B29D PRODUCING PARTICULAR ARTICLES FROM PLASTICS OR FROM SUBSTANCES IN A PLASTIC STATE (making granules B29B 9/00; making preforms B29B 11/00)

1/00 Producing articles with screw-threads
1/005 {fibre reinforced}

5/00 Producing elements of slide fasteners; Combined making and attaching of elements of slide fasteners
5/02 the fasteners having separate interlocking members
5/04 the interlocking members being formed by continuous meander of filamentary material
5/06 the interlocking members being formed by continuous helix
5/08 the interlocking members being formed by profiled or castellated edge of a stringer
5/10 the interlocking members being formed by continuous profiled strip

7/00 Producing flat articles, e.g. films or sheets (B29D 24/00 takes precedence)
7/01 Films or sheets

2009/00 IPC7 Producing layered products

11/00 Producing optical elements, e.g. lenses or prisms (grinding or polishing of optical elements B24B; constructional form of optical elements G02B; optical parts of spectacles G02C 7/00))

11/0009 {Production of simple or compound lenses}
11/0019 {with non-spherical faces, e.g. toric faces}
11/0028 {Bifocal lenses; Multifocal lenses}
11/0038 {Production of contact lenses}
11/0048 {composed of parts with dissimilar composition (B29D 11/00057 takes precedence)}
11/0057 {characterised by the shape or surface condition of the edge, e.g. flashless, burrless, smooth}
11/0067 {Hydrating contact lenses}
11/0076 {enabling passage of fluids, e.g. oxygen, tears, between the area under the lens and the lens exterior}
11/0086 {methods for matching the anterior surface of the contact lens to the shape of an eyeball}

11/0096 {for delivering compositions, e.g. drugs to the eye}
11/00105 {covering a large part of the cornea}
11/00115 {made by rotational casting}
11/00125 {Auxiliary operations, e.g. removing oxygen from the mould, conveying moulds from a storage to the production line in an inert atmosphere}
11/00134 {Curing of the contact lens material}
11/00144 {wherein the lens material is not fully polymerized, e.g. by leaving an unpolymerized volume}
11/00153 {Differential curing, e.g. by differential radiation}
11/00163 {Movable masks or shutters, e.g. to vary the exposure}
11/00173 {Conveying moulds}
11/00182 {using carrier plates}
11/00192 {Demoulding, e.g. separating lenses from mould halves}
11/00201 {using cooling means}
11/00211 {using heating means}
11/00221 {using prying means}
11/0023 {Transferring contact lenses}
11/0024 {using a vacuum suction gripper}
11/0025 {Removing impurities from contact lenses, e.g. leaching}
11/00259 {Plants for the production of contact lenses}
11/00269 {Fresnel lenses}
11/00278 {Lenticular sheets (B29D 11/00269 takes precedence)}
11/0029 {made by a rotating cylinder}
11/00298 {Producing lens arrays}
11/00307 {Producing lens wafers}
11/00317 {Production of lenses with markings or patterns}
11/00326 {having particular surface properties, e.g. a micropattern}
11/00336 {by making depressions in the lens surfaces}
11/00346 {having nanosize structures or features, e.g. fillers}
11/00355 . . . [with a refractive index gradient]
11/00365 . . . [Production of microlenses (lenticular sheets B29D 11/00278)]
11/00375 . . . [by moulding lenses in holes through a substrate]
11/00384 . . . [Local shaping by heating, e.g. local irradiation causing expansion]
11/00394 . . . [Producing solid immersion lenses [SIL]]
11/00403 . . . [Producing compound lenses]
11/00413 . . . [made by moulding between two mould parts which are not in direct contact with one another, e.g. comprising a seal between or on the edges (B29D 11/00019 - B29D 11/00355, B29D 11/00423, B29D 11/00432 take precedence)]
11/00423 . . . [Plants for the production of simple or compound lenses (B29D 11/00259 takes precedence)]
11/00432 . . . [Auxiliary operations, e.g. machines for filling the moulds (B29D 11/00125 takes precedence)]
11/00442 . . . [Curing the lens material]
11/00451 . . . [Changing a shape by remelting]
11/00461 . . . [Adjusting the refractive index, e.g. after implanting]
11/00471 . . . [made by rotational casting (B29D 11/00115 takes precedence)]
11/0048 . . . [Moulds for lenses (moulds for plastic articles in general B29C 33/00)]
11/0049 . . . [Double sided moulds]
11/005 . . . [having means for aligning the front and back moulds]
11/00509 . . . [to make toric lenses]
11/00519 . . . [Reusable moulds]
11/00528 . . . [Consisting of two mould halves joined by an annular gasket]
11/00538 . . . [Feeding arrangements]
11/00548 . . . [with surfaces formed by films]
11/00557 . . . [with deformable mould walls, e.g. to make lenses with different shapes]
11/00567 . . . [wherein the mould forms part of the final package for lenses]
11/00576 . . . [with means to engage flash, e.g. HEMA ring]
11/00586 . . . [and removing the flash or HEMA ring]
11/00596 . . . [Mirrors]
11/00605 . . . [Production of reflex reflectors]
11/00615 . . . [moulded by partially embedding reflective elements, e.g. glass beads, into the surface of a support, e.g. to make prefabricated road markings (dispensing reflective beads on road markings in situ E01C 23/163)]
11/00625 . . . [Moulds for reflex reflectors (moulds for plastic articles in general B29C 33/00)]
11/00634 . . . [Production of filters]
11/00644 . . . [polarizing]
11/00653 . . . [photochromic]
11/00663 . . . [Production of light guides]
11/00673 . . . [Supports for light guides]
11/00682 . . . [with a refractive index gradient]
11/00692 . . . [combined with lenses]
11/00701 . . . [having an intermediate layer between core and cladding]
11/00711 . . . [by shrinking the sleeve or cladding onto the core]
11/00721 . . . [involving preforms for the manufacture of light guides]
11/0073 . . . [Optical laminates]

NOTE
Classification in this group must be supplemented, in so far as any product is concerned, by classification in B32B

11/0074 . . . [Production of other optical elements not provided for in B29D 11/00009- B29D 11/0073]
11/0075 . . . [Connectors for light guides]
11/00759 . . . [Branching elements for light guides]
11/00769 . . . [Producing diffraction gratings]
11/00778 . . . [Producing hyperlenses, superlenses or ”perfect” lenses]
11/00788 . . . [Producing optical films]
11/00798 . . . [Producing diffusers]
11/00807 . . . [Producing lenses combined with electronics, e.g. chips]
11/00817 . . . [Producing electro-active lenses or lenses with energy receptors, e.g. batteries or antennas]
11/00826 . . . [with energy receptors for wireless energy transmission]
11/00836 . . . [Producing non-circular, e.g. elliptic lenses]
11/00846 . . . [Producing zero power lenses]
11/00855 . . . [Producing cylindrical lenses]
11/00865 . . . [Applying coatings; tinting; colouring (printing, marking or copying processes B41M; identification in general G09F 3/00; producing decorative effects in general B44C; positioning or marking of lenses B24B 13/0055)]
11/00875 . . . [on light guides]
11/00884 . . . [Spin coating]
11/00894 . . . [colouring or tinting]
11/00903 . . . [on the surface]
11/00913 . . . [full body; edge-to-edge]
11/00923 . . . [on lens surfaces for colouring or tinting (printing or marking in general B41M)]
11/00932 . . . [Combined cutting and grinding thereof]
11/00942 . . . [where the lens material is mounted in a support for mounting onto a cutting device, e.g. a lathe, and where the support is of machinable material, e.g. plastics]
11/00951 . . . [Measuring, controlling or regulating]
11/00961 . . . [using microprocessors or computers]
11/00971 . . . [using CNC machining to make mould surfaces]
11/0098 . . . [Inspecting lenses]
11/0099 . . . [while still attached to the mould]
11/02 . . . [Artificial eyes from organic plastic material (implantable eye parts, artificial eyes A61F 2/14)]
11/023 . . . [Implants for natural eyes]
11/026 . . . [Comprising more than one lens]
12/00 Producing frames
12/02 . . . Spectacle frames (constructional form G02C)
15/00 Producing gear wheels or similar articles with grooves or projections, e.g. control knobs
16/00 Producing articles with corrugations (B29D 23/18 takes precedence)
Producing carriers of records containing fine grooves or impressions, e.g. disc records for needle playback, cylinder records (recording sound or other information using formed grooves or the equivalent G11B); Producing record discs from master stencils

Producing buttons or semi-finished parts of buttons

Producing hair combs or similar toothed or slotted articles

Producing hollow articles (tubular articles B29D 23/00; pneumatic tyres B29D 30/00)

Producing tubular articles (B29D 24/00 takes precedence)

Producing articles with hollow walls (B29D 99/00/28 takes precedence)
2030/0601 . . . . . . {Vulcanising tyres; Vulcanising presses for tyres}
2030/0602 . . . . . . [the vulcanising medium being in direct contact with the tyre]
2030/0603 . . . . . . {Loading or unloading the presses}
2030/0605 . . . . . . {Vulcanising presses characterised by moulds integral with the presses having radially movable sectors}
2030/0606 . . . . . . [Vulcanising moulds not integral with vulcanising presses (for solid tyres B29D 30/02)]
2030/0607 . . . . . . [Constructional features of the moulds (moulds or cores in general B29C 33/00)]
2030/0609 . . . . . . {the moulds being made of a plurality of laminations, e.g. thin plates, adjacent one another, so as to create the moulding cavity}
2030/0611 . . . . . . [Means for forming passages under the tread surface, e.g. undercuts, holes, channels, grooves]
2030/0612 . . . . . . [Means for forming recesses or protrusions in the tyres, e.g. grooves or ribs, to create the tread or sidewalls patterns]
2030/0613 . . . . . . {Means, e.g. sipes or blade-like elements, for forming narrow recesses in the tyres, e.g. cuts or incisions for winter tyres}
2030/0614 . . . . . . [porous moulds, e.g. sintered materials (porous moulds in general B29C 33/3814)]
2030/0616 . . . . . . {Surface structure of the mould, e.g. roughness, arrangement of slits, grooves or channels}
2030/0617 . . . . . . [Venting devices, e.g. vent plugs or inserts]
2030/0618 . . . . . . {Annular elements, e.g. rings, for moulding the tyre shoulder areas}
2030/0620 . . . . . . {Means for sealing the tyre against the mould in the bead areas}
2030/0621 . . . . . . {to seal the bead portions against the mould i.e. by using pressing devices}
2030/0622 . . . . . . [the pressing devices being collapsible, e.g. annular elements consisting of a plurality of sectors]
2030/0623 . . . . . . [the pressing devices being flexible, e.g. annular elements being relatively elastic and deformable]
2030/0625 . . . . . . [the pressing devices being substantially rigid]
2030/0626 . . . . . . [the pressing devices being one-piece devices]
2030/0627 . . . . . . [the pressing devices being ring-shaped]
30/0629 . . . . . . {with radially movable sectors}
2030/0631 . . . . . . (the moulds being split in upper and lower halves)
2030/0633 . . . . . . [After-treatment specially adapted for vulcanising tyres]
2030/0634 . . . . . . [Measuring, calculating, correcting tyre uniformity, e.g. correcting RFV]
2030/0635 . . . . . . [Measuring and calculating tyre uniformity, e.g. using mathematical methods]
2030/0637 . . . . . . [Correcting by adding material]
2030/0638 . . . . . . [Correcting by removing material, e.g. by grinding]
2030/0639 . . . . . . [Correcting by heat treatments]
2030/0641 . . . . . . [Correcting by restraining tyre deformation]
2030/0642 . . . . . . [Correcting by stretching]
2030/0643 . . . . . . [Cooling during post cure inflation; Post cure inflators used therefor]
2030/0645 . . . . . . [Devices for inserting vulcanising cores, i.e. bladders, into the tyres; Closing the press in combination therewith]
2030/0646 . . . . . . [Attaching to, or removing the vulcanizing cores or bladders from the center mechanisms]
2030/0647 . . . . . . [Supporting or transferring tyres using an assembly of a bladder and side rings]
2030/0649 . . . . . . [Devices for removing vulcanising cores, i.e. bladders, from the tyres; Opening the press in combination therewith]
2030/065 . . . . . . [Tyre-vulcanising presses with two or more moulds, e.g. stacked upon each other]
2030/0651 . . . . . . [the moulds being arranged side by side, or in a circle]
2030/0653 . . . . . . [Exchanging moulds in the presses]
30/0654 . . . . . . [Flexible cores therefor, e.g. bladders, bags, membranes, diaphragms (elastic cores or mandrels for shaping of plastics B29C 33/505; bags for isostatic pressing in compression moulding B29C 43/12, B29C 43/3642)]
2030/0655 . . . . . . [Constructional or chemical features of the flexible cores]
2030/0657 . . . . . . [Removing the vulcanizing media from the flexible cores, e.g. draining or evacuating]
2030/0658 . . . . . . [Venting devices for the flexible cores]
2030/0659 . . . . . . [Details or accessories for the flexible cores not otherwise provided for]
30/0661 . . . . . . [Rigid cores therefor, e.g. annular or substantially toroidal cores (cores for building tyres B29D 30/12; drums for building tyres B29D 30/24)]
2030/0662 . . . . . . [Accessories, details or auxiliary operations]
2030/0663 . . . . . . [Mould maintenance, e.g. cleaning, washing, repairing]
2030/0665 . . . . . . [Measuring, calculating and correcting tyre uniformity before vulcanization]
2030/0666 . . . . . . [Heating by using fluids (heating, cooling or curing using liquids, gas or steam B29C 35/04)]
2030/0667 . . . . . . [Circulating the fluids, e.g. introducing and removing them into and from the moulds; devices therefor]
2030/0669 . . . . . . [the fluids being circulated by a turbine type pump associated with the mould, e.g. positioned in the mould]
2030/067 . . . . . . [the vulcanizing fluids being gases or vapours]
B29D

2030/0671 . . . . . {the vulcanizing fluids being liquids}
2030/0673 . . . . . {the vulcanizing fluids being combinations of different kinds of fluids, e.g. steam and nitrogen}
2030/0674 . . . . . {Heating by using non-fluid means, e.g. electrical heating}
2030/0675 . . . . . {Controlling the vulcanization processes}
2030/0677 . . . . . {Controlling temperature differences}
30/0678 . . . . . {Injection moulding specially adapted for tyres or parts thereof (injection moulding in general B29C 45/00)}
30/0679 . . . . . {Centrifugal casting specially adapted for tyres or parts thereof (centrifugal casting in general B29C 39/00)}
30/0681 . . . . . {Parts of pneumatic tyres; accessories, auxiliary operations}
30/0682 . . . . . {Inner liners (tubeless tyres with impervious liner or coating on the tyre B60C 5/14)}
30/0683 . . . . . {Additional internal supports to be positioned inside the tyre, as emergency supports for run-flat tyres}
30/0685 . . . . . {Incorporating auto-repairing or self-sealing arrangements or agents on or into tyres (auto-repairing or self-sealing arrangements or agents B29C 73/16; puncture preventing arrangements B60C 19/12)}
30/0686 . . . . . {Incorporating sealants on or into tyres not otherwise provided for; auxiliary operations therefore, e.g. preparation of the tyre}
30/0687 . . . . . {by incorporating the sealant into one chamber, e.g. bag, cell, tube or closed cavity}
30/0689 . . . . . {by incorporating the sealant into a plurality of chambers, e.g. bags, cells, tubes or closed cavities}
30/069 . . . . . {through the use of a cylindrical support, e.g. a drum}
30/0691 . . . . . {through the use of a toroidal support, e.g. a core, a part of the tyre or an inner tube}
30/0693 . . . . . {the sealant being in the form of discrete particles, e.g. spheres or balls, filled with sealant}
30/0694 . . . . . {the sealant being in the form of one or more narrow strips, e.g. applied by winding into the interior of the tyre}
30/0695 . . . . . {the sealant being in the form of one wide strip, e.g. a patch}
30/0697 . . . . . {the sealant being in liquid form, e.g. applied by spraying}
30/0698 . . . . . {the sealant being applied by injection, e.g. introducing the sealant through a hole}
30/08 . . . . . Building tyres
30/082 . . . . . {Optimizing the deposition of the layers on the tyre building support, e.g. by using mathematical methods}
30/084 . . . . . {Placing two side portions of the tyre into the mould and introducing, e.g. by extrusion or injection moulding, the tread material to create the toroidal tyre}
30/086 . . . . . {Building the tyre carcass by combining two or more sub-assemblies, e.g. two half-carcasses}
30/088 . . . . . {by using a seamless tubular component, e.g. an inner liner, a carcass structure or a belt/breaker during tyre manufacturing on a core or a building drum}
30/10 . . . . . on round cores, i.e. the shape of the core is approximately identical with the shape of the completed tyre
30/105 . . . . . {the cores being movable}
30/12 . . . . . Cores
30/14 . . . . . Rolling-down or pressing-down the layers in the building process
30/16 . . . . . Applying the layers; Guiding or stretching the layers during application {[(applying tread bands to carcasess B29D 30/58; retreading B29D 30/54)}
30/1607 . . . . . {by feeding a sheet perpendicular to the core axis and joining the ends to form an annular element (bending sheets and joining the edges B29C 53/42)}
30/1614 . . . . . {by sliding a preformed tubular layer over the core}
30/1621 . . . . . {by feeding a continuous band and winding it spirally, i.e. the band is fed without relative movement along the core axis, to form an annular element (winding and joining, spirally in general B29C 53/562)}
30/1628 . . . . . {by feeding a continuous band and winding it helically, i.e. the band is fed while being advanced along the core axis, to form an annular element (winding and joining, helically in general B29C 53/58)}
30/1635 . . . . . {by feeding a continuous band and moving it back and forth (zig-zag) to form an annular element}
30/1642 . . . . . {by feeding cut-to-length pieces in a direction perpendicular to the core axis and in a plane parallel to the core axis, and placing the pieces side-by-side to form an annular element}
30/165 . . . . . {by feeding cut-to-length pieces in a direction parallel to the core axis and placing the pieces side-by-side to form an annular element}
30/1657 . . . . . {by feeding cut-to-length pieces in a direction inclined with respect to the core axis and placing the pieces side-by-side to form an annular element}
30/1664 . . . . . {Details, accessories or auxiliary operations not provided for in the other subgroups of B29D 30/00}
30/1671 . . . . . {Venting air inclusions during the layer applications, e.g. by creating grooves, channels, passages, holes in the band-like tire component to be applied}
30/1678 . . . . . {the layers being applied being substantially continuous, i.e. not being cut before the application step}
30/1685 . . . . . {the layers being applied being already cut to the appropriate length, before the application step}
30/1692 . . . . . {Changing the orientation of the layers, e.g. plies, to be applied}
30/18 . . . . . Fitting the bead-rings or bead-cores; Folding the textile layers around the rings or cores
30/20 . . . . . by the flat-tyre method, i.e. building on cylindrical drums
30/201 . . . . . {Manufacturing run-flat tyres}
B29D

2030/202 . . . . . . [the building drums being movable, i.e. not permanently connected to a fixed frame]
2030/203 . . . . . . [the fixtures supporting the cylindrical drums being non displaceable, i.e. substantially fixed to the floor]
2030/204 . . . . . . [the fixtures supporting the cylindrical drums, e.g. turrets, being displaceable, e.g. movable along a path, rail or the like]
2030/205 . . . . . . [A single building drum being mounted on a fixture or supporting device, e.g. turret or turntable]
2030/206 . . . . . . [A plurality of building drums being mounted on a fixture or supporting device, e.g. turret or turntable]
2030/207 . . . . . . [the drum supporting device being rotatable around an inclined axis]
2030/208 . . . . . . [the drum supporting device being rotatable around a horizontal axis]
2030/209 . . . . . . [the drum supporting device being rotatable around a vertical axis]
30/22 . . . . . . Breaker plies being applied in the unexpanded state
30/24 . . . . . . Drums
2030/241 . . . . . . {Auxiliary drums used for temporary storage of the layers before application to the building drums}
30/242 . . . . . . {for manufacturing substantially cylindrical tyre components without cores or beads, e.g. treads or belts}
30/243 . . . . . . {and with mechanisms for folding layers}
30/244 . . . . . . {for manufacturing substantially cylindrical tyre components with cores or beads, e.g. carcasses (mechanisms for folding layers around cores or blads per se B29D 30/32)}
30/245 . . . . . . [Drums for the single stage building process, i.e. the building-up of the cylindrical carcass and the toroidal expansion of it are realised on the same drum (expansion to a toroidal shape B29D 30/36)]
30/246 . . . . . . [Drums for the multiple stage building process, i.e. the building-up of the cylindrical carcass is realised on one drum and the toroidal expansion is realised after transferring on another drum (expansion to a toroidal shape B29D 30/36)]
30/247 . . . . . . [Arrangements for the first stage only, e.g. means for radially expanding the drum to lock the beads (B29D 30/245 takes precedence)]
30/248 . . . . . . [Drums of the undercut type without toroidal expansion, e.g. with provisions for folding down the plies, for positioning the beads under the surface of the drum]
30/26 . . . . . . Accessories or details, e.g. membranes, transfer rings
30/2607 . . . . . . [Devices for transferring annular tyre components during the building-up stage, e.g. from the first stage to the second stage building drum]
2030/2614 . . . . . . {Bladders associated with the building drum, e.g. bladders used for the toroidal expansion, bladders for turning-up the plies}
2030/2621 . . . . . . [Means for clamping bladders on the drum shoulders]
2030/2628 . . . . . . [Bladders for shaping the inner parts of the tyre beads or sidewalls]
2030/2635 . . . . . . [Central bladder, e.g. elastic membrane, sleeve, envelope, diaphragm, which covers the central portion of the drum, e.g. covering the toroidally expandable rigid segments]
2030/2642 . . . . . . [Adjusting the diameter of the drum, to match its circumference with the length of ply]
2030/265 . . . . . . [Radially expandable and contractable drum comprising a set of circumferentially arranged elastic, flexible elements, e.g. blades or laminas, with or without expandable annular sleeve or bladder]
2030/2657 . . . . . . [Radially expandable and contractable drum comprising a set of circumferentially arranged rigid elements, e.g. fingers or arms]
2030/2664 . . . . . . [the drum comprising at least two portions that are axially separable, e.g. the portions being supported by different shafts, e.g. in order to facilitate the insertion of the beads]
2030/2671 . . . . . . [Holding the layers, e.g. the webs or the plies, in position onto the drum]
2030/2678 . . . . . . [by using magnets]
2030/2685 . . . . . . [by using mechanical means, e.g. jaws, grippers, pressing bars]
2030/2692 . . . . . . [by using suction means, e.g. vacuum producing devices]
30/28 . . . . . . Rolling-down or pressing-down the layers in the building process
30/30 . . . . . . Applying the layers; Guiding or stretching the layers during application ((applying tread bands to carcasses B29D 30/58; retreading B29D 30/54)]
30/3007 . . . . . . [by feeding a sheet perpendicular to the drum axis and joining the ends to form an annular element (bending sheets and joining the edges B29C 53/42)]
30/3014 . . . . . . [by sliding a preformed tubular layer over the drum]
30/3021 . . . . . . [by feeding a continuous band and winding it spirally, i.e. the band is fed without relative movement along the drum axis, to form an annular element (winding and joining, spirally in general B29C 53/562)]
30/3028 . . . . . . [by feeding a continuous band and winding it helically, i.e. the band is fed while being advanced along the drum axis, to form an annular element (winding and joining, helically in general B29C 53/58)]
30/3035 . . . . . . [by feeding a continuous band and moving it back and forth (zig-zag) to form an annular element]
Expansion of tyres in a flat form [i.e. expansion to a toroidal shape independently of their building-up process], e.g. of tyres built by the flat-tyres method or by jointly covering two bead-rings, located parallel to each other at a distance apart, with fabric or cord layers.

Textile inserts, e.g. cord or canvas layers, for tyres (making woven fabrics D03D; Treatment of inserts prior to building the tyre (pretreatment of inserts B29B 15/00; manufacture of layers comprising fibrous parallel reinforcements of substantial or continuous length B29C 70/20)

Endless textile bands without bead-rings; Fitting the bead-rings or bead-cores; Folding the textile layers around the rings or cores (making woven fabrics D03D; manufacture of layers comprising fibrous parallel reinforcements of substantial or continuous length B29C 70/20)

Chemical pretreatment of textile inserts before building the tyre (pretreatment of textiles B29D 30/40; pretreatment of reinforcements B29B 15/08; treating fibers, threads, yarns, fabrics in general D06M 15/00)

Textile inserts, e.g. cord or canvas layers, for tyres (making woven fabrics D03D; Treatment of inserts prior to building the tyre (pretreatment of inserts B29B 15/00; manufacture of layers comprising fibrous parallel reinforcements of substantial or continuous length B29C 70/20)

Chemical pretreatment of textile inserts before building the tyre (pretreatment of textiles B29D 30/40; pretreatment of reinforcements B29B 15/08; treating fibers, threads, yarns, fabrics in general D06M 15/00)

Textile inserts, e.g. cord or canvas layers, for tyres (making woven fabrics D03D; Treatment of inserts prior to building the tyre (pretreatment of inserts B29B 15/00; manufacture of layers comprising fibrous parallel reinforcements of substantial or continuous length B29C 70/20)

(General aspects of the joining methods and devices for creating the bands (joining of preformed parts in general B29C 65/00))

(Joining by overlapping (single lap to butt joints in general B29C 66/112; single bevel to bevel joints in general B29C 66/116))

(Joining devices being angularly adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being laterally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being longitudinally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining by overlapping (single lap to butt joints in general B29C 66/112; single bevel to bevel joints in general B29C 66/116))

(Joining by overlapping (single lap to butt joints in general B29C 66/112; single bevel to bevel joints in general B29C 66/116))

(Joining devices being angularly adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being laterally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being longitudinally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

Endless textile bands without bead-rings; Fitting the bead-rings or bead-cores; Folding the textile layers around the rings or cores (making woven fabrics D03D; manufacture of layers comprising fibrous parallel reinforcements of substantial or continuous length B29C 70/20)

Textile inserts, e.g. cord or canvas layers, for tyres (making woven fabrics D03D; Treatment of inserts prior to building the tyre (pretreatment of inserts B29B 15/00; manufacture of layers comprising fibrous parallel reinforcements of substantial or continuous length B29C 70/20)

(General aspects of the joining methods and devices for creating the bands (joining of preformed parts in general B29C 65/00))

(Joining by overlapping (single lap to butt joints in general B29C 66/112; single bevel to bevel joints in general B29C 66/116))

(Joining devices being angularly adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being laterally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being longitudinally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining by overlapping (single lap to butt joints in general B29C 66/112; single bevel to bevel joints in general B29C 66/116))

(Joining devices being angularly adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being laterally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being longitudinally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining by overlapping (single lap to butt joints in general B29C 66/112; single bevel to bevel joints in general B29C 66/116))

(Joining devices being angularly adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being laterally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being longitudinally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining by overlapping (single lap to butt joints in general B29C 66/112; single bevel to bevel joints in general B29C 66/116))

(Joining devices being angularly adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being laterally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being longitudinally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining by overlapping (single lap to butt joints in general B29C 66/112; single bevel to bevel joints in general B29C 66/116))

(Joining devices being angularly adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being laterally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining devices being longitudinally adjustable (joining devices characterized by the movement of the joining tools B29C 66/83))

(Joining by overlapping (single lap to butt joints in general B29C 66/112; single bevel to bevel joints in general B29C 66/116))
2030/443 . . . . . . (Increasing the length of the layers, e.g. by stretching)
2030/445 . . . . . . (Shortening the layers, e.g. by acting on the lateral edges or on the thickness or by cutting)
2030/4456 . . . . . . (by using speed differences, e.g. between conveyors or between conveyor and drum)
2030/4462 . . . . . . (by using grasping means)
2030/4468 . . . . . . [Holding the layers]
2030/4475 . . . . . . (by electrostatically charging the layers)
2030/4481 . . . . . . (by using magnetic forces, e.g. magnets)
2030/4487 . . . . . . (by using mechanical means, e.g. grippers or pressing bars)
2030/4493 . . . . . . (by using suction means, e.g. vacuum)
30/46 . . . . . . Cutting textile inserts to required shape
30/463 . . . . . . (Holding the textile inserts during cutting; means therefor)
2030/466 . . . . . . (Cutting the textile inserts between cords)
30/48 . . . . . . Bead-rings or bead-cores (from wire B21F 37/00); Treatment thereof prior to building the tyre
2030/481 . . . . . . [Fillers or apexes]
2030/482 . . . . . . [Applying fillers or apexes to bead cores]
2030/483 . . . . . . [Treating the bead cores to increase rubber adhesion]
2030/485 . . . . . . (the bead cores being made using a band containing a plurality of wires embedded in rubber)
2030/486 . . . . . . [Additional components for the tyre bead areas, e.g. cushioning elements, chafers, flippers]
2030/487 . . . . . . [Forming devices for manufacturing the beads]
2030/488 . . . . . . [Clamping the wires on the forming devices]
30/50 . . . . . . Covering, e.g. by winding, the separate bead-rings or bead-cores with textile material, e.g. with flipper strips (folding textile layers around bead-rings or bead-cores B29D 30/18, B29D 30/32; jointly covering bead-rings or bead cores B29D 30/34)
30/52 . . . . . . Unvulcanised treads, e.g. on used tyres; Retreading (apparatus for forming [treads by extrusion B29C 47/00; apparatus for] vulcanising treads B29C 35/02; apparatus characterised by the means for holding wheels or parts thereof B60B 30/00)
2030/523 . . . . . . [Ring-shaped treads]
2030/526 . . . . . . (the tread comprising means for discharging the electrostatic charge, e.g. conductive elements or portions having conductivity higher than the tread rubber)
30/54 . . . . . . Retreading
2030/541 . . . . . . (Abrading the tyre, e.g. buffing, to remove tread and/or sidewalls rubber, to prepare it for retreading)
30/542 . . . . . . [using envelopes or membranes provided with sealings for curing]
2030/543 . . . . . . [Spreading the envelopes or membranes for inserting the tyre therein]
2030/544 . . . . . . (Applying an intermediate adhesive layer, e.g. cement or cushioning element between carcass and tread)
2030/545 . . . . . . (Using chambers to apply heat and pressure, e.g. autoclaves for curing the retreaded tyres)
2030/546 . . . . . . [Measuring, detecting, monitoring, inspecting, controlling]
2030/547 . . . . . . (Retreading solid tyres)
2030/548 . . . . . . (Removing the worn out tread from the carcass, e.g. by pulling a continuous wire embedded between tread and carcass)
2030/549 . . . . . . (Means for holding the tyre on a support)
30/56 . . . . . . Retreading with prevulcanised tread (B29D 30/542 takes precedence)
30/58 . . . . . . Applying bands of rubber treads, i.e. applying camel back
2030/582 . . . . . . [Venting air inclusions, e.g. air trapped between tread and carcass]
2030/585 . . . . . . [Radially expanding annular treads to fit it over carcases]
2030/587 . . . . . . [Using isostatic pressure, e.g. bags or bladders, to press tread and carcass against each other]
30/60 . . . . . . by winding narrow strips
30/62 . . . . . . by extrusion or injection of the tread on carcass
30/64 . . . . . . Tyre spreaders
30/66 . . . . . . Moulding treads on to tyre casings, e.g. non-skid treads with spikes
2030/662 . . . . . . [Treads with antiskid properties, i.e. with spikes]
2030/665 . . . . . . [Treads containing inserts other than spikes, e.g. fibers or hard granules, providing antiskid properties]
2030/667 . . . . . . [Treads with antiskid properties, e.g. having special patterns or special rubber compositions]
30/68 . . . . . . Cutting profiles into the treads of tyres
2030/685 . . . . . . [before tread vulcanization]
30/70 . . . . . . Annuular breakers
2030/705 . . . . . . [the breakers being obtained by cutting a continuous reinforced strip into predefined lengths and placing the cut strips side by side on a suitable support, e.g. a toroidal core or a carcass]
30/72 . . . . . . Side-walls
2030/722 . . . . . . [Reinforcing the sidewalls, e.g. by using filaments, fibers or additional reinforcing layers]
2030/724 . . . . . . [Stiffening the sidewalls, e.g. by using additional inserts, e.g. made of rubber, plastics or other materials]
2030/726 . . . . . . [Decorating or marking the sidewalls before tyre vulcanization (protecting, decorating, marking tyre sidewalls B60C 13/00)]
2030/728 . . . . . . [Decorating or marking the sidewalls after tyre vulcanization (protecting, decorating, marking tyre sidewalls B60C 13/00)]
33/00 Producing bushes for bearings
35/00 Producing footwear

NOTES
1. Classification is made in this group if the moulding technique is of interest.
2. The assembling of individual parts by mechanical joining is classified in subclass A43D, e.g. by gluing shoe parts A43D 25/00
35/0009 . . . . (by injection moulding; Apparatus therefor)
35/0018 . . . [Moulds]
35/0027 . . . . [Last constructions; Mountings therefor]
35/0036 . . . . [with displaceable sole plates]
35/0045 . . . . [Sealing means for the mould cavity]
35/0054 . . . . [by compression moulding, vulcanising or the like; Apparatus therefor]
35/0063 . . . . [Moulds]
35/0072 . . . . [Last constructions; Mountings therefor]
35/0081 . . . . [with displaceable sole plates]
35/0090 . . . . [Sealing means for the mould cavity]
35/0102 . . . . made in one piece using a moulding technique, e.g. by injection moulding or casting
35/0110 . . . . having multilayered parts
35/0120 . . . . having soles or heels formed and joined on to preformed uppers using a moulding technique, e.g. by injection moulding, pressing and vulcanising
35/0129 . . . . [by injection moulding]
35/0132 . . . . [using means to bond the moulding material to the preformed uppers]
35/0142 . . . . [using particular materials for the preformed uppers]
35/0150 . . . . [by compression moulding, vulcanising or the like]
35/0158 . . . . [using means to bond the moulding material to the preformed uppers]
35/0160 . . . . [using particular materials for the preformed uppers]
35/0170 . . . . having multilayered parts
35/0180 . . . . [by injection moulding]
35/0190 . . . . [injecting first the outer sole part]
35/0200 . . . . [using exchangeable mould elements]
35/0210 . . . . [by compression moulding, vulcanising or the like]
35/0220 . . . . [forming first the outer sole part]
35/0230 . . . . [by injection moulding]
35/0240 . . . . [using exchangeable mould elements]
35/0250 . . . . having preformed soles or heels joined on to preformed uppers using a moulding technique, e.g. by feeding or injecting plastics material between the parts to be joined
35/0260 . . . . Producing parts thereof, e.g. soles, heels, uppers, by a moulding technique
35/0270 . . . . [Soles]
35/0280 . . . . [Heels]
35/0290 . . . . [Uppers]
35/0300 . . . . [Moulds or apparatus therefor]
35/0310 . . . . Multilayered parts
35/0320 . . . . [Soles]
35/0330 . . . . [Heels]
35/0340 . . . . [Uppers]
35/0350 . . . . [Moulds or apparatus therefor]

99/00 Subject matter not provided for in other groups of this subclass ((not used, see subgroups))

99/0003 . . . [Producing profiled members, e.g. beams]
99/0007 . . . [having a variable cross-section]
99/0010 . . . [Producing wall or panel-like structures, e.g. for hulls, fuselages, or buildings (articles with hollow walls B29D 24/00)]
99/0014 . . . [provided with ridges or ribs, e.g. joined ribs]
99/0017 . . . [with filled hollow ridges]
99/0021 . . . [provided with plain or filled structures, e.g. cores, placed between two or more plates or sheets, e.g. in a matrix]
99/0025 . . . [Producing blades or the like, e.g. blades for turbines, propellers, or wings]
99/0028 . . . [hollow blades]
99/0032 . . . [Producing rolling bodies, e.g. rollers, wheels, pulleys or pinions (bushes for bearings B29D 33/00; gear wheels B29D 15/00)]
99/0035 . . . [rollers or cylinders having an axial length of several times the diameter, e.g. for embossing, pressing, or printing]
99/0039 . . . [Producing countertops]
99/0042 . . . [Producing plain balls (hollow balls B29D 22/04)]
99/0046 . . . [Producing rods (connecting-rods formed from fiber-reinforced resins F16C 7/026)]
99/0050 . . . [Producing membranes]
99/0053 . . . [Producing sealings (B29D 99/0085 takes precedence)]
99/0057 . . . [Producing floor coverings]
99/0060 . . . [Producing casings, e.g. accumulator cases]
99/0064 . . . [Producing wearing apparel]
99/0067 . . . [Gloves]
99/0070 . . . [Masks, e.g. gas masks]
99/0075 . . . [Bathing caps]
99/0078 . . . [Producing filamentary materials]
99/0080 . . . [Producing articles in the form of closed loops, e.g. rings (B29D 29/00 takes precedence)]
99/0085 . . . [for sealing purposes]
99/0089 . . . [Producing honeycomb structures (consisting of porous ceramic ware C04B 38/006)]
99/0092 . . . [Producing upholstery articles, e.g. cushions, seats (B29C 63/025 takes precedence)]
99/0096 . . . [Producing closure members for containers, e.g. closure caps or stoppers]