

# CPC COOPERATIVE PATENT CLASSIFICATION

## E FIXED CONSTRUCTIONS

### BUILDING

#### E01 CONSTRUCTION OF ROADS, RAILWAYS, OR BRIDGES

#### E01B PERMANENT WAY; PERMANENT-WAY TOOLS; MACHINES FOR MAKING RAILWAYS OF ALL KINDS (derailing or rereiling blocks on track, track brakes or retarders [B61K](#))

##### 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.

<b><u>Structure of the permanent way for railways or tramways</u></b>	3/24	. . Slabs; Blocks; Pot sleepers; Fastening tie-rods to them
<b>1/00 Ballastway; Other means for supporting the sleepers or the track; Drainage of the ballastway (draining by trenches, culverts, or conduits <a href="#">E01F 5/00</a>)</b>	3/26	. . combined with inserts of wood artificial stone or other material
1/001 . {Track with ballast}	3/28	. made from concrete or from natural or artificial stone ( <a href="#">manufacture B28</a> )
1/002 . {Ballastless track, e.g. concrete slab trackway, or with asphalt layers}	3/30	. . Hollow sleepers
1/004 . . {with prefabricated elements embedded in fresh concrete or asphalt}	3/32	. . with armouring or reinforcement ( <a href="#">hollow sleepers E01B 3/30</a> )
1/005 . . {with sleeper shoes}	3/34	. . . with pre-tensioned armouring or reinforcement ( <a href="#">pre-tensioned armouring or reinforcing elements E04C 5/00</a> )
1/007 . . {with interlocking means to withstand horizontal forces}	3/36	. . Composite sleepers
1/008 . {Drainage of track}	3/38	. . Longitudinal sleepers; Longitudinal sleepers integral or combined with tie-rods; Combined longitudinal and transverse sleepers; Layers of concrete supporting both rails
<b>2/00 General structure of permanent way (railway networks <a href="#">B61B 1/00</a>; foundations for pavings <a href="#">E01C 3/00</a>; foundations in general <a href="#">E02D</a>)</b>	3/40	. . Slabs; Blocks; Pot sleepers; Fastening tie-rods to them
2/003 . {Arrangement of tracks on bridges or in tunnels}	3/42	. . combined with inserts of wood or other material
2/006 . {Deep foundation of tracks}	3/44	. made from other materials only if the material is essential
<b>3/00 Transverse or longitudinal sleepers (for switches or crossings <a href="#">E01B 7/22</a>); Other means resting directly on the ballastway for supporting rails</b>	3/46	. made from different materials ( <a href="#">E01B 3/26</a> , <a href="#">E01B 3/42</a> take precedence)
3/02 . made from wood ( <a href="#">drying or impregnating B27K</a> )	3/48	. Distance keepers or tie-rods for sleepers
3/04 . . Means for preventing cleaving	<b>5/00 Rails; Guard rails (manufacture of rails <a href="#">B21B</a>); Distance-keeping means for them</b>	
3/06 . . . Anti-cracking dogs	5/02	. Rails
3/08 . . . Straps or bands for hooping or encircling sleepers (apparatus for hooping wooden railway sleepers on the spot <a href="#">E01B 31/28</a> )	5/04	. . Grooved rails
3/10 . . Composite sleepers	5/06	. . Reversible or invertible rails
3/12 . . Longitudinal sleepers; Longitudinal sleepers integral or combined with tie-rods; Combined longitudinal and transverse sleepers	5/08	. . Composite rails; Compound rails with dismountable or non-dismountable parts
3/14 . . Slabs; Blocks; Fastening tie-rods to them	5/10	. . . Composite grooved rails; Inserts for grooved rails
3/16 . made from steel	5/12	. . Rails with a foot serving as a sleeper
3/18 . . Composite sleepers	5/14	. . Rails for special parts of the track, e.g. for curves
3/20 . . Sleeper construction for special purposes, e.g. with openings for ballast working (sleepers for shiftable track for heavy loads <a href="#">E01B 23/12</a> )	5/16	. Distance keepers
3/22 . . Longitudinal sleepers; Longitudinal sleepers integral or combined with tie-rods; Combined longitudinal and transverse sleepers	5/18	. Guard rails; Connecting, fastening or adjusting means therefor
	<b>7/00 Switches; Crossings (operating mechanisms <a href="#">B61L</a>)</b>	
	7/02	. Tongues; Associated constructions

- 7/04 . . Constructions with tongues turning about a vertical pivot at the end
- 7/06 . . Constructions with flexible tongues or flexible fishplates
- 7/08 . . Other constructions of tongues, e.g. tilting about an axis parallel to the rail, movable tongue blocks or rails
- 7/10 . Frogs
- 7/12 . . Fixed frogs made of one part or composite
- 7/14 . . with movable parts
- 7/16 . . Jump-over frogs
- 7/18 . Combinations of switches and crossings
- 7/20 . Safety means for switches, e.g. switch point protectors, auxiliary or guiding rail members
- 7/22 . Special sleepers for switches or crossings; Fastening means therefor
- 7/24 . Heating of switches
- 7/26 . Lubricating of switches ([lubricating of rails B61K 3/00](#))
- 7/28 . Crossings
- 7/30 . . Jump-over crossings
- 9/00 Fastening rails on sleepers, or the like (fastening rails to bridges [E01D 19/12](#))**
- 9/02 . Fastening rails, tie-plates, or chairs directly on sleepers or foundations; Means therefor
- 9/04 . . Fastening on wooden or concrete sleepers or on masonry without clamp members
- 9/06 . . . Railways spikes ([nails in general F16B](#))
- 9/08 . . . . Elastic spikes
- 9/10 . . . Screws or bolts for sleepers ([screws or bolts in general F16B](#))
- 9/12 . . . Retaining or locking devices for spikes or screws
- 9/14 . . . Plugs, sleeves, thread linings, or other inserts for holes in sleepers ([inserting plugs or sleeves E01B 31/26](#))
- 9/16 . . . . for wooden sleepers
- 9/18 . . . . for concrete sleepers
- 9/20 . . . by keys
- 9/22 . . Fastening on steel sleepers without clamp members
- 9/24 . . . by keys
- 9/26 . . . Welded fastenings
- 9/28 . . Fastening on wooden or concrete sleepers or on masonry with clamp members
- 9/30 . . . by resilient steel clips
- 9/303 . . . . {the clip being a shaped bar}
- 9/306 . . . . {the clip being a shaped plate}
- 9/32 . . Fastening on steel sleepers with clamp members
- 9/34 . . . by resilient steel clips
- 9/36 . . Metal sole-plates for rails which rails are directly fastened to sleepers
- 9/38 . Indirect fastening of rails by using tie-plates or chairs; Fastening of rails on the tie-plates or in the chairs
- 9/40 . . Tie-plates for flat-bottom rails ([manufacture B21](#))
- 9/42 . . . of two or more parts
- 9/44 . . Fastening the rail on the tie-plate
- 9/46 . . . by clamps
- 9/48 . . . . by resilient steel clips
- 9/483 . . . . . {the clip being a shaped bar}
- 9/486 . . . . . {the clip being a shaped plate}
- 9/50 . . . by keys
- 9/52 . . . . by resilient keys
- 9/54 . . Rail chairs
- 9/56 . . . for rails with two or more treads
- 9/58 . . Fastening the rail in the chair
- 9/60 . Rail fastenings making use of clamps or braces supporting the side of the rail
- 9/62 . Rail fastenings incorporating resilient supports
- 9/64 . Rail fastenings gripping or encircling the sleeper
- 9/66 . Rail fastenings allowing the adjustment of the position of the rails, so far as not included in the preceding groups
- 9/68 . Pads or the like, e.g. of wood, rubber, placed under the rail, tie-plate, or chair
- NOTE**
- If the subject to be classified has more than one characteristic, classification is made in group [E01B 9/68](#) and indexing codes for the different characteristics are given
- 9/681 . . {characterised by the material}
- 9/683 . . . {layered or composite}
- 9/685 . . {characterised by their shape}
- 9/686 . . . {with textured surface}
- 9/688 . . . {with internal cavities}
- 11/00 Rail joints (electrical connection of the rail [B60M 5/00](#))**
- 11/02 . Dismountable rail joints
- 11/04 . . Flat fishplates
- 11/06 . . . with keys or pins
- 11/08 . . Angle fishplates
- 11/10 . . Fishplates with parts supporting or surrounding the rail foot
- 11/12 . . Fishplates engaging only the rail foot
- 11/14 . . Rail foot flange clips in one piece
- 11/16 . . Fishplates for joining rails of different sections
- 11/18 . . Fishplates for temporarily repairing broken rails
- 11/20 . . with gap-bridging
- 11/22 . . . by parts of the rails
- 11/24 . . . . with oblique or overlapping rail ends
- 11/26 . . . . with interlocking rail ends
- 11/28 . . . by parts of the joining members
- 11/30 . . . . Fishplates with integral tread parts lying in the cross-section of the rail head
- 11/32 . . . by separate parts, Inserts bridging both rail heads
- 11/34 . . . . Auxiliary rail beside gap
- 11/36 . . Fastening means for fishplates
- 11/38 . . . Locking arrangements for fastening means ([locking means for nuts or bolts in general F16B](#))
- 11/40 . . Dismountable rail joints combined with welded parts
- 11/42 . Joint constructions for relatively movable rails, e.g. rails on turntables, traversers, or swing bridges
- 11/44 . Non-dismountable rail joints; Welded joints ([welding methods B23K](#))
- 11/46 . . General methods for making gapless tracks
- 11/48 . . Joints made by flame welding
- 11/50 . . Joints made by electric welding
- 11/52 . . Joints made by alumino-thermal welding
- 11/54 . Electrically-insulating rail joints

11/56	. Special arrangements for supporting rail ends ( <a href="#">foot supports E01B 11/08 - E01B 11/14</a> )	25/24	. . Supporting rails; Auxiliary balancing rails; Supports or connections for rails
11/58	. . Bridge plates	25/26	. . Switches; Crossings
11/60	. . . with wedges	25/28	. Rail tracks for guiding vehicles when running on road or similar surface ( <a href="#">wheel tracks on roads E01C 9/02</a> )
11/62	. . Bridge chairs ( <a href="#">chairs E01B 9/54 - E01B 9/58</a> )		
<b>13/00</b>	<b>Arrangements preventing shifting of the track</b>	25/30	. Tracks for magnetic suspension or levitation vehicles
13/02	. Rail anchors	25/305	. . { <a href="#">Rails or supporting constructions</a> }
<b>15/00</b>	<b>Guards for preventing a person's foot being trapped in grooved rails</b>	25/32	. . Stators, guide rails or slide rails
		25/34	. . Switches; Frogs; Crossings
<b>17/00</b>	<b>Cattle guards connected to the permanent way (<a href="#">grids in general for preventing cattle from straying A01K 3/00</a>)</b>	<b>26/00</b>	<b>Tracks or track components not covered by any one of the preceding groups</b>
<b>19/00</b>	<b>Protection of permanent way against development of dust or against the effect of wind, sun, frost, or corrosion; Means to reduce development of noise (<a href="#">snow fences E01F 7/02</a>, <a href="#">snow-ploughs E01H 8/02</a>, <a href="#">watering E01H 11/00</a>)</b>	26/005	. { <a href="#">Means for fixing posts, barriers, fences or the like to rails</a> }
19/003	. { <a href="#">Means for reducing the development or propagation of noise</a> }		
19/006	. { <a href="#">Means for protecting the underground against spillage</a> }		
<b>21/00</b>	<b>Track superstructure adapted for tramways in paved streets (<a href="#">paving E01C 9/04</a>, <a href="#">E01C 9/06</a>)</b>	<b>27/00</b>	<b>Placing, renewing, working, cleaning, or taking-up the ballast, with or without concurrent work on the track; Devices therefor; Packing sleepers</b>
21/02	. Special supporting means; Draining of rails	27/02	. Placing the ballast; Making ballastway; Redistributing ballasting material; Machines or devices therefor; Levelling means
21/04	. Special fastenings, joint constructions, or tie-rods	27/021	. . { <a href="#">by devices moving underneath the track, e.g. ballast sleighs</a> }
<b>23/00</b>	<b>Easily dismantlable or movable tracks, e.g. temporary railways; Details specially adapted therefor</b>	27/022	. . { <a href="#">by devices moving on the track with or without spreading or levelling</a> }
23/02	. Tracks for light railways, e.g. for field, colliery, or mine use	27/023	. . { <a href="#">Spreading, levelling or redistributing ballast already placed</a> }
23/04	. . Fastening or joining means	27/025	. . . { <a href="#">by means of non-driven tools</a> }
23/06	. . Switches ( <a href="#">turntables B60S</a> , <a href="#">B61J</a> ); Portable switches; Turnouts	27/026	. . . { <a href="#">by means of driven tools, e.g. rotating brooms or digging devices</a> }
23/08	. Temporary tracks for use while repairing tramways	27/027	. . { <a href="#">Loosening ballasting material</a> }
23/10	. Shiftable tracks for heavy loads, e.g. carrying excavators	27/028	. . { <a href="#">Compacting ballasting material; Performing ballast cores or seats for sleepers</a> }
23/12	. . Sleepers	27/04	. Removing the ballast; Machines therefor, whether or not additionally adapted for taking-up ballast ( <a href="#">E01B 27/06</a> , <a href="#">E01B 27/12 takes precedence</a> ; <a href="#">redistributing ballasting material E01B 27/02</a> )
23/14	. . Fastening or joining means ( <a href="#">fastening of rails by keys E01B 9/24</a> )	27/06	. Renewing or cleaning the ballast <a href="#">in situ</a> , with or without concurrent work on the track
23/16	. . Switches	27/08	. . the track having been taken-up ( <a href="#">E01B 27/11 takes precedence</a> )
<b>25/00</b>	<b>Tracks for special kinds of railways (<a href="#">systems B61B</a>; <a href="#">wheel tracks on roads E01C 9/02</a>)</b>	27/10	. . without taking-up track ( <a href="#">E01B 27/11 takes precedence</a> )
25/02	. Tracks for rack railways	27/102	. . . { <a href="#">Removing unwanted material without removing the ballast</a> }
25/04	. . Rack rails; Supports or connections for rack rails	27/105	. . . { <a href="#">the track having been lifted</a> }
25/06	. . Switches; Frogs; Crossings	27/107	. . . { <a href="#">along between the tracks only</a> }
25/08	. Tracks for mono-rails with centre of gravity of vehicle above the load-bearing rail	27/11	. . combined with concurrent renewal of track components
25/10	. . Mono-rails; Auxiliary balancing rails; Supports or connections for rails	27/12	. Packing sleepers, with or without concurrent work on the track; Compacting track-carrying ballast
25/12	. . Switches; Crossings	27/13	. . Packing sleepers, with or without concurrent work on the track ( <a href="#">preforming ballast cores or seats for sleepers E01B 27/02</a> )
25/14	. Tracks for cable-drawn railway vehicles	27/14	. . . Manual tools or hand-held power tools therefor
25/15	. . Switches; Crossings	27/16	. . . Sleeper-tamping machines
25/16	. Tracks for aerial rope railways with a stationary rope	27/17	. . . . combined with means for lifting, levelling or slewing the track
25/18	. . Ropes; Supports, fastening or straining means for ropes ( <a href="#">ropes in general D07B</a> ; <a href="#">masts E04H 12/00</a> ; <a href="#">ropes sockets F16G</a> )		
25/20	. . Switches; Crossings		
25/22	. Tracks for railways with the vehicle suspended from rigid supporting rails		

- 27/18 . . . . by introducing additional fresh material under the sleepers, e.g. by the measured-shovel method, by the blowing method
- 27/20 . . Compacting the material of the track-carrying ballastway, e.g. by vibrating the track, by surface vibrators (of trackless ballastway [E01B 27/02](#); for packing sleepers [E01B 27/12](#))
- 29/00 Laying, rebuilding, or taking-up tracks; Tools or machines therefor ([E01B 27/00](#), [E01B 31/00](#) take precedence)**
- 29/005 . {[Making of concrete parts of the track in situ](#)}
- 29/02 . Transporting, laying, removing, or renewing lengths of assembled track, assembled switches, or assembled crossings ([E01B 29/04](#) takes precedence)
- 29/04 . Lifting or levelling of tracks ([lifting devices in general B66F](#))
- 29/05 . Transporting, laying, removing, or renewing both rails and sleepers (as assembled units [E01B 29/02](#))
- 29/06 . Transporting, laying, removing or renewing sleepers ([E01B 29/05](#) takes precedence; carrying devices [B65G 7/12](#))
- 29/09 . . under, or from under, installed rails
- 29/10 . . . for inserting or removing sleepers
- 29/11 . . . . Removal involving destruction of the sleeper, e.g. the sectioning thereof
- 29/13 . . . for moving sleepers in a direction parallel to the rails, e.g. for spacing or aligning them ([E01B 29/10](#) takes precedence)
- 29/14 . . . for lifting sleepers up to the rails ([lifting devices in general B66F](#))
- 29/16 . Transporting, laying, removing, or replacing rails; Moving rails placed on sleepers in the track ([E01B 29/05](#) takes precedence; moving or tilting heavy loads in general [B65G 7/00](#))
- 29/17 . . Lengths of rails assembled into strings, e.g. welded together
- 29/20 . . Moving rails placed on installed sleepers in the plane track
- 29/22 . . Raising rails from sleepers, e.g. for inserting sole-plates ([lifting devices in general B66F](#))
- 29/24 . Fixing or removing detachable fastening means or accessories thereof; Pre-assembling track components by detachable fastening means ([E01B 29/02](#), [E01B 31/26](#) take precedence)
- 29/26 . . the fastening means being spikes ([E01B 29/16](#) takes precedence; hand-held tools for nail or staple driving or extracting [B25C](#))
- 29/28 . . the fastening means being of screw-and-nut type (portable apparatus for fixing or removing screws or the like [B25B](#)); Apparatus therefor, adapted to additionally drilling holes
- 29/29 . . . for horizontally-arranged fastening elements, e.g. fish-bolts
- 29/32 . Installing or removing track components, not covered by the preceding groups, e.g. sole-plates, rail anchors ([E01B 31/26](#) takes precedence)
- 29/40 . Means or arrangements for temporarily supporting laid tracks, or rails or sleepers in the track ([temporary fishplates E01B 11/18](#))
- 29/42 . Undetachably joining or fastening track components in or on the track, e.g. by welding, by gluing; Pre-assembling track components by gluing; Sealing joints with filling components ([E01B 31/26](#) takes precedence; independent heating means [E01B 31/18](#); welding in general [B23K](#); gluing metal parts in general [F16B 11/00](#))
- 29/44 . . Methods for effecting joining of rails in the track, e.g. taking account of ambient temperature
- 29/46 . . Devices for holding, positioning, or urging together the rail ends ([adjusting the joint by moving rails E01B 29/20](#))
- 31/00 Working rails, sleepers, baseplates, or the like, in or on the line; Machines, tools, or auxiliary devices specially designed therefor (characterised by features independent of use on assembled track [B21](#), [B23 - B25](#), [B27](#))**
- 31/02 . Working rail or other metal track components on the spot
- 31/04 . . Sectioning or slitting, e.g. by sawing, shearing, flame-cutting
- 31/06 . . Making holes, e.g. by drilling, punching, flame-cutting
- 31/08 . . Bending, e.g. for straightening rails or rail joints (for aligning rail ends to be welded [E01B 29/46](#))
- 31/12 . . Removing metal from rails, rail joints, or baseplates, e.g. for deburring welds, reconditioning worn rails
  - . . . . by milling
  - . . . . by planing or filing
  - . . . . by grinding
  - . . . . {[using grinding belts](#)}
- 31/13 . . . . by milling
- 31/15 . . . . by planing or filing
- 31/17 . . . . by grinding
- 31/175 . . . . {[using grinding belts](#)}
- 31/18 . . Reconditioning or repairing worn or damaged parts on the spot, e.g. applying inlays, building-up rails by welding ([E01B 31/04 - E01B 31/12](#) take precedence); Heating or cooling of parts on the spot, e.g. for reducing joint gaps, for hardening rails
- 31/20 . Working or treating non-metal sleepers in or on the line, e.g. marking, creosoting ([working metal sleepers E01B 31/02](#))
- 31/22 . . Cutting or grinding wooden sleepers, e.g. for forming rail seats ([E01B 31/24](#) takes precedence)
- 31/23 . . . Sectioning (combined with removal of segments from track [E01B 29/11](#))
- 31/24 . . Forming, treating, reconditioning, or cleaning holes in sleepers; Drilling-templates ([E01B 29/28](#), [E01B 31/26](#) take precedence)
- 31/26 . . Inserting or removing inserts or fillings for holes in sleepers, e.g. plugs, sleeves
- 31/28 . . Applying or removing anti-splitting or like reinforcing means ([E01B 31/26](#) takes precedence; straps or bands therefor [E01B 3/08](#))
- 33/00 Machines or devices for shifting tracks, with or without lifting, e.g. for aligning track, for shifting excavator track (combined with sleeper packing machines [E01B 27/17](#))**
- 33/02 . for slewing, i.e. transversely shifting, in steps
- 33/04 . . Manual tools; Devices not mounted on vehicles
- 33/06 . for slewing in a continuous operation, e.g. for tracks which carry excavators
  - . . Boom track-slewing machines
  - . . Bridge track-slewing machines
- 33/08 . . Boom track-slewing machines
- 33/10 . . Bridge track-slewing machines

- 33/12 . . Combined boom and bridge track-slewing machines
  - 33/18 . . Details not peculiar to a particular type of machine
  - 33/21 . . . Arrangement or construction of rollers moving the rails
  - 35/00 Applications of measuring apparatus or devices for track-building purposes (apparatus on locomotives or cars to indicate or record bad track sections B61K 9/00; measuring angles, linear dimensions, or irregularities in general G01B, G01C)**
  - 35/02 . for spacing, for cross levelling; for laying-out curves
  - 35/04 . . Wheeled apparatus
  - 35/06 . for measuring irregularities in longitudinal direction
  - 35/08 . . for levelling
  - 35/10 . . for aligning
  - 35/12 . for measuring movement of the track or of the components thereof under rolling loads, e.g. depression of sleepers, increase of gauge
  - 37/00 Making, maintaining, renewing, or taking-up the ballastway or the track, not provided for in a single one of groups E01B 27/00 - E01B 35/00**
- 
- 2201/00 Fastening or restraining methods**
  - 2201/02 . by wedging action
  - 2201/04 . by bolting, nailing or the like
  - 2201/06 . by eccentric or levering action
  - 2201/08 . by plastic or elastic deformation of fastener
  - 2201/10 . in alternative ways, e.g. glueing, welding, form-fits
- Making, maintaining, renewing, or taking-up the ballastway or the track; Tools or machines specially designed therefor (derailing or rerailling of machines B61K 5/00; removal of foreign matter from the permanent way, vegetation control applying liquids E01H)**
- 2202/00 Characteristics of moving parts of rail systems, e.g. switches, special frogs, tongues**
  - 2202/02 . Nature of the movement
  - 2202/021 . . Turning or tilting or elastically bending
  - 2202/022 . . . about horizontal axis
  - 2202/024 . . . about vertical axis
  - 2202/025 . . Pure translation
  - 2202/027 . . Including a component perpendicular to the plane of the rails
  - 2202/028 . . . Movement along an inclined surface
  - 2202/04 . Nature of the support or bearing
  - 2202/042 . . Sliding
  - 2202/044 . . Rolling
  - 2202/046 . . . with rolls on fixed part
  - 2202/048 . . . with rolls on moving part
  - 2202/06 . . Use of friction-reducing surfaces
  - 2202/08 . Locking devices or mechanisms for inhibiting movement
  - 2203/00 Devices for working the railway-superstructure**
  - 2203/01 . with track
  - 2203/012 . . present, i.e. in its normal position
  - 2203/015 . . present but lifted
  - 2203/017 . . removed or not present yet
  - 2203/02 . Removing or re-contouring ballast
  - 2203/021 . . Blowing
  - 2203/022 . . Horizontal chain
  - 2203/024 . . Inclined chain
  - 2203/025 . . Suction
  - 2203/027 . . Sweeping
  - 2203/028 . . Alternative ways
  - 2203/03 . Displacing or storing ballast
  - 2203/032 . . with special use or configuration of conveyor belts
  - 2203/034 . . using storing containers
  - 2203/036 . . . fixed to vehicle
  - 2203/038 . . . detachable from the vehicle
  - 2203/04 . Cleaning or reconditioning ballast or ground beneath
  - 2203/042 . . *in situ*, e.g. vacuum-cleaners
  - 2203/045 . . the ballast having been taken up
  - 2203/047 . . Adding material, e.g. tar, glue, protective layers
  - 2203/06 . Placing ballast
  - 2203/062 . . New ballast
  - 2203/065 . . Re-use of ballast
  - 2203/067 . . Special methods for posing or quantifying ballast
  - 2203/08 . Levelling ballast or ground beneath
  - 2203/083 . . Ploughs
  - 2203/086 . . Rotating brooms
  - 2203/10 . Track-lifting or-lining devices or methods
  - 2203/12 . Tamping devices
  - 2203/122 . . for straight track
  - 2203/125 . . adapted for switches or crossings
  - 2203/127 . . vibrating the track surface
  - 2203/14 . Way of locomotion or support
  - 2203/141 . . on the track to be treated
  - 2203/143 . . on a side-track
  - 2203/145 . . on the ballast
  - 2203/146 . . using other means than driven wheels as propulsion means
  - 2203/148 . . having wheelsets that can be displaced horizontally or vertically
  - 2203/15 . Reducing impact of devices on environment
  - 2203/16 . Guiding or measuring means, e.g. for alignment, canting, stepwise propagation
  - 2203/17 . continually advancing
  - 2204/00 Characteristics of the track and its foundations**
  - 2204/01 . Elastic layers other than rail-pads, e.g. sleeper-shoes, bituconcrete
  - 2204/02 . Ballast bags
  - 2204/03 . Injecting, mixing or spraying additives into or onto ballast or underground
  - 2204/04 . Direct mechanical or chemical fixing of sleepers onto underground
  - 2204/05 . Use of geotextiles
  - 2204/06 . Height or lateral adjustment means or positioning means for slabs, sleepers or rails
  - 2204/07 . Drainage
  - 2204/08 . Deep or vertical foundation
  - 2204/09 . Ballastless systems
  - 2204/10 . Making longitudinal or transverse sleepers or slabs *in situ* or embedding them
  - 2204/11 . Embedded tracks, using prefab elements or injecting or pouring a curable material
  - 2204/12 . Floating rails or sleepers
  - 2204/13 . Dowels for slabs, sleepers or rail-fixings
  - 2204/14 . Vegetation on or around railway-tracks

Making, maintaining, renewing, or taking-up the ballastway or the track; Tools or machines specially designed therefor

**E01B**

2204/15 . Layout or geometry of the track

2204/16 . Specific granulometry of the ballast

**2205/00** **Electrical insulation of railway track parts**