]**
37/54 • • for pipes under pressure which are supported only on one side **[5, 2006.01]**
37/56 • for double-walled or multi-channel pipes **[5, 2006.01]**
37/58 • the extremities of the two halves of the joint being pressed against each other without being locked in position **[5, 2006.01]**
37/60 • with plug and fixed wall housing **[7, 2006.01]**
37/62 • pneumatically or hydraulically actuated **[7, 2006.01]**

39/00 Joints or fittings for double-walled or multi-channel pipes or pipe assemblies [1, 2006.01]
39/02 • for hoses **[1, 2006.01]**
39/04 • allowing adjustment or movement **[1, 2006.01]**
39/06 • of the multiline swivel type, e.g. comprising a plurality of axially mounted modules **[7, 2006.01]**

41/00 Branching pipes; Joining pipes to walls (F16L 39/00 takes precedence; connections not designed for conveying fluid F16B 9/00; joints suitable for connecting together pipe ends, see the relevant groups) **[1, 2006.01]**
41/02 • Branch units, e.g. made in one piece, welded, riveted **[1, 2006.01]**
41/03 • • comprising junction pieces for four or more pipe members **[5, 2006.01]**
41/04 • Tapping pipe walls, i.e. making connections through the walls of pipes while they are carrying fluids; Fittings therefor (apparatus or operations relating to metal-working steps, see the relevant classes for metal-working) **[1, 2006.01]**
41/06 • • making use of attaching means embracing the pipe **[1, 2006.01]**
41/08 • Joining pipes to walls or pipes, the joined pipe axis being perpendicular to the plane of a wall or to the axis of another pipe (F16L 41/02 takes precedence) **[2, 2006.01]**
41/10 • • the extremity of the pipe being screwed into the wall **[5, 2006.01]**
41/12 • • using attaching means embracing the pipe **[5, 2006.01]**
41/14 • • by screwing an intermediate part against the inside or outside of the wall **[5, 2006.01]**
41/16 • • the branch pipe comprising fluid cut-off means **[5, 2006.01]**
41/18 • the branch pipe being movable **[7, 2006.01]**

43/00 Bends; Siphons (with cleaning apertures F16L 45/00; siphons for water-closets E03D 11/18; siphons in general F04F 10/00) **[1, 2006.01]**
43/02 • adapted to make use of special securing means **[1, 2006.01]**

45/00 Pipe units with cleaning aperture and closure therefor [1, 2006.01]

47/00 Connecting arrangements or other fittings specially adapted to be made of plastics or to be used with pipes made of plastics (packing, for joints, adapted to sealing by fluid pressure F16L 17/00) **[1, 2006.01]**
47/02 • Welded joints; Adhesive joints **[1, 2006.01]**
47/03 • • Welded joints with an electrical resistance incorporated in the joint **[7, 2006.01]**
47/04 • with a swivel nut or collar engaging the pipe **[2, 2006.01]**
47/06 • with sleeve or socket formed by or in the pipe end **[2, 2006.01]**
47/08 • • with sealing rings arranged between the outer surface of one pipe end and the inner surface of the sleeve or socket, the sealing rings being placed previously in the sleeve or socket **[7, 2006.01]**
47/10 • • • the sealing rings being maintained in place by additional means **[7, 2006.01]**
47/12 • • with additional locking means **[7, 2006.01]**
47/14 • Flanged joints **[7, 2006.01]**
47/16 • Screw-threaded joints **[7, 2006.01]**
47/18 • Adjustable joints; Joints allowing movement **[7, 2006.01]**
47/20 • based principally on specific properties of plastics **[7, 2006.01]**
47/22 • • using shrink-down material **[7, 2006.01]**
47/24 • • for joints between metal and plastics pipes **[7, 2006.01]**
47/26 • for branching pipes; for joining pipes to walls; Adaptors therefor **[7, 2006.01]**
47/28 • • Joining pipes to walls or to other pipes, the axis of the joined pipe being perpendicular to the wall or to the axis of the other pipe **[7, 2006.01]**
47/30 • • • using attaching means embracing the pipe **[7, 2006.01]**
47/32 • • Branch units, e.g. made in one piece, welded, riveted **[7, 2006.01]**
47/34 • • Tapping pipes, i.e. making connections through walls of pipes while carrying fluids; Fittings therefor **[7, 2006.01]**

49/00 Connecting arrangements, e.g. joints, specially adapted for pipes of brittle material, e.g. glass, earthenware [1, 2006.01]
49/02 • Joints with a sleeve or socket **[5, 2006.01]**
49/04 • Flanged joints **[5, 2006.01]**

49/06 • Joints in which sealing surfaces are pressed together by means of a member, e.g. swivel nut, screwed on, or into, one of the joint parts **[7, 2006.01]**

49/08 • Adjustable joints; Joints allowing movement **[7, 2006.01]**

51/00 Expansion-compensation arrangements for pipe-lines (telescopic pipes F16L 27/12) **[1, 2006.01]**

51/02 • making use of a bellows or an expansible folded or corrugated tube **[1, 2006.01]**

51/03 • • comprising two or more bellows **[5, 2006.01]**

51/04 • making use of bends, e.g. lyre-shaped **[1, 2006.01]**

53/00 Heating or cooling pipes or pipe systems (preventing freezing of pipes, thawing frozen pipes E03B 7/12, E03B 7/14; pipe-line systems, pipe-lines F17D) **[1, 2006.01]**

55/00 Devices or appurtenances for use in, or in connection with, pipes or pipe systems (F16L 1/00-F16L 53/00, F16L 57/00, F16L 59/00 take precedence; repairing or joining pipes on or under water F16L 1/26; nozzles B05B; cleaning of pipes B08B 9/02, e.g. removal of blockages B08B 9/027; devices for preventing bursting of water pipes by freezing E03B 7/10; for domestic plumbing installations E03C 1/00; arrangements for sealing leaky tubes or conduits of heat-exchangers F28F 11/00) **[1, 2006.01]**

55/02 • Energy absorbers; Noise absorbers (in valves F16K 47/00) **[1, 2006.01]**

55/027 • • Throttle passages (influencing fluid flow F15D 1/00; control of fluid flow G05D 7/00) **[5, 2006.01]**

55/033 • • Noise absorbers (F16L 55/027 takes precedence) **[5, 2006.01]**

55/035 • • • in the form of specially adapted hangers or supports **[7, 2006.01]**

55/04 • Devices damping pulsations or vibrations in fluids **[1, 2006.01]**

55/045 • • specially adapted to prevent or minimise the effects of water hammer **[5, 2006.01]**

55/05 • • • Buffers therefor (accumulators F15B 1/04) **[5, 2006.01]**

55/052 • • • • Pneumatic reservoirs **[7, 2006.01]**

55/053 • • • • • the gas in the reservoir being separated from the fluid in the pipe **[7, 2006.01]**

55/054 • • • • • • the reservoir being placed in or around the pipe from which it is separated by a sleeve-shaped membrane **[7, 2006.01]**

55/055 • • • Valves therefor **[5, 2006.01]**

55/07 • Arrangement or mounting of devices, e.g. valves, for venting or aerating or draining (arrangement of draining devices in water-supply systems E03B 7/08; apparatus for draining F16K, F16T; venting or aerating devices per se F16K 24/00) **[2, 2006.01]**

55/09 • Air-conditioning, e.g. de-watering, in pneumatic systems (in general F24) **[1, 2006.01]**

55/10 • Means for stopping flow in pipes or hoses (F16L 29/00, F16L 37/28 take precedence; for covering leaks F16L 55/16; valves F16K) **[1, 7, 2006.01]**

55/103 • • by temporarily freezing liquid sections in the pipe **[7, 2006.01]**

55/105 • • Closing devices introduced radially into the pipe or hose **[5, 2006.01]**

55/11 • • Plugs **[5, 2006.01]**

55/115 • • Caps **[5, 2006.01]**

55/12 • • by introducing into the pipe a member expandable in situ (inflatable cut-off valves F16K 7/10) **[1, 2006.01]**

55/124 • • • introduced radially into the pipe or hose **[5, 2006.01]**

55/128 • • • introduced axially into the pipe or hose **[5, 2006.01]**

55/13 • • • • the closure device being a plug fixed by plastic deformation **[7, 2006.01]**

55/132 • • • • the closure device being a plug fixed by radially deforming the packing **[5, 2006.01]**

55/134 • • • • • by means of an inflatable packing **[7, 2006.01]**

55/136 • • • • the closure device being a plug fixed by radially expanding or deforming a split ring, hooks or the like **[5, 2006.01]**

55/16 • Devices for covering leaks in pipes or hoses, e.g. hose-menders **[1, 7, 2006.01]**

55/162 • • from inside the pipe (specially adapted for bends, branch units, branching pipes, or the like F16L 55/179) **[5, 7, 2006.01]**

55/163 • • • a ring, a band or a sleeve being pressed against the inner surface of the pipe **[7, 2006.01]**

55/164 • • • a sealing fluid being introduced in the pipe (F16L 55/1645 takes precedence) **[7, 2006.01]**

55/1645 • • • a sealing material being introduced inside the pipe by means of a tool moving in the pipe **[7, 2006.01]**

55/165 • • • a pipe being inserted in the damaged section **[5, 7, 2006.01]**

55/168 • • from outside the pipe (specially adapted for bends, branch units, branching pipes, or the like F16L 55/179) **[5, 7, 2006.01]**

55/17 • • • by means of rings, bands or sleeves pressed against the outside surface of the pipe or hose (hose-clips for connecting hoses to rigid members F16L 33/02) **[5, 7, 2006.01]**

55/172 • • • • the ring, band or sleeve being tightened by a tangentially arranged threaded pin and a nut **[5, 7, 2006.01]**

55/175 • • • by using materials which fill a space around the pipe before hardening **[5, 7, 2006.01]**

55/178 • • • by clamping an outer gasket against a joint with sleeve or socket **[5, 7, 2006.01]**

55/179 • • specially adapted for bends, branch units, branching pipes or the like **[7, 2006.01]**

55/18 • Appliances for use in repairing pipes (F16L 55/10 takes precedence) **[1, 2006.01]**

55/24 • Preventing accumulation of dirt or other matter in pipes, e.g. by traps, by strainers **[1, 2006.01]**

55/26 • Pigs or moles, i.e. devices movable in a pipe or conduit with or without self-contained propulsion means (tunnel railway systems B61B 13/10; conveying articles through pipes or tubes, e.g. tube mail systems, B65G 51/00) **[5, 2006.01]**

Note(s) [5]

1. Pigs or moles specially adapted for particular applications are classified in the relevant places for the applications, e.g.
   - stopping flow from or in pipes or hoses F16L 55/12;
   - repairing pipes F16L 55/18;
   - applying liquids or other fluent materials to the inside of tubes B05C 7/08;

- cleaning pipes or tubes or systems of pipes or tubes B08B 9/02;
- welding or cutting B23K 37/02;
- earth drilling E21B;
- cleaning chimneys F23J 3/02;
- cleaning internal or external surfaces of heat-exchange or heat-transfer conduits F28G;
- measuring, testing G01;
- inspection of vessels in nuclear reactors G21C 17/003;
- inspection or maintenance of pipe-lines or tubes in nuclear installations G21C 17/017;
- installing electric, or combined optical and electric, cables or lines H02G.

2. In this group, it is desirable to add the indexing codes of group F16L 101/00.

55/28 • • Constructional aspects **[6, 2006.01]**
55/30 • • • of the propulsion means, e.g. towed by cables **[6, 2006.01]**
55/32 • • • • being self-contained **[6, 2006.01]**
55/34 • • • • • the pig or mole being moved step by step **[6, 2006.01]**
55/36 • • • • • jet driven **[6, 2006.01]**
55/38 • • • • driven by fluid pressure **[6, 2006.01]**
55/40 • • • of the body **[6, 2006.01]**
55/42 • • • • gelled or degradable **[6, 2006.01]**
55/44 • • • • expandable **[6, 2006.01]**
55/46 • • Launching or retrieval of pigs or moles **[6, 2006.01]**
55/48 • • Indicating the position of the pig or mole in the pipe or conduit **[6, 2006.01]**

57/00 Protection of pipes or objects of similar shape against external or internal damage or wear (supporting of pipes inside other pipes or sleeves F16L 7/00; used in connection with end fittings of hoses F16L 35/00; protection of pipes or pipe fittings against corrosion or incrustation F16L 58/00; protection thereof during transport B65D, e.g. B65D 59/00) **[1, 2006.01]**
57/02 • against cracking or buckling **[7, 2006.01]**
57/04 • against fire or other external sources of extreme heat **[7, 2006.01]**
57/06 • against wear (F16L 57/04 takes precedence) **[7, 2006.01]**

58/00 Protection of pipes or pipe fittings against corrosion or incrustation (supporting of pipes inside other pipes or sleeves F16L 7/00; compound tubes F16L 9/14; cleaning pipes or tubes B08B 9/02) **[1, 2006.01]**
58/02 • by means of internal or external coatings (coatings for thermal insulation F16L 59/00; methods or machines for applying coatings, see the relevant places, e.g. B28B 21/94) **[2, 2006.01]**
58/04 • • Coatings characterised by the materials used (F16L 58/16 takes precedence; compositions, see the relevant classes, e.g. C04B) **[2, 2006.01]**
58/06 • • • by cement, concrete, or the like **[2, 2006.01]**
58/08 • • • by metal **[2, 2006.01]**
58/10 • • • by rubber or plastics **[2, 2006.01]**
58/12 • • • by tar or bitumen **[2, 2006.01]**
58/14 • • • by ceramic or vitreous materials **[2, 2006.01]**
58/16 • • the coating being in the form of a bandage (apparatus for covering cores by winding B65H 81/00) **[2, 2006.01]**
58/18 • specially adapted for pipe fittings **[2, 2006.01]**

59/00 Thermal insulation in general (heat, sound insulation in buildings E04B; heat insulation of steam engines F01B 31/08; heat insulation in rotary piston machines or engines F01C 21/06; heat insulation of pumps F04C 29/04; thermal insulation of pressure vessels F17C 1/12; vessels not under pressure, with provision for insulation F17C 3/02) **[1, 2006.01]**
59/02 • Shape or form of insulating materials, with or without coverings integral with the insulating materials (chemical aspects, see the relevant classes) **[1, 2006.01]**
59/04 • Arrangements using dry fillers, e.g. using slag wool **[1, 2006.01]**
59/05 • • in prefabricated shells or covers **[2, 2006.01]**
59/06 • Arrangements using an air layer or vacuum **[1, 2006.01]**
59/065 • • using vacuum (F16L 59/075 takes precedence) **[7, 2006.01]**
59/07 • • the air layer being enclosed by one or more layers of insulation **[7, 2006.01]**
59/075 • • the air layer or the vacuum being delimited by longitudinal channels distributed around the circumference of a tube **[7, 2006.01]**
59/08 • Means for preventing radiation, e.g. with metal foil **[1, 2006.01]**
59/10 • Bandages or covers for the protection of the insulation, e.g. against the influence of the environment or against mechanical damage (integral with insulating materials F16L 59/02) **[1, 2006.01]**
59/11 • • Rigid covers for elbows **[7, 2006.01]**
59/12 • Arrangements for supporting insulation from the wall or body insulated, e.g. by means of spacers between pipe and heat-insulating material; Arrangements specially adapted for supporting insulated bodies **[1, 2006.01]**
59/125 • • Helical spacers **[7, 2006.01]**
59/13 • • Resilient supports **[7, 2006.01]**
59/135 • • Hangers or supports specially adapted for insulated pipes **[7, 2006.01]**
59/14 • Arrangements for the insulation of pipes or pipe systems (F16L 59/02-F16L 59/12 take precedence) **[1, 2006.01]**
59/147 • • the insulation being located inwardly of the outer surface of the pipe **[5, 2006.01]**
59/15 • • for underground pipes **[7, 2006.01]**
59/153 • • for flexible pipes **[5, 2006.01]**
59/16 • • Arrangements specially adapted to local requirements at flanges, junctions, valves, or the like (means in or on valves for heating or cooling F16K 49/00) **[1, 2006.01]**
59/18 • • • adapted for joints **[5, 2006.01]**
59/20 • • • • for non-disconnectable joints **[5, 2006.01]**
59/21 • • • adapted for expansion-compensation devices **[7, 2006.01]**
59/22 • • • adapted for bends **[5, 2006.01]**

Indexing scheme associated with groups F16L 55/26-F16L 55/48, relating to uses and applications of pigs or moles. [6]

101/00 Uses or applications of pigs or moles [6, 2006.01]

101/10 • Treating the inside of pipes **[6, 2006.01]**
101/12 • • Cleaning **[6, 2006.01]**
101/14 • • Drying **[6, 2006.01]**

101/16 • • Coating by application of fluent materials, e.g. painting **[6, 2006.01]**
101/18 • • Lining other than coating **[6, 2006.01]**
101/20 • Expelling gases or fluids **[6, 2006.01]**
101/30 • Inspecting, measuring or testing **[6, 2006.01]**
101/40 • Separating transported fluids **[6, 2006.01]**
101/50 • Pulling cables or the like **[6, 2006.01]**
101/60 • Stopping leaks **[6, 2006.01]**
101/70 • Drill-well operations **[6, 2006.01]**