### CPC - COOPERATIVE PATENT CLASSIFICATION

**H** ELECTRICITY  
*(NOTE omitted)*

**H01** ELECTRIC ELEMENTS  
*(NOTES omitted)*

**H01B** CABLES; CONDUCTORS; INSULATORS; SELECTION OF MATERIALS FOR THEIR CONDUCTIVE, INSULATING OR DIELECTRIC PROPERTIES  
*(selection for magnetic properties H01F 1/00; waveguides H01P {; printed circuits H05K})*

**NOTE**
Group H01B 12/00 takes precedence over groups H01B 5/00 - H01B 11/00.

**WARNING**
In this subclass non-limiting references *(in the sense of paragraph 39 of the Guide to the IPC)* may still be displayed in the scheme.

<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/00</td>
<td>Conductors or conductive bodies characterised by the conductive materials; Selection of materials as conductors</td>
</tr>
<tr>
<td>1/02</td>
<td>mainly consisting of metals or alloys</td>
</tr>
<tr>
<td>1/023</td>
<td>{Alloys based on aluminium}</td>
</tr>
<tr>
<td>1/026</td>
<td>{Alloys based on copper}</td>
</tr>
<tr>
<td>1/04</td>
<td>mainly consisting of carbon-silicon compounds, carbon or silicon</td>
</tr>
<tr>
<td>1/06</td>
<td>mainly consisting of other non-metallic substances</td>
</tr>
<tr>
<td>1/08</td>
<td>oxides</td>
</tr>
<tr>
<td>1/10</td>
<td>sulfdes</td>
</tr>
<tr>
<td>1/12</td>
<td>organic substances {{organic macromolecular compounds or compositions C08}}</td>
</tr>
<tr>
<td>1/121</td>
<td>{Charge-transfer complexes}</td>
</tr>
<tr>
<td>1/122</td>
<td>{Ionic conductors}</td>
</tr>
<tr>
<td>1/124</td>
<td>{Intrinsically conductive polymers}</td>
</tr>
<tr>
<td>1/125</td>
<td>{comprising aliphatic main chains, e.g. polyacrylenes}</td>
</tr>
<tr>
<td>1/127</td>
<td>{comprising five-membered aromatic rings in the main chain, e.g. polypyrroles, polyathiphenenes}</td>
</tr>
<tr>
<td>1/128</td>
<td>{comprising six-membered aromatic rings in the main chain, e.g. polyanilines, polyphenylenes}</td>
</tr>
<tr>
<td>1/14</td>
<td>Conductive material dispersed in non-conductive inorganic material</td>
</tr>
<tr>
<td>1/16</td>
<td>the conductive material comprising metals or alloys</td>
</tr>
<tr>
<td>1/18</td>
<td>the conductive material comprising carbon-silicon compounds, carbon or silicon</td>
</tr>
<tr>
<td>1/20</td>
<td>Conductive material dispersed in non-conductive organic material {{organic macromolecular compounds or compositions C08}}</td>
</tr>
<tr>
<td>1/22</td>
<td>the conductive material comprising metals or alloys</td>
</tr>
<tr>
<td>1/24</td>
<td>the conductive material comprising carbon-silicon compounds, carbon or silicon</td>
</tr>
<tr>
<td>3/00</td>
<td>Insulators or insulating bodies characterised by the insulating materials; Selection of materials for their insulating or dielectric properties</td>
</tr>
<tr>
<td>3/002</td>
<td>{Inhomogeneous material in general}</td>
</tr>
<tr>
<td>3/004</td>
<td>{with conductive additives or conductive layers}</td>
</tr>
<tr>
<td>3/006</td>
<td>{Other inhomogeneous material}</td>
</tr>
<tr>
<td>3/008</td>
<td>{Other insulating material}</td>
</tr>
<tr>
<td>3/02</td>
<td>mainly consisting of inorganic substances</td>
</tr>
<tr>
<td>3/025</td>
<td>{Other inorganic material}</td>
</tr>
<tr>
<td>3/04</td>
<td>mica</td>
</tr>
<tr>
<td>3/06</td>
<td>asbestos</td>
</tr>
<tr>
<td>3/065</td>
<td>{Wires with asbestos}</td>
</tr>
<tr>
<td>3/08</td>
<td>quartz; glass; glass wool; slag wool; vitreous enamels</td>
</tr>
<tr>
<td>3/081</td>
<td>{Wires with vitreous enamels}</td>
</tr>
<tr>
<td>3/082</td>
<td>{Wires with glass or glass wool}</td>
</tr>
<tr>
<td>3/084</td>
<td>{Glass or glass wool in binder}</td>
</tr>
<tr>
<td>3/085</td>
<td>{Particles bound with glass}</td>
</tr>
<tr>
<td>3/087</td>
<td>{Chemical composition of glass}</td>
</tr>
<tr>
<td>3/088</td>
<td>{Shaping of glass or deposition of glass}</td>
</tr>
<tr>
<td>3/10</td>
<td>metallic oxides {ceramics H01B 3/12}</td>
</tr>
<tr>
<td>3/105</td>
<td>{Wires with oxides}</td>
</tr>
<tr>
<td>3/12</td>
<td>ceramics</td>
</tr>
<tr>
<td>3/14</td>
<td>cements</td>
</tr>
<tr>
<td>3/16</td>
<td>gases</td>
</tr>
<tr>
<td>3/18</td>
<td>mainly consisting of organic substances {{organic macromolecular compounds or compositions C08}}</td>
</tr>
<tr>
<td>3/185</td>
<td>{Substances or derivatives of cellulose}</td>
</tr>
<tr>
<td>3/20</td>
<td>liquids, e.g. oils {silicone oils H01B 3/46}</td>
</tr>
<tr>
<td>3/22</td>
<td>hydrocarbons</td>
</tr>
<tr>
<td>3/24</td>
<td>containing halogen in the molecules, e.g. halogenated oils</td>
</tr>
<tr>
<td>3/26</td>
<td>asphalts; bitumens; pitches</td>
</tr>
<tr>
<td>3/28</td>
<td>natural or synthetic rubbers</td>
</tr>
</tbody>
</table>
3/30 ... plastics; resins; waxes

NOTE

Group H01B 3/47 takes precedence over groups H01B 3/32 - H01B 3/46

3/301 ... [Macromolecular compounds obtained by reactions forming a linkage containing sulfur with or without nitrogen, oxygen or carbon in the main chain of the macromolecule, not provided for in group H01B 3/302]

3/302 ... [Polyurethanes or polythiourethanes; Polyurea or polythiourea]

3/303 ... [Macromolecular compounds obtained by reactions forming a linkage containing nitrogen with or without oxygen or carbon in the main chain of the macromolecule, not provided for in groups H01B 3/38 or H01B 3/302]

3/305 ... [Polymides or polyesteramides]

3/306 ... [Polyimides or polyesterimides]

3/307 ... [Other macromolecular compounds]

3/308 ... [Wires with resins]

3/32 ... natural resins

3/34 ... Waxes (silicone waxes H01B 3/46)

3/36 ... condensation products of phenols with aldehydes or ketones

3/38 ... condensation products of aldehydes with amines or amides

3/40 ... epoxy resins

3/42 ... polyesters; polyethers; polyacetals

3/421 ... [Polyesters]

3/422 ... [Linear saturated polyesters derived from dicarboxylic acids and dihydroxy compounds]

3/423 ... [Linear aromatic polyesters]

3/425 ... [Non-saturated polyesters derived from polycarboxylic acid and polyoxy compounds, in which at least one of the two components contains aliphatic unsaturation]

3/426 ... [Polycarbonates]

3/427 ... [Polyethers]

3/428 ... [Polyacetals]

3/44 ... vinyl resins; acrylic resins (silicones H01B 3/46)

3/441 ... [from alkenes]

3/442 ... [from aromatic vinyl compounds]

3/443 ... [from vinylhalogenides or other halogenehetyclic compounds]

3/445 ... [from vinylfluorides or other fluoroethylene compounds]

3/446 ... [from vinylacetals]

3/447 ... [from acrylic compounds]

3/448 ... [from other vinyl compounds]

3/46 ... silicones

3/465 ... [Silicone oils]

3/47 ... fibre-reinforced plastics, e.g. glass-reinforced plastics

3/48 ... fibrous materials (fibre-reinforced plastics H01B 3/47)

3/485 ... [Other fibrous materials fabric]

3/50 ... fabric

3/52 ... wood; paper; press board

3/54 ... hard paper; hard fabrics

3/545 ... [Hard fabrics]

3/56 ... gases

5/00 Non-insulated conductors or conductive bodies characterised by their form

5/002 ... [Auxiliary arrangements]

5/004 ... [for protection against corona]

5/006 ... [for protection against vibrations]

5/008 ... [Fence-wire not otherwise provided for (wire fencing E04H 17/02)]

5/02 ... Single bars, rods, wires, or strips

5/04 ... wound or coiled

5/06 ... Single tubes

5/08 ... Several wires or the like stranded in the form of a rope

5/10 ... stranded around a space, insulating material, or dissimilar conducting material

5/101 ... [stranded around a space]

5/102 ... [stranded around a high tensile strength core]

5/104 ... [composed of metallic wires, e.g. steel wires]

5/105 ... [composed of synthetic filaments, e.g. glass-fibres]

5/107 ... [stranded around a core supporting radial stresses, e.g. a tube, a wire helix]

5/108 ... [stranded around communication or control conductors]

5/12 ... Braided wires or the like

5/14 ... comprising conductive layers or films on insulating-supports

5/16 ... comprising conductive material in insulating or poorly conductive material, e.g. conductive rubber (H01B 1/14, H01B 1/20 take precedence; insulating bodies with conductive admixtures H01B 17/64; conductive paints C09D 5/24)

7/00 Insulated conductors or cables characterised by their form

7/0009 ... [Details relating to the conductive cores]

7/0018 ... [Strip or foil conductors (H01B 7/08 takes precedence)]

7/0027 ... [Liquids conductors]

7/0036 ... [Alkali metal conductors]

7/0045 ... [Cable-harnesses]

7/0054 ... [Cables with incorporated electric resistances]

7/0063 ... [Ignition cables]

7/0072 ... [Electrical cables comprising fluid supply conductors]

7/0081 ... [Cables of rigid construction (rigid-tube cables H01B 7/16)]

7/009 ... [Cables with built-in connecting points or with predetermined areas for making deviations]

7/02 ... Disposition of insulation

7/0208 ... [Cables with several layers of insulating material]

7/0216 ... [Two layers]

7/0225 ... [Three or more layers]

7/0233 ... [Cables with a predominant gas dielectric]

7/0241 ... [comprising one or more helical wrapped layers of insulation]

7/025 ... [comprising in addition one or more other layers of non-helical wrapped insulation]

7/0258 ... [comprising one or more longitudinal lapped layers of insulation]
Flexible cables, conductors, or cords, e.g. trailing cables

{[attached to mobile objects, e.g. portable tools, elevators, mining equipment, hoisting cables]}
{[attached to flying objects, e.g. aircraft towline, cables connecting an aerodyne to the ground]}
{[attached to marine objects, e.g. buoys, diving equipment, aquatic probes, marine towline]}
{[attached to objects sunk in bore holes, e.g. well drilling means, well pumps]}
{[for implantation into a human or animal body, e.g. pacemaker leads]}

7/06  Extensible conductors or cables, e.g. self-coiling cords

7/065  [having the shape of an helix]

7/08  Flat or ribbon cables

7/0807  [Twin conductor or cable]
7/0815  [covered with gluten for wall-fixing]
7/0823  [Parallel wires, incorporated in a flat insulating profile]
7/083  [Parallel wires, incorporated in a fabric]
7/0838  [Parallel wires, sandwiched between two insulating layers]
7/0846  [Juxtaposed parallel wires, fixed to each other without a support layer]
7/0861  [comprising one or more screens]
7/0869  [comprising one or more armouring, tensile- or compression-resistant elements]
7/0876  [comprising twisted pairs]
7/0884  [comprising connection wire loops]
7/0892  [incorporated in a cable of non-flat configuration]

7/10  Contact cables, i.e. having conductors which may be brought into contact by distortion of the cable

7/102  [responsive to heat]
7/104  [responsive to pressure]
7/106  [comprising concentric conductors]
7/108  [comprising parallel conductors]
7/12  Floating cables

7/14  Submarine cables
7/145  [associated with hydrodynamic bodies]

7/16  Rigid-tube cables
7/17  Protection against damage caused by external factors, e.g. sheaths or armouring
7/18  [Protection against damage caused by wear, mechanical force or pressure; (Sheaths; Armouring)]
7/1805  [Protections not provided for in groups H01B 7/182 - H01B 7/26]
7/181  [composed of beads or rings]
7/1815  [composed of longitudinal inserts]
7/182  [comprising synthetic filaments]
7/1825  [forming part of a high tensile strength core]
7/183  [forming part of an outer sheath]
7/1835  [Sheaths comprising abrasive charges]
7/184  [Sheaths comprising grooves, ribs or other projections]
7/1845  [Sheaths comprising perforations]
7/185  [Sheaths comprising internal cavities or channels]
7/1855  [Sheaths comprising helical wrapped non-metallic layers]
7/186  [Sheaths comprising longitudinal wrapped non-metallic layers]
7/1865  [Sheaths comprising braided non-metallic layers]
7/187  [Sheaths comprising extruded non-metallic layers]
7/1875  [Multi-layer sheaths]
7/188  [Inter-layer adherence promoting means]
7/1885  [Inter-layer adherence preventing means]
7/189  [Radial force absorbing layers providing a cushioning effect (H01B 7/185 takes precedence)]
7/1895  [Internal space filling-up means]
7/20  Metal tubes, e.g. lead sheaths
7/201  [Extruded metal tubes]
7/202  [Longitudinal lapped metal tubes]
7/204  [composed of lead]
7/205  [composed of aluminium]
7/207  [composed of iron or steel]
7/208  [composed of composite laminated metals]
7/22  Metal wires or tapes, e.g. made of steel
7/221  [Longitudinally placed metal wires or tapes]
7/223  [forming part of a high tensile strength core]
7/225  [forming part of an outer sheath]
7/226  [Helicoidally wound metal wires or tapes]
7/228  [Metal braid]
7/24  Devices affording localised protection against mechanical force or pressure
7/26  Reduction of losses in sheaths or armouring
7/28  [Protection against damage caused] by moisture, corrosion, chemical attack or weather
7/2806  [Protection against damage caused by corrosion]
7/2813  [Protection against damage caused by electrical, chemical or water tree deterioration]
7/282  [Preventing penetration of fluid, e.g. water or humidity,] into conductor or cable
7/2825  [using a water impermeable sheath]
7/285  [by completely or partially filling interstices in the cable]
7/2855  [using foamed plastic]
7/288  [using hygroscopic material or material swelling in the presence of liquid]
7/29  Protection against damage caused by extremes of temperature or by flame ((heat dissipation or conduction H01B 7/42))
7/292  [using material resistant to heat]
7/295  [using material resistant to flame]
7/30  with arrangements for reducing conductor losses when carrying alternating current, e.g. due to skin effect
7/303  [Conductors comprising interwire insulation]
7/306  [Transposed conductors]
9/0627. . . [Features relating to the dielectric of gas-pressure cables]
9/0655. . . [Helically wrapped insulation]
9/0661. . . [Longitudinally wrapped insulation]
9/0666. . . [Discontinuous insulation]
9/0672. . . [having the shape of a disc]
9/0677. . . [Features relating to the enclosing sheath of gas-pressure cables]
9/0683. . . [Features relating to the conductors of oil-pressure cables]
9/0688. . . [Features relating to the dielectric of oil-pressure cables]
9/0694. . . [Features relating to the enclosing sheath of oil-pressure cables]

11/00 Communication cables or conductors
11/002. . . [Pair constructions]
11/005. . . [Quad constructions]
11/007. . . [for overhead application]
11/02. . . Cables with twisted pairs or quads
11/04. . . with pairs or quads mutually positioned to reduce cross-talk
11/06. . . with means for reducing effects of electromagnetic or electrostatic disturbances, e.g. screens
11/08. . . Screens specially adapted for reducing cross-talk
11/085. . . [composed of longitudinal tape conductors]
11/10. . . Screens specially adapted for reducing interference from external sources
11/1008. . . [Features relating to screening tape per se]
11/1016. . . [composed of a longitudinal lapped tape-conductor]
11/1025. . . [composed of a helicoidally wound tape-conductor]
11/1033. . . [composed of a wire-braided conductor]
11/1041. . . [composed of a helicoidally wound wire-conductor]
11/105. . . [composed of a longitudinally posed wire-conductor]
11/1058. . . [using a coating, e.g. a loaded polymer, ink or print]
11/1066. . . [the coating containing conductive or semiconductive material]
11/1075. . . [the coating being applied by printing]
11/1083. . . [the coating containing magnetic material]
11/1091. . . [with screen grounding means, e.g. drain wires]
11/12. . . Arrangements for exhibiting specific transmission characteristics
11/125. . . [Specially adapted cable interconnections]
11/14. . . Continuously inductively loaded cables, e.g. Krarup cables
11/143. . . [using helically wound magnetic tape]
11/146. . . [using magnetically loaded coatings]
11/16. . . Cables, e.g. submarine cables, with coils or other devices incorporated during cable manufacture

9/0644. . . [Features relating to the dielectric of gas-pressure cables]
9/065. . . [Tubular insulation]
9/0661. . . [Longitudinally wrapped insulation]
9/0666. . . [Discontinuous insulation]
9/0672. . . [having the shape of a disc]
9/0677. . . [Features relating to the enclosing sheath of gas-pressure cables]
9/0683. . . [Features relating to the conductors of oil-pressure cables]
9/0688. . . [Features relating to the dielectric of oil-pressure cables]
9/0694. . . [Features relating to the enclosing sheath of oil-pressure cables]
11/18 . Coaxial cables; Analogous cables having more than one inner conductor within a common outer conductor

**NOTE**

If suitable for handling frequencies considerably beyond the audio range and if typical HF-features of coaxial cables are disclosed, e.g. propagation of non-TEM modes, multimoding, oversized coaxial cables, particular cross-section adapted for HF-propagation, classification is made in H01P 3/06

11/1804 . (Construction of the space inside the hollow inner conductor)

11/1808 . (Construction of the conductors)

11/1813 . {Co-axial cables with at least one braided conductor}

11/1817 . {Co-axial cables with at least one metal deposit conductor}

11/1821 . {Co-axial cables with at least one wire-wound conductor}

11/1826 . {Co-axial cables with at least one longitudinal lapped tape-conductor}

11/183 . {Co-axial cables with at least one helicoidally wound tape-conductor}

11/1834 . {Construction of the insulation between the conductors}

11/1839 . {of cellular structure}

11/1843 . {of tubular structure}

11/1847 . {of helical wrapped structure}

11/1852 . {of longitudinal lapped structure}

11/1856 . {Discontinuous insulation}

11/186 . {having the shape of a disc}

11/1865 . {having the shape of a bead}

11/1869 . {Construction of the layers on the outer side of the outer conductor}

11/1873 . {Measures for the conductors, in order to fix the spacers}

11/1878 . {Special measures in order to improve the flexibility}

11/1882 . {Special measures in order to improve the refrigeration}

11/1886 . {Special measures in order to improve the centration of the inner conductor}

11/1891 . {comprising auxiliary conductors}

11/1895 . {Particular features or applications}

11/20 . Cables having a multiplicity of coaxial lines

11/203 . {forming a flat arrangement}

11/206 . {Tri-conductor coaxial cables}

11/22 . Cables including at least one electrical conductor together with optical fibres

**12/00 Superconductive or hyperconductive conductors, cables, or transmission lines**

12/02 . characterised by their form

**NOTE**

Group H01B 12/12 takes precedence over groups H01B 12/04 - H01B 12/10.

12/04 . Single wire

12/06 . Films or wires on bases or cores

12/08 . Stranded or braided wires

12/10 . Multi-filaments embedded in normal conductors

12/12 . Hollow conductors

12/14 . characterised by the disposition of thermal insulation

12/16 . characterised by cooling

**13/00 Apparatus or processes specially adapted for manufacturing conductors or cables**

13/0003 . {for feeding conductors or cables}

13/0006 . {for reducing the size of conductors or cables}

13/0009 . {for forming corrugations on conductors or cables}

13/0013 . {for embedding wires in plastic layers}

13/0016 . {for heat treatment}

13/002 . {for heat extraction}

13/0023 . {for welding together plastic insulated wires side-by-side}

13/0026 . {Apparatus for manufacturing conducting or semi-conducting layers, e.g. deposition of metal}

13/003 . {using irradiation}

13/0033 . {by electrostatic coating}

13/0036 . {Details}

13/004 . {for manufacturing rigid-tube cables}

13/008 . {for manufacturing extensible conductors or cables}

13/012 . {for manufacturing wire harnesses}

13/01209 . {Details}

13/01218 . {the wires being disposed by hand}

13/01227 . {using a layout board}

13/01236 . {the wires being disposed by machine}

13/01245 . {using a layout board}

13/01254 . {Flat-harness manufacturing}

13/01263 . {Tying, wrapping, binding, lacing, strapping or sheathing harnesses}

13/01272 . {Harness tying apparatus}

13/01281 . {Harness wrapping apparatus}

13/0129 . {Sheathing harnesses with foil material}

13/016 . {for manufacturing co-axial cables (applying discontinuous insulation H01B 13/20)

13/0162 . {of the central conductor}

13/0165 . {of the layers outside the outer conductor}

13/0167 . {After-treatment}

13/02 . Stranding-up

13/0207 . {Details; Auxiliary devices}

13/0214 . {by a twisting pay-off device}

13/0221 . {by a twisting take-up device}

13/0228 . {by a twisting pay-off and take-up device}

13/0235 . {by a twisting device situated between a pay-off device and a take-up device}

13/0242 . {being an accumulator}

13/025 . {of tubular construction}

13/0257 . {being a perforated disc}

13/0264 . {being rollers, pulleys, drums or belts (H01B 13/0242 takes precedence)}

13/0271 . {Alternate stranding processes}

13/0278 . {Stranding machines comprising a transposing mechanism}

13/0285 . {Pretreatment}

13/0292 . {After-treatment}

13/04 . Mutually positioning pairs or quads to reduce cross-talk

13/06 . Insulating conductors or cables (H01B 13/32 takes precedence)

13/062 . {by pulling on an insulating sleeve}

13/065 . {Insulating conductors with lacquers or enamels}
13/067 . . . (Insulating coaxial cables (H01B 13/20 takes precedence))
13/08 . . . by winding
13/0808 . . . [Hand-held devices]
13/0816 . . . [Apparatus having a coaxial rotation of the supply reels about the conductor or cable]
13/0825 . . . [Apparatus having a planetary rotation of the supply reels around the conductor or cable]
13/0833 . . . [the supply reel axis being arranged parallel to the conductor or cable axis]
13/0841 . . . [the supply reel axis being arranged perpendicular to the conductor or cable axis]
13/085 . . . [Apparatus having the supply reels in a fixed position, the conductor or cable rotating about its own axis]
13/0858 . . . [Details of winding apparatus; Auxiliary devices]
13/0866 . . . [Brakes or tension regulating means]
13/0875 . . . [Detecting breakage or run-out of winding material]
13/0883 . . . [Pretreatment]
13/0891 . . . [After-treatment]
13/10 . . . by longitudinal lapping
13/103 . . . [combined with pressing of plastic material around the conductors]
13/106 . . . [the conductor having a rectangular cross-section]
13/12 . . . by applying loose fibres
13/14 . . . by extrusion [(extrusion in general B29C 48/00)]
13/141 . . . [of two or more insulating layers]
13/142 . . . [of cellular material]
13/143 . . . [with a special opening of the extrusion head]
13/144 . . . [Heads for simultaneous extrusion on two or more conductors]
13/145 . . . [Pretreatment or after-treatment]
13/146 . . . [Controlling the extrusion apparatus dependent on the capacitance or the thickness of the insulating material (measuring thickness G01B; testing during manufacturing G01R 31/59)]
13/147 . . . [Feeding of the insulating material]
13/148 . . . [Selection of the insulating material therefor]
13/16 . . . by passing through or dipping in a liquid bath; by spraying
13/165 . . . [by spraying]
13/18 . . . Applying discontinuous insulation, e.g. discs, beads
13/185 . . . [by periodically constricting an insulating sleeve]
13/20 . . . for concentric or coaxial cables
13/202 . . . [by molding spacers]
13/204 . . . [by punching spacers]
13/206 . . . [by forming a helical web]
13/208 . . . [by mechanically removing parts of a continuous insulation]
13/22 . . . Sheathing; Armouring; Screening; Applying other protective layers (H01B 13/32 takes precedence)
13/221 . . . [filling-up interstices]
13/222 . . . [by electro-plating]
13/224 . . . [by drawing a cable core into an oversized tube by means of a tow line]
13/225 . . . [Screening coaxial cables]
13/227 . . . [Pretreatment]
13/228 . . . [After-treatment]
13/24 . . . by extrusion { (extrusion of cables with plastic material in general B29C 48/15) }
13/245 . . . [of metal layers]
13/26 . . . by winding, braiding or longitudinal lapping
13/2606 . . . [by braiding]
13/2613 . . . [by longitudinal lapping]
13/262 . . . [of an outer metallic screen]
13/2626 . . . [of a coaxial cable outer conductor]
13/2633 . . . [Bending and welding of a metallic screen]
13/264 . . . [Details of the welding stage]
13/2646 . . . [Bending and soldering of a metallic screen]
13/2653 . . . [Details of the soldering stage]
13/266 . . . [Bending and adhesively bonding of a metallic screen]
13/2666 . . . [Details of the bonding stage]
13/2673 . . . [of a compartment separating metallic screens]
13/268 . . . [of a non-metallic sheet]
13/2686 . . . [Pretreatment]
13/2693 . . . [After-treatment]
13/28 . . . Applying continuous inductive loading, e.g. Krakup loading
13/282 . . . [by winding]
13/285 . . . [by extrusion]
13/287 . . . [by passing through a coating bath]
13/30 . . . Drying; Impregnating (H01B 13/32 takes precedence)
13/32 . . . Filling or coating with impervious material
13/321 . . . [the material being a powder]
13/322 . . . [the material being a liquid, jelly-like or viscous substance]
13/323 . . . [using a filling or coating head]
13/324 . . . [in combination with a vacuum chamber]
13/325 . . . [in combination with vibration generating means]
13/326 . . . [Material preparing or feeding devices]
13/327 . . . [using a filling or coating cone or die]
13/328 . . . [using a filling or coating bath]
13/329 . . . [the material being a foam]
13/34 . . . for marking conductors or cables
13/341 . . . [using marking wheels, discs, rollers, drums, balls or belts]
13/342 . . . [by applying marked tape, thread or wire on the full length of the conductor or cable]
13/344 . . . [by applying sleeves, ferrules, tags, clips, labels or short length strips]
13/345 . . . [by spraying, ejecting or dispensing marking fluid]
13/347 . . . [Electrostatic deflection of the fluid jets]
13/348 . . . [using radiant energy, e.g. a laser beam]
15/00 Apparatus or processes for salvaging material from cables (for removing insulation from conductors H02G 1/12)
15/001 . . . [by cooling down]
15/003 . . . [by heating up]
15/005 . . . [by cutting]
15/006 . . . [Making a longitudinal cut]
15/008 . . . [by crushing]
17/00 Insulators or insulating bodies characterised by their form
H01B

17/005 . (Insulators structurally associated with built-in electrical equipment)
17/02 . Suspension insulators; Strain insulators
17/04 . . Chains; Multiple chains
17/06 . . Fastening of insulator to support, to conductor, or to adjoining insulator
17/08 . . . by cap-and-bolt
17/10 . . . by intermediate link
17/12 . . Special features of strain insulators
17/14 . Supporting insulators (pin insulators H01B 17/20; apertured insulators H01B 17/24)
17/145 . . (Insulators, poles, handles, or the like in electric fences)
17/16 . . Fastening of insulators to support, to conductor, or to adjoining insulator
17/18 . . for very heavy conductors, e.g. bus-bars, rails
17/20 . Pin insulators
17/22 . . Fastening of conductors to insulator
17/24 . Insulators apertured for fixing by nail, screw, wire, or bar, e.g. diabolo, bobbin
17/26 . Lead-in insulators; Lead-through insulators
17/265 . . (Fastening of insulators to support (H01B 17/301 takes precedence))
17/28 . . Capacitor type
17/30 . . Sealing
17/301 . . . (Sealing of insulators to support)
17/303 . . . (Sealing of leads to lead-through insulators)
17/305 . . . (by embedding in glass or ceramic material)
17/306 . . . (by embedding in material other than glass or ceramics)
17/308 . . . (by compressing packing material)
17/32 . . Single insulators consisting of two or more dissimilar insulating bodies
17/325 . . . (comprising a fibre-reinforced insulating core member)
17/34 . . Insulators containing liquid, e.g. oil
17/36 . . Insulators having evacuated or gas-filled spaces
17/38 . . Fittings, e.g. caps; Fastenings therefor
17/40 . . Cementless fittings
17/42 . . Means for obtaining improved distribution of voltage (capacitor-type lead-through insulators H01B 17/28); Protection against arc discharges
17/44 . . Structural association of insulators with corona rings
17/46 . . Means for providing an external arc-discharge path
17/48 . . over chains or other serially-arranged insulators
17/50 . . with surfaces specially treated for preserving insulating properties, e.g. for protection against moisture, dirt, or the like
17/52 . . having cleaning devices (H01B 17/54 takes precedence)
17/525 . . . (Self-cleaning, e.g. by shape or disposition of screens)
17/54 . . having heating or cooling devices
17/56 . . Insulating bodies
17/58 . . Tubes, sleeves, beads, or bobbins through which the conductor passes
17/583 . . . (Grommets; Bushings)
17/586 . . . . (with strain relief arrangements)
17/60 . . . Composite insulating bodies
17/62 . . . Insulating-layers or insulating-films on metal bodies
17/64 . . . with conductive admixtures, inserts or layers
17/66 . . . Joining insulating bodies together, e.g. by bonding
19/00 Apparatus or processes specially adapted for manufacturing insulators or insulating bodies
{ (manufacture of porcelain for electric insulation C04B 33/26) }
19/02 . Drying; Impregnating
19/04 . Treating the surfaces, e.g. applying coatings