

# WIPO



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**WORLD INTELLECTUAL PROPERTY ORGANIZATION**  
GENEVA

**SPECIAL UNION FOR THE INTERNATIONAL PATENT CLASSIFICATION  
(IPC UNION)**

**COMMITTEE OF EXPERTS**

**Thirty-Second Session  
Geneva, February 24 to 28, 2003**

PROPOSED AMENDMENTS TO THE IPC

*Document prepared by the Secretariat*

1. The amendments to the IPC contained in the Technical Annexes to this document have been approved by the IPC Revision Working Group at its first to eighth sessions and are herewith submitted to the Committee of Experts for adoption. These amendments concern the following IPC subclasses:

<u>Area</u>	<u>Annex</u>	<u>Project</u>	<u>Area</u>	<u>Annex</u>	<u>Project</u>
A47J	1	385	B60K	12	355
A61F	2	386	B60T	13	355
A61G	3	386	B62K	14	386
A61H	4	386	C08J	15	415
A61K	5	412	C09K	16	362
A61P	6	412	C10L	17	363
A61Q	7	412	C12S	18	362
B29C	8	278	C23F	19	362
B29D	9	278	E03B	20	396
B30B	10	414	E04G	21	367
B32B	11	278	E21B	22	362



Project	Class or subclass affected	Approved amendments contained in Annex .. to document IPC/WG/-															
		8/8		7/7		6/5		5/3		4/5		3/3		2/3		1/2	
		E	F	E	F	E	F	E	F	E	F	E	F	E	F	E	F
396	E03B		3	21													
	F16K		4	22													
410	H02P	5E, E	5F, E	23E, E	23F	21E, E	21F	28, E		31							
412	A61K	6E, E	6F, E	24E, E	24F, E	22E, E	22F	29, E		32							
	A61P		7	25													
	A61Q	8E, E	8F, E	26E, E	26F, E	23E, E	23F	30									
414	B30B		11	27													
415	C08J	12E	12F														
416	F01M			28E, E	28F	39											
	F16N				29	40											

3. In addition to the approval of the amendments referred to above, the IPC Revision Working Group considered a matter to which its attention had been drawn by the Committee of Experts (see document IPC/CE/31/8, paragraph 10) and agreed as follows:

“Project C 367 (mechanical) – In view of the decision of the IPC Committee of Experts to refer back to the Working Group the amendments to subclass E04G proposed under Project C 367 (see document IPC/CE/31/8, paragraph 10), certain changes to this subclass were made, including the deletion of the existing groups E04G 3/02 to 3/16 (see Annex 10E to this report).” [See document IPC/WG/7/7, paragraph 43.]

4. *The Committee of Experts is invited to adopt the amendments to the IPC proposed in Technical Annexes 1 to 29 to this document.*

[Technical Annexes follow]

## TECHNICAL ANNEXES

<b>ANNEX 1</b>	<b>A 47 J</b>	<b>[Project-Rapporteur : 385/PT]</b>	<b>&lt;CE32040E&gt;</b>
27/08		• Pressure cookers; Lids or locking devices specially adapted therefor	
<b>36/00</b>		--- <b>accessories of cooking vessels</b> (27/00 to 33/00 --- as these parts, details or accessories are restricted to ---	
36/06		• Lids or covers for cooking vessels (specially adapted for pressure cookers 27/08)	
36/10		• • --- Lid-locking devices	
<b>ANNEX 2</b>	<b>A 61 F</b>	<b>[Project-Rapporteur : 386/US]</b>	<b>&lt;CE32030E&gt;</b>
<b>4/00</b>		<b>Methods or devices enabling disabled persons to operate ---</b>	
<b>ANNEX 3</b>	<b>A 61 G</b>	<b>[Project-Rapporteur : 386/US]</b>	<b>&lt;CE32028E&gt;</b>
<b>Title</b>		<b>TRANSPORT, PERSONAL CONVEYANCES, OR ACCOMMODATION SPECIALLY ADAPTED FOR DISABLED PERSONS OR PATIENTS; OPERATING</b> --- walking aids A 61 H 3/00; inclined lifts associated with stairways for transporting disabled persons or wheelchairs B 66 B 9/08)	
<b>Subclass index</b>		MEANS FOR DISPLACING DISABLED PERSONS OR PATIENTS BEDS; TREATMENT ROOMS; ==>	1/00 to 7/00
<i>D Guide Heading before 1/00</i>		<Deleted>	
1/003		• with facilities for picking up disabled persons or patients, e.g. break-away --- endless belts (devices in general for lifting disabled persons 7/10)	
<b>3/00</b>		--- <b>provisions for transporting disabled persons or their personal conveyances, e.g. for ---</b>	

3/02 • Loading or unloading personal conveyances; Facilitating access of disabled persons to, or exit of disabled persons from, vehicles

3/04 • • Transfer of seated disabled persons by swinging – – –

**5/00** **Chairs or personal conveyances specially adapted for disabled persons, e.g wheelchairs** (chairs with toilet conveniences [A 47 K 11/04](#); devices enabling disabled persons to operate an apparatus or device not forming part of the body [A 61 F 4/00](#); running gear or propulsion features [B 60 K](#); bicycles specially adapted for disabled riders [B 62 K 3/16](#))

Note(s) after  
5/00

Chairs for disabled persons having removable – – – with the disabled person to a vehicle and support the disabled person during use – – –

5/02 • propelled by the disabled person

**Guide** **Beds or accessories for disabled persons; Treatment rooms – – –**  
**Heading**  
**after 5/14**

**7/00** – – – **for nursing; Devices for lifting disabled persons** ([A 61 F 5/045](#) takes precedence; stretchers with facilities for picking up disabled persons [1/003](#))

7/08 • Apparatus for transporting beds

7/10 • Devices for lifting disabled persons, e.g. special – – –

7/12 • • for hoisting the disabled person under the – – –

7/14 • • facilitating both lifting and lateral movement of the disabled person

7/16 <Unchanged>

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ANNEX 4 A 61 H [Project-Rapporteur : 386/US] <CE32029E>

**Title** – – – **devices enabling disabled persons to operate – – –**

**3/00** **Appliances for aiding disabled persons to walk about – – –**

3/04 • Wheeled walking aids for disabled persons



N	8/23	• • •	<i>Sulfur; Selenium; Tellurium; Compounds thereof</i>
N	8/24	• • •	<i>Phosphorus; Compounds thereof</i>
N	8/25	• • •	<i>Silicon; Compounds thereof</i>
N	8/26	• • •	<i>Aluminium; Compounds thereof</i>
N	8/27	• • •	<i>Zinc; Compounds thereof</i>
N	8/28	• • •	<i>Zirconium; Compounds thereof</i>
N	8/29	• • •	<i>Titanium; Compounds thereof</i>
N	8/30	• •	<i>containing organic compounds</i>
N	8/31	• • •	<i>Hydrocarbons</i>
N	8/33	• • •	<i>containing oxygen</i>
N	8/34	• • • •	<i>Alcohols</i>
N	8/35	• • • •	<i>Ketones, e.g. quinones, benzophenone</i>
N	8/36	• • • •	<i>Carboxylic acids; Salts or anhydrides thereof</i>
N	8/362	• • • • •	<i>Polycarboxylic acids</i>
N	8/365	• • • • •	<i>Hydroxycarboxylic acids; Ketocarboxylic acids</i>
N	8/368	• • • • •	<i>with carboxyl groups directly bound to carbon atoms of aromatic rings</i>
N	8/37	• • • •	<i>Esters of carboxylic acids</i>
N	8/38	• • • •	<i>Percompounds, e.g. peracids</i>
N	8/39	• • • •	<i>Derivatives containing from 2 to 10 oxyalkylene groups</i>
N	8/40	• • •	<i>containing nitrogen (quinones containing nitrogen 8/35)</i>
N	8/41	• • • •	<i>Amines</i>
N	8/42	• • • •	<i>Amides</i>
N	8/43	• • • •	<i>Guanidines</i>
N	8/44	• • • •	<i>Aminocarboxylic acids or derivatives thereof, e.g. aminocarboxylic acids containing sulfur; Salts, esters or N-acylated derivatives thereof</i>
N	8/45	• • • •	<i>Derivatives containing from 2 to 10 oxyalkylene groups</i>
N	8/46	• • •	<i>containing sulfur (8/44 takes precedence)</i>
N	8/49	• • •	<i>containing heterocyclic compounds</i>
N	8/55	• • •	<i>containing phosphorus</i>
N	8/58	• • •	<i>containing atoms other than carbon, hydrogen, halogen, oxygen, nitrogen, sulfur or phosphorus</i>

- N 8/60 • • • *Sugars; Derivatives thereof*
- N 8/63 • • • *Steroids; Derivatives thereof*
- N Note(s) after  
8/63
- This group covers steroids, as defined in Note (1) after  
the title of subclass C 07 J.*
- N 8/64 • • • *Proteins; Peptides; Derivatives or degradation products  
thereof*
- N 8/65 • • • • *Collagen; Gelatin; Keratin; Derivatives or degradation  
products thereof*
- N 8/66 • • • • *Enzymes*
- N 8/67 • • • • *Vitamins*
- N 8/68 • • • • *Sphingolipids, e.g. ceramides, cerebroside, gangliosides*
- N 8/69 • • • • *containing fluorine*
- N 8/70 • • • • *containing perfluoro groups, e.g. perfluoroethers*
- N 8/72 • • • *containing organic macromolecular compounds*
- N 8/73 • • • • *Polysaccharides*
- N 8/81 • • • • *obtained by reactions involving only carbon-to-carbon  
unsaturated bonds*
- N 8/84 • • • • *obtained by reactions other than those involving only carbon-  
to-carbon unsaturated bonds*
- N 8/85 • • • • • *Polyesters*
- N 8/86 • • • • • *Polyethers*
- N 8/87 • • • • • *Polyurethanes*
- N 8/88 • • • • • *Polyamides*
- N 8/89 • • • • • *Polysiloxanes*
- N 8/891 • • • • • • *saturated, e.g. dimethicone, phenyl trimethicone*
- N 8/892 • • • • • • *containing silicon bound to unsaturated aliphatic  
groups, e.g. vinyl dimethicone*
- N 8/893 • • • • • • *containing atoms other than carbon and hydrogen in  
the side groups to the main chain*
- N 8/894 • • • • • • • *side groups containing halogen, e.g. fluorosilicones*
- N 8/895 • • • • • • • *side groups containing nitrogen, e.g.  
amodimethicone*



- N 8/896 • • • • • • *side groups containing oxygen, e.g. dimethiconol*
- N 8/897 • • • • • • • *modified by an alkoxy group, e.g. behenoxy dimethicone*
- N 8/898 • • • • • • • *modified by a polyoxyalkylene group, e.g. cetyl dimethicone copolyol*
- N 8/899 • • • • • • *side groups containing sulfur (8/898 takes precedence)*
- N 8/90 • • • *Block copolymers (8/89 takes precedence)*
- N 8/91 • • • *Graft copolymers (8/89 takes precedence)*
- N 8/92 • • *Oils, fats or waxes; Derivatives thereof, e.g. hydrogenation products*
- N 8/96 • • *containing materials, or derivatives thereof, of undetermined constitution*
- N 8/97 • • • *of vegetable origin, e.g. plant extracts*
- N 8/98 • • • *of animal origin*
- N 8/99 • • • *from micro-organisms*

**ANNEX 6                    A 61 P            [Project-Rapporteur : 412/EP]                    <CE32033E>**

- N 17/18 • *Antioxidants, e.g. antiradicals (preparations for protection against sunlight A 61 Q 17/00)*

**ANNEX 7                    A 61 Q            [Project-Rapporteur : 412/EP]                    <CE32025E>**

- N **Title**                    **USE OF COSMETICS OR SIMILAR TOILET PREPARATIONS**
- N *Note(s) after the title*
- (1)                    *This subclass covers the use of cosmetics or similar toilet preparations already classified as such in main group A 61 K 8/00, in subclasses C 11 D or C 12 N, or in classes C 01, C 07 or C 08.*
- (2)                    *When classifying in this subclass, classification is also made in subclass A 61 P if the preparation is stated to have therapeutic activity.*

- (3) *In this subclass, the use of cosmetics or similar toilet preparations is classified in all appropriate places.*
- (4) *The classification symbols of this subclass are not listed first when assigned to patent documents.*

N	<b>1/00</b>	<b><i>Make-up preparations; Body powders; Preparations for removing make-up</i></b>
N	1/02	• <i>Preparations containing skin colorants, e.g. pigments (preparations in powder form 1/12)</i>
N	1/04	• • <i>for lips</i>
N	1/06	• • • <i>Lipsticks</i>
N	1/08	• • <i>for cheeks, e.g. rouge</i>
N	1/10	• • <i>for eyes, e.g. eyeliner, mascara</i>
N	1/12	• <i>Face or body powders, e.g. for grooming, adorning or absorbing</i>
N	1/14	• <i>Preparations for removing make-up</i>
N	<b>3/00</b>	<b><i>Manicure or pedicure preparations</i></b>
N	3/02	• <i>Nail coatings</i>
N	3/04	• <i>Nail coating removers</i>
N	<b>5/00</b>	<b><i>Preparations for care of the hair</i></b>
N	5/02	• <i>Preparations for cleaning the hair</i>
N	5/04	• <i>Preparations for permanent waving or straightening the hair</i>
N	5/06	• <i>Preparations for styling the hair, e.g. by temporary shaping or colouring</i>
N	5/08	• <i>Preparations for bleaching the hair</i>
N	5/10	• <i>Preparations for permanently dyeing the hair</i>
N	5/12	• <i>Preparations containing hair conditioners</i>
N	<b>7/00</b>	<b><i>Preparations for affecting hair growth</i></b>
N	Note(s) after 7/00	

*Informative note*

*References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:*

*Preparations with therapeutic activity A 61 P 17/14.*

- N 7/02 • Preparations for inhibiting or slowing hair growth
- N 9/00 **Preparations for removing hair or for aiding hair removal**
- N 9/02 • Shaving preparations
- N 9/04 • Depilatories
- N 11/00 **Preparations for care of the teeth, of the oral cavity or of dentures; Dentifrices, e.g. toothpastes; Mouth rinses**
- N 11/02 • Preparations for deodorising, bleaching or disinfecting dentures
- N 13/00 **Formulations or additives for perfume preparations (essential oils or perfumes per se C 11 B 9/00)**
- N 15/00 **Anti-perspirants or body deodorants (deodorisation of air A 61 L 9/00)**
- N 17/00 **Barrier preparations; Preparations brought into direct contact with the skin for affording protection against external influences, e.g. sunlight, X-rays or other harmful rays, corrosive materials, bacteria or insect stings (chemical means for combating harmful chemical agents A 62 D 3/00)**
- N Note(s) after 17/00

Informative note

References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

Drugs for treating burns A 61 P 17/02.

- N 17/02 • containing insect repellants
- N Note(s) after 17/02

Informative note

References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:

Pest repellants A 01 N.

- N 17/04 • Topical preparations for affording protection against sunlight or other radiation; Topical sun tanning preparations
- N 19/00 **Preparations for care of the skin**

- N 19/02 • *for chemically bleaching or whitening the skin*
- N 19/04 • *for chemically tanning the skin (topical sun tanning preparations 17/04)*
- N 19/06 • *for countering cellulitis*
- N 19/08 • *Anti-ageing preparations*
- N 19/09 • *Washing or bathing preparations*

**ANNEX 8 B 29 C [Project-Rapporteur : 278/EP] <CE32035E>**

Note(s) after the title R

(2) Layered products or laminating methods are further classified in subclass [B 32 B](#).

**ANNEX 9 B 29 D [Project-Rapporteur : 278/EP] <CE32036E>**

Note(s) after the title

N (2) *Layered product or laminating methods are further classified in subclass [B 32 B](#).*

(3) <Former note (2)>

D 9/00 (transferred to [B 32 B 37/00 - 41/02](#))

D Note(s) after 9/00 <Deleted>

**ANNEX 10 B 30 B [Project-Rapporteur : 414/PT] <CE32043E>**

**Title PRESSES IN GENERAL; PRESSES NOT OTHERWISE PROVIDED FOR (producing ultra-high – – –**

D Note(s) after the title <Deleted>

**11/00 – – – tableting presses** (apparatus for forming or shaping of dough [A 21 C 3/00, 11/00](#); for clay or mixtures containing cement [B 28 B](#); apparatus for shaping of plastic or substances in a plastic state [B 29](#), e.g. for compression moulding [B 29 C 43/00](#), for extrusion moulding [47/00](#))

Note(s) after  
the title

- <== does not cover:
- --- apparatus is solely applicable and fully classifiable ---
- compositions or preparation ==>

<Delete former note>

- (4) In this subclass, ==>
- (5) In groups 1/00 to 33/00, at each ---
- N (6) *Layered products are classified in groups 37/00 or 38/00 if not characterised by their structure or composition*
- (7) <Former note (6)>

- D 1/10 (transferred to 37/00)
- D 31/00-31/10 (transferred to 37/00)
- D 31/12 (transferred to 37/00, 38/00)
- D 31/14-31/28 (transferred to 37/00)
- D 31/30 (transferred to 37/00)
- D 35/00 (transferred to 38/00 - 43/00)

N **Guide** **Methods or apparatus for making layered products; Treatment of the**  
**Heading** **layers or of the layered products**  
**before 37/00**

N Note(s)  
before 37/00

*In groups 37/00 and 39/00, the following expressions are used with the meanings indicated:*

- "laminating" means the action of combining previously unconnected layers to become one product whose layers will remain together.
- "partial laminating" occurs when one layer does not fully cover a surface of another layer, whereby the layer with the greater surface area is laminated on only part of its surface.

- "adhesive" means a layer, or part of a layer, applied in any state or in any manner, which is incorporated for the purpose of bonding.

N	37/00	<b>Methods or apparatus for laminating, e.g. by curing or by ultrasonic bonding</b>
N	37/02	<ul style="list-style-type: none"><li>• characterised by a sequence of laminating steps, e.g. by adding new layers at consecutive laminating stations</li></ul>
N	37/04	<ul style="list-style-type: none"><li>• characterised by the partial melting of at least one layer</li></ul>
N	37/06	<ul style="list-style-type: none"><li>• characterised by the heating method</li></ul>
N	37/08	<ul style="list-style-type: none"><li>• characterised by the cooling method</li></ul>
N	37/10	<ul style="list-style-type: none"><li>• characterised by the pressing technique, e.g. using direct action of vacuum or fluid pressure</li></ul>
N	37/12	<ul style="list-style-type: none"><li>• characterised by using adhesives</li></ul>
N	37/14	<ul style="list-style-type: none"><li>• characterised by the properties of the layers</li></ul>
N	37/15	<ul style="list-style-type: none"><li>• • with at least one layer being manufactured and immediately laminated before reaching its stable state, e.g. in which a layer is extruded and laminated while in semi-molten state</li></ul>
N	37/16	<ul style="list-style-type: none"><li>• • with all layers existing as coherent layers before laminating</li></ul>
N	37/18	<ul style="list-style-type: none"><li>• • • involving the assembly of discrete sheets or panels only</li></ul>
N	37/20	<ul style="list-style-type: none"><li>• • • involving the assembly of continuous webs only</li></ul>
N	37/22	<ul style="list-style-type: none"><li>• • • involving the assembly of both discrete and continuous layers</li></ul>
N	37/24	<ul style="list-style-type: none"><li>• • with at least one layer not being coherent before laminating, e.g. made up from granular material sprinkled onto a substrate (37/15 takes precedence)</li></ul>
N	37/26	<ul style="list-style-type: none"><li>• • with at least one layer which influences the bonding during the laminating process, e.g. release layers or pressure equalising layers</li></ul>
N	37/28	<ul style="list-style-type: none"><li>• involving assembly of non-flat intermediate products which are flattened at a later step, e.g. tubes</li></ul>
N	37/30	<ul style="list-style-type: none"><li>• Partial laminating</li></ul>
N	38/00	<b>Ancillary operations in connection with laminating processes</b>
N	38/04	<ul style="list-style-type: none"><li>• Punching, slitting or perforating</li></ul>
N	38/06	<ul style="list-style-type: none"><li>• Embossing</li></ul>
N	38/08	<ul style="list-style-type: none"><li>• Impregnating</li></ul>

- N 38/10 • *Removing layers, or parts of layers, mechanically or chemically (punching, slitting or perforating 38/04)*
- N 38/12 • *Deep-drawing*
- N 38/14 • *Printing or colouring*
- N 38/16 • *Drying; Softening; Cleaning*
- N 38/18 • *Handling of layers or the laminate*
- N 39/00 *Layout of apparatus or plants, e.g. modular laminating systems*
- N 41/00 *Arrangements for controlling or monitoring lamination processes; Safety arrangements*
- N 41/02 • *Safety arrangements*
- N 43/00 *Operations specially adapted for layered products and not otherwise provided for, e.g. repairing; Apparatus therefor*

**ANNEX 12      B 60 K      [Project-Rapporteur : 355/GB]      <CE32017E>**

- C 28/16 • • *responsive to, or preventing, spinning or skidding of wheels (brake regulation specially adapted to prevent excessive wheel spin during vehicle acceleration, e.g. traction control B 60 T 8/175; preventing wheel – – –*

**ANNEX 13      B 60 T      [Project-Rapporteur : 355/GB]      <CE32016E>**

N Note(s) after 8/00

*When classifying in group 8/17, classification is also made in appropriate places in groups 8/18, 8/24, 8/26 or 8/32 if other aspects than electronic control are of interest.*

- N 8/17 • *Using electrical or electronic regulation means to control braking*
- N 8/171 • • *Detecting parameters used in the regulation; Measuring values used in the regulation*
- N 8/172 • • *Determining control parameters used in the regulation, e.g. by calculations involving measured or detected parameters*

- N 8/173 • • *Eliminating or reducing the effect of unwanted signals, e.g. due to vibrations or electrical noise*
- N 8/174 • • *characterised by using special control logic, e.g. fuzzy logic*
- N 8/175 • • *Brake regulation specially adapted to prevent excessive wheel spin during vehicle acceleration, e.g. traction control (safety devices for propulsion unit control responsive to, or preventing, skidding of wheels [B 60 K 28/16](#))*
- N 8/1755 • • *Brake regulation specially adapted to control the stability of the vehicle, e.g. taking into account yaw rate or transverse acceleration in a curve*
- N 8/176 • • *Brake regulation specially adapted to prevent excessive wheel slip during vehicle deceleration, e.g. ABS ([8/1755](#) takes precedence)*
- N 8/1761 • • • *responsive to wheel or brake dynamics, e.g. wheel slip, wheel acceleration or rate of change of brake fluid pressure*
- N 8/1763 • • • *responsive to the coefficient of friction between the wheels and the ground surface ([8/1764](#) takes precedence)*
- N 8/1764 • • • *Regulation during travel on surface with different coefficients of friction, e.g. between left and right sides, mu-split*
- N 8/1766 • • • *Proportioning of brake forces according to vehicle axle loads, e.g. front to rear of vehicle*
- N 8/1769 • • • *specially adapted for vehicles having more than one driven axle, e.g. four-wheel drive vehicles*

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**ANNEX 14      B 62 K      [Project-Rapporteur : 386/US]      <CE32022E>**

- 3/16 • --- disabled riders
- 5/00** --- **road wheels** (specially adapted for disabled persons [A 61 G 5/00](#); cycle ---)

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**ANNEX 15      C 08 J      [Project-Rapporteur : 415/GB]      <CE32054E>**

- Title** --- **C 08 C, F, G, H** (working, e.g. shaping, of plastics [B 29](#); layered ---)
- 5/00** --- to [B 01 D 71/00](#); working, e.g. shaping, of plastics [B 29](#))



**11/00**      --- **waste materials** (recovery of plastics **B 29 B 17/00**;  
 polymerisation processes ---

ANNEX	16	C 09 K	[Project-Rapporteur : 362/EP]	<CE32002E>
D	7/00		(transferred to 8/02)	
D	Note(s) after 7/00		<Deleted>	
D	7/02		(transferred to 8/04)	
D	7/04		(transferred to 8/05)	
D	7/06		(transferred to 8/32)	
D	7/08		(transferred to 8/38)	
N	<b>8/00</b>		<b>Compositions for drilling of boreholes or wells; Compositions for treating boreholes or wells, e.g. for completion or for remedial operations</b>	
N	8/02		• Well-drilling compositions	
N	Note(s) after 8/02			
			<i>In this group, in the absence of an indication to the contrary, classification is made in the last appropriate place.</i>	
N	8/03		• • Specific additives for general use in well-drilling compositions	
N	8/035		• • • Organic additives	
N	8/04		• • Aqueous well-drilling compositions	
N	8/05		• • • containing inorganic compounds only, e.g. mixtures of clay and salt	
N	8/06		• • • Clay-free compositions (containing inorganic compounds only 8/05)	
N	8/08		• • • • containing natural organic compounds, e.g. polysaccharides, or derivatives thereof	
N	8/10		• • • • • Cellulose or derivatives thereof	
N	8/12		• • • • • containing synthetic organic macromolecular compounds or their precursors	
N	8/14		• • • Clay-containing compositions (containing inorganic compounds only 8/05)	
N	8/16		• • • • characterised by the inorganic compounds other than clay	
N	8/18		• • • • characterised by the organic compounds	

- N 8/20
  - • • • • *Natural organic compounds or derivatives thereof, e.g. polysaccharides or lignin derivatives*
- N 8/22
  - • • • • *Synthetic organic compounds*
- N 8/24
  - • • • • • *Polymers*
- N 8/26
  - • • *Oil-in-water emulsions*
- N 8/28
  - • • • *containing organic additives*
- N 8/32
  - • *Non-aqueous well-drilling compositions, e.g. oil-based*
- N 8/34
  - • • *Organic liquids*
- N 8/36
  - • • *Water-in-oil emulsions*
- N 8/38
  - • *Gaseous or foamed well-drilling compositions*
- N 8/40
  - *Spacer compositions, e.g. compositions used to separate well-drilling from cementing masses*
- N 8/42
  - *Compositions for cementing, e.g. for cementing casings into boreholes; Compositions for plugging, e.g. for killing wells (compositions for plastering 8/50)*
- N 8/44
  - • *containing organic binders only*
- N 8/46
  - • *containing inorganic binders, e.g. Portland cement*
- N 8/467
  - • • *containing additives for specific purposes*
- N 8/473
  - • • • *Density reducing additives, e.g. for obtaining foamed cement compositions*
- N 8/48
  - • • • *Density increasing or weighting additives*
- N 8/487
  - • • • *Fluid loss control additives; Additives for reducing or preventing circulation loss*
- N 8/493
  - • • • *Additives for reducing or preventing gas migration*
- N 8/50
  - *Compositions for plastering borehole walls, i.e. compositions for temporary consolidation of borehole walls (compositions for consolidating loose sand or the like around wells 8/56)*
- N 8/502
  - • *Oil-based compositions*
- N 8/504
  - • *Compositions based on water or polar solvents (8/502 takes precedence)*
- N 8/506
  - • • *containing organic compounds*
- N 8/508
  - • • • *macromolecular compounds*
- N 8/512
  - • • • • *containing cross-linking agents*
- N 8/514
  - • • • • *of natural origin, e.g. polysaccharides, cellulose (8/512 takes precedence)*

- N 8/516 • • *characterised by their form or by the form of their components, e.g. encapsulated material*
- N 8/518 • • • *Foams*
- N 8/52 • *Compositions for preventing, limiting or eliminating depositions, e.g. for cleaning*
- N 8/524 • • *organic depositions, e.g. paraffins or asphaltenes*
- N 8/528 • • *inorganic depositions, e.g. sulfates or carbonates*
- N 8/532 • • • *Sulfur*
- N 8/536 • • *characterised by their form or by the form of their components, e.g. encapsulated material*
- N 8/54 • *Compositions for in situ inhibition of corrosion in boreholes or wells*
- N *Note(s) after 8/54*

Informative note

*References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:*

*Inhibiting corrosion of metallic materials by using inhibitors in general C 23 F 11/00*

- N 8/56 • *Compositions for consolidating loose sand or the like around wells without excessively decreasing the permeability thereof (compositions for plastering borehole walls 8/50)*
- N *Note(s) after 8/56*

Informative note

*References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:*

*Soil-conditioning materials or soil-stabilising materials 17/00.*

- N 8/565 • • *Oil-based compositions*
- N 8/57 • • *Compositions based on water or polar solvents (8/565 takes precedence)*
- N 8/575 • • • *containing organic compounds*
- N 8/58 • *Compositions for enhanced recovery methods for obtaining hydrocarbons, i.e. for improving the mobility of the oil, e.g. displacing fluids*

- N 8/582 • • *characterised by the use of bacteria*
  - N 8/584 • • *characterised by the use of specific surfactants*
  - N 8/588 • • *characterised by the use of specific polymers*
  - N 8/592 • • *Compositions used in combination with generated heat, e.g. by steam injection*
  - N 8/594 • • *Compositions used in combination with injected gas (8/592 takes precedence)*
  - N 8/60 • *Compositions for stimulating production by acting on the underground formation*
  - N 8/62 • • *Compositions for forming crevices or fractures*
  - N 8/64 • • • *Oil-based compositions*
  - N 8/66 • • • *Compositions based on water or polar solvents (8/64 takes precedence)*
  - N 8/68 • • • • *containing organic compounds*
  - N 8/70 • • • *characterised by their form or by the form of their components, e.g. foams*
  - N 8/72 • • • *Eroding chemicals, e.g. acids*
  - N 8/74 • • • • *combined with additives added for specific purposes*
  - N 8/76 • • • • • *for preventing or reducing fluid loss*
  - N 8/78 • • • • • *for preventing sealing*
  - N 8/80 • • *Compositions for reinforcing fractures, e.g. compositions of proppants used to keep the fractures open*
  - N 8/82 • • *Oil-based compositions (8/64 takes precedence)*
  - N 8/84 • • *Compositions based on water or polar solvents (8/66, 8/82 take precedence)*
  - N 8/86 • • • *containing organic compounds*
  - N 8/88 • • • • *macromolecular compounds*
  - N 8/90 • • • • • *of natural origin, e.g. polysaccharides, cellulose*
  - N 8/92 • • *characterised by their form or by the form of their components, e.g. encapsulated material (8/70 takes precedence)*
  - N 8/94 • • • *Foams*
- 17/00** – – – **soil-stabilising materials** (specially adapted for boreholes or wells 8/00; fertilisers C 05; consolidating – – –

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ANNEX 17 C 10 L [Project-Rapporteur : 363/GB] <CE32004E>

	Note(s) after 1/10		
		(1)	In this group, in the absence – – – compound is classified in – – –
N		(2)	<i>If an additive is a mixture of compounds, classification is made for each compound of interest.</i>
		(3)	<Former note (2)>
N	1/183	• • • • •	<i>at least one hydroxy group bound to an aromatic carbon atom</i>
N	1/185	• • • • •	<i>Ethers; Acetals; Ketals; Aldehydes; Ketones</i>
N	1/188	• • • • •	<i>Carboxylic acids; Salts thereof</i>
N	1/189	• • • • •	<i>having at least one carboxyl group bound to an aromatic carbon atom</i>
N	1/19	• • • • •	<i>Esters</i>
N	1/192	• • • • •	<i>Macromolecular compounds</i>
N	1/195	• • • • •	<i>obtained by reactions involving only carbon-to-carbon unsaturated bonds</i>
N	1/196	• • • • •	<i>derived from monomers containing a carbon-to-carbon unsaturated bond and a carboxyl group or salts, anhydrides or esters thereof</i>
N	1/197	• • • • •	<i>derived from monomers containing a carbon-to-carbon unsaturated bond and an acyloxy group of a saturated carboxylic or carbonic acid</i>
N	1/198	• • • • •	<i>obtained otherwise than by reactions involving only carbon-to-carbon unsaturated bonds</i>
N	1/222	• • • • •	<i>containing at least one carbon-to-nitrogen single bond</i>
N	1/223	• • • • •	<i>having at least one amino group bound to an aromatic carbon atom</i>
N	1/224	• • • • •	<i>Amides; Imides</i>
N	1/226	• • • • •	<i>containing at least one nitrogen-to-nitrogen bond, e.g. azo compounds, azides, hydrazines</i>
N	1/228	• • • • •	<i>containing at least one carbon-to-nitrogen double bond, e.g. guanidines, hydrazones, semicarbazones, imines; containing at least one carbon-to-nitrogen triple bond, e.g. nitriles</i>
N	1/23	• • • • •	<i>containing at least one nitrogen-to-oxygen bond, e.g. nitro-compounds, nitrates, nitrites</i>

- N* 1/232 • • • • containing nitrogen in a heterocyclic ring
- N* 1/233 • • • • • containing nitrogen and oxygen in the ring, e.g. oxazoles
- N* 1/234 • • • • Macromolecular compounds
- N* 1/236 • • • • • obtained by reactions involving only carbon-to-carbon unsaturated bonds
- N* 1/238 • • • • • obtained otherwise than by reactions involving only carbon-to-carbon unsaturated bonds
- N* 1/2383 • • • • • • Polyamines or polyimines, or derivatives thereof
- N* 1/2387 • • • • • • • Polyoxyalkyleneamines
- 1/30 • • • containing elements not mentioned in groups 1/16 to 1/28
- C* 10/00 **Use of additives to fuels or fires for particular purposes** (additives for liquid carbonaceous fuels characterised by their chemical nature 1/10; using binders for briquetting solid fuels 5/10; using additives to improve the combustion of solid fuels 9/10)
- 10/02 • for reducing smoke development
- 10/04 • for minimising corrosion or incrustation
- 10/06 • for facilitating soot removal
- N* 10/08 • for improving lubricity; for reducing wear
- N* 10/10 • for improving the octane number
- N* 10/12 • for improving the cetane number
- N* 10/14 • for improving low temperature properties
- N* 10/16 • • Pour-point depressants
- N* 10/18 • use of detergents or dispersants for purposes not provided for in groups 10/02 to 10/16

Note(s) after  
the title

<== C 08, D 21 C, H  
A 62 D, C 09 B, H, E 21 B  
B 01 D, C 10 G, F 24 F, ==>

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ANNEX 19                    C 23 F            [Project-Rapporteur : 362/EP]                    <CE32024E>

11/00                    --- **corrosive agent** (compositions for in situ inhibition of corrosion in boreholes or wells [C 09 K 8/54](#); adding inhibitors to mineral ---)

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ANNEX 20                    E 03 B            [Project-Rapporteur : 396/PT]                    <CE32042E>

9/00                    --- or valves per se [F 16 K](#))

9/02                    • Hydrants; Arrangement of valves therein; Keys for hydrants

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ANNEX 21                    E 04 G            [Project-Rapporteur : 367/DE]                    <CE32027E>

1/00                    **Scaffolds primarily resting ---**

C 1/14                    • *Comprising essentially pre-assembled two-dimensional frame-like elements, e.g. of rods in L- or H-shape, with or ---*

C 1/15                    • *--- precedence); Platforms (boards or planks therefor [5/08](#))*

D 1/16                    *(transferred to [1/17](#), [5/16](#))*

N 1/17                    • *Comprising essentially pre-assembled three-dimensional elements, e.g. cubic elements*

1/20                    • • Scaffolds comprising upright ---

1/22                    • • Scaffolds having a ---

D 1/26                    *(transferred to [5/00](#))*

1/30                    • • Ladder scaffolds

N 1/38                    • *Scaffolds partly supported by the building (ladders attachable to structures [E 06 C 1/34](#))*

D 3/02                    *(transferred to [3/18](#) - [3/34](#))*

D 3/04                    *(transferred to [3/18](#) - [3/34](#))*

D 3/06                    *(transferred to [3/18](#))*

D 3/08                    *(transferred to [3/20](#))*

D 3/10                    *(transferred to [3/18](#) - [3/34](#))*

D 3/12                    *(transferred to [3/26](#), [3/34](#))*

D 3/14                    *(transferred to [3/18](#) - [3/34](#))*

D 3/16                    *(transferred to [3/18](#) - [3/34](#))*

- N 3/18 • supported by cantilevers or other provisions mounted in openings in the building, e.g. window openings (3/28 takes precedence)
- N 3/20 • supported by walls (3/28 takes precedence; wall-anchors for supporting scaffolds 5/04; consoles 5/06)
- N 3/22 • supported by roofs or ceilings (3/28 takes precedence)
- N 3/24 • specially adapted for particular parts of buildings or for buildings of particular shape, e.g. chimney stacks or pylons (3/28 takes precedence)
- N 3/26 • • specially adapted for working on roofs
- N 3/28 • Mobile scaffolds; Scaffolds with mobile platforms
- N 3/30 • • suspended by flexible supporting elements, e.g. cables
- N 3/32 • • • Hoisting devices; Safety devices
- N 3/34 • • characterised by supporting structures provided on the roofs
- C 5/00 **Component parts or accessories for scaffolds** (connections 7/00)
- 5/08 • --- or planks
- N 5/10 • Steps or ladders specially adapted for scaffolds
- N 5/12 • Canopies
- N 5/14 • Railings
- N 5/16 • Struts or stiffening rods, e.g. diagonal rods
- N 7/32 • • with coupling elements using wedges
- N 7/34 • • with coupling elements using positive engagement, e.g. hooks or pins
- 21/24 • --- structures for scaffolds 5/00)
- 21/32 • --- of buildings (related to scaffolds 5/00; ropes or ---
- 27/00 --- **steps, ramps** (as parts or accessories for scaffolds 5/00; gangways B 63; ---

Note(s) after  
 the title

<== for further processing;

--- B, e.g. B 23 B;



- N* – compositions for drilling of boreholes or wells or for treating boreholes or wells, which compositions are covered by group [C 09 K 8/00](#), e.g. compositions for enhanced recovery methods for obtaining hydrocarbons [8/58](#).
- N* (3) Processes using enzymes or micro-organisms in order to:
- N* (i) liberate, separate or purify a pre-existing compound or composition, or to
- N* (ii) treat textiles or clean solid surfaces of materials
- N* are further classified in subclass [C 12 S](#).
- C* 33/13 • • --- bailers [27/02](#); chemical compositions therefor [C 09 K 8/00](#))
- C* 37/06 • --- like substances (chemical compositions therefor [C 09 K 8/52](#))
- C* 41/02 • --- bailers [27/02](#); chemical compositions therefor [C 09 K 8/54](#); inhibiting corrosion ---
- C* 43/02 • Subsoil filtering ([43/11](#) takes precedence; chemical compositions for consolidating loose sand or the like around wells [C 09 K 8/56](#))
- C* 43/22 • • --- precedence; chemical or bacterial compositions therefor [C 09 K 8/58](#); chemical features in ---
- C* 43/25 • --- generating arrangements [28/00](#); chemical compositions therefor [C 09 K 8/60](#))

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<b>ANNEX</b>	<b>23</b>	<b>F 01 C</b>	<b>[Project-Rapporteur : 369/EP]</b>	<b>&lt;CE32021E&gt;</b>
<i>N</i>	<b>20/00</b>	<b><i>Control of, monitoring of, or safety arrangements for, machines or engines</i></b>		
<i>N</i>	20/02	• specially adapted for several machines or engines connected in series or in parallel		
<i>N</i>	20/04	• specially adapted for reversible machines or engines		
<i>N</i>	20/06	• specially adapted for stopping, starting, idling or no-load operation		
<i>N</i>	20/08	• characterised by varying the rotational speed		
<i>N</i>	20/10	• characterised by changing the positions of the inlet or outlet openings with respect to the working chamber		

- N 20/12 • • *using sliding valves*
- N 20/14 • • *using rotating valves*
- N 20/16 • • *using lift valves*
- N 20/18 • *characterised by varying the volume of the working chamber (by changing the positions of inlet or outlet openings 20/10)*
- N 20/20 • • *by changing the form of the inner or outer contour of the working chamber*
- N 20/22 • • *by changing the eccentricity between cooperating members*
- N 20/24 • *characterised by using valves regulating pressure or flow rate, e.g. discharge valves (20/10 takes precedence)*
- N 20/26 • • *using bypass channels*
- N 20/28 • *Safety arrangements; Monitoring*
- 21/00 – – – *provided for in groups 1/00 to 20/00*
- D 21/12 *(transferred to 20/00, 21/18)*
- D 21/14 *(transferred to 20/00)*
- D 21/16 *(transferred to 20/00)*
- N 21/18 • *Arrangements for admission or discharge of the working fluid, e.g. constructional features of the inlet or outlet*

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**ANNEX 24 F 01 M [Project-Rapporteur : 416/PT] <CE32038E>**

Note(s) after the title

- (1) Attention is drawn – – –
- N (2) *Attention is drawn to the following places, which cover lubrication of specific machines or engines:*
- N *F 01 B 31/10 Steam engines*
- N *F 01 C 21/04 Rotary-piston or oscillating-piston machines or engines*
- N *F 01 D 25/18 Non-positive-displacement machines*
- N *F 02 C 7/06 Gas-turbine plants*
- N *F 02 F 1/20 Cylinders of combustion engines*
- N *F 04 B 39/02 Pumps for elastic fluids*

N	<i>F 04 C 29/02</i>	<i>Rotary-piston or oscillating-piston pumps for liquids</i>
N	<i>F 04 D 29/04</i>	<i>Non-positive-displacement pumps</i>

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ANNEX	25	F 04 C	[Project-Rapporteur : 369/EP]	<CE32020E>
D	<i>Guide Heading before 2/00</i>	<i>&lt;Deleted&gt;</i>		
	<b>2/00</b>	--- like <b>7/00</b> ; such pumps specially adapted for elastic fluids <b>18/00</b> , <b>19/00</b> ; rotary-piston machines or pumps in ---		
	<b>3/00</b>	--- resiliently deformable <b>5/00</b> ; such pumps specially adapted for elastic fluids <b>18/48</b> )		
	<b>5/00</b>	--- <b>resiliently deformable</b> (such pumps specially adapted for elastic fluids <b>18/00</b> )		
	<b>7/00</b>	--- <b>the like</b> (such pumps specially adapted for elastic fluids <b>19/00</b> )		
	<b>9/00</b>	<b>Oscillating-piston machines or pumps</b> (such pumps specially adapted for elastic fluids <b>21/00</b> )		
	<b>11/00</b>	--- <b>or oscillating-piston type</b> (combinations of such pumps specially adapted for elastic fluids <b>23/00</b> ); <b>Pumping installations</b> ( <b>13/00</b> takes precedence; specially adapted for elastic fluids <b>23/00</b> ; fluid gearing <b>F 16 H</b> )		
	<b>13/00</b>	--- <b>high pressures</b> (of pumps specially adapted for elastic fluids <b>25/00</b> )		
N	<b>14/00</b>	<b>Control of, monitoring of, or safety arrangements for, machines, pumps or pumping installations</b> (of pumps or pumping installations specially adapted for elastic fluids <b>28/00</b> )		
N	14/02	• <i>specially adapted for several machines or pumps connected in series or in parallel</i>		
N	14/04	• <i>specially adapted for reversible machines or pumps</i>		
N	14/06	• <i>specially adapted for stopping, starting, idling or no-load operation</i>		
N	14/08	• <i>characterised by varying the rotational speed</i>		
N	14/10	• <i>characterised by changing the positions of the inlet or outlet openings with respect to the working chamber</i>		
N	14/12	• • <i>using sliding valves</i>		

- N 14/14
  - • *using rotating valves*
- N 14/16
  - • *using lift valves*
- N 14/18
  - *characterised by varying the volume of the working chamber (by changing the positions of inlet or outlet openings 14/10)*
- N 14/20
  - • *by changing the form of the inner or outer contour of the working chamber*
- N 14/22
  - • *by changing the eccentricity between cooperating members*
- N 14/24
  - *characterised by using valves regulating pressure or flow rate, e.g. discharge valves (14/10 takes precedence)*
- N 14/26
  - • *using bypass channels*
- N 14/28
  - *Safety arrangements; Monitoring*
- C 15/00
  - ***Component parts, details or accessories of machines, pumps or pumping installations, not provided for in groups 2/00 to 14/00 (of pumps specially adapted for elastic fluids 18/00 to 29/00)***
- D 15/02
  - *(transferred to 14/00, 15/06)*
- D 15/04
  - *(transferred to 14/00)*
- N 15/06
  - *Arrangements for admission or discharge of the working fluid, e.g. constructional features of the inlet or outlet*

**Guide  
Heading  
before 18/00**

**Pumps specially adapted – – –**

- 18/00 Rotary-piston pumps specially adapted for elastic fluids (with fluid – – –**
- 19/00 – – – or the like, specially adapted for elastic fluids**
- 21/00 Oscillating-piston pumps specially adapted for elastic fluids**
- 23/00 – – – or oscillating-piston type, specially adapted for elastic fluids; Pumping installations specially adapted for elastic fluids; Multi-stage pumps specially adapted for elastic fluids (25/00 takes precedence)**
- 25/00 Adaptations for special use of pumps for elastic fluids**
- 27/00 – – – rotary-piston pumps specially adapted for elastic fluids**
- N 28/00 ***Control of, monitoring of, or safety arrangements for, pumps or pumping installations specially adapted for elastic fluids***

- N 28/02 • *pecially adapted for several pumps connected in series or in parallel*
- N 28/04 • *pecially adapted for reversible pumps*
- N 28/06 • *pecially adapted for stopping, starting, idling or no-load operation*
- N 28/08 • *characterised by varying the rotational speed*
- N 28/10 • *characterised by changing the positions of the inlet or outlet openings with respect to the working chamber*
- N 28/12 • • *using sliding valves*
- N 28/14 • • *using rotating valves*
- N 28/16 • • *using lift valves*
- N 28/18 • *characterised by varying the volume of the working chamber (by changing the positions of inlet or outlet openings 28/10)*
- N 28/20 • • *by changing the form of the inner or outer contour of the working chamber*
- N 28/22 • • *by changing the eccentricity between cooperating members*
- N 28/24 • *characterised by using valves regulating pressure or flow rate, e.g. discharge valves (28/10 takes precedence)*
- N 28/26 • • *using bypass channels*
- N 28/28 • *Safety arrangements; Monitoring*
- 29/00 – – – *or pumping installations specially adapted for elastic fluids, not provided for in groups 18/00 to 28/00*
- D 29/08 *(transferred to 28/00, 29/12)*
- D 29/10 *(transferred to 28/00)*
- N 29/12 • *Arrangements for admission or discharge of the working fluid, e.g. constructional features of the inlet or outlet*

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ANNEX 26 F 16 K [Project-Rapporteur : 396/PT] <CE32041E>

Note(s) after the title

- N <== for irrigation conduits
- N E 03 B 9/02 Arrangement of valves in hydrants
- N E 03 D Flushing valves ==>

Note(s) after  
the title

-- the following places, which cover lubrication of  
specific apparatus or in particular processes:

	<a href="#">A 01 D 69/12</a>	Harvesters
<i>N</i>	<a href="#">B 21 B 25/04</a>	<i>Mandrels for metal tube rolling mills</i>
<i>N</i>	<a href="#">B 21 B 27/06</a>	<i>Rolls for metal rolling mills</i>
<i>N</i>	<a href="#">B 21 D 37/18</a>	<i>Tools for machines for working metal without removing material</i>
	<a href="#">B 21 J 3/00</a>	Forging or pressing
<i>N</i>	<a href="#">B 22 D 11/07</a>	<i>Moulds for continuous casting of metals</i>
<i>N</i>	<a href="#">B 23 C 5/28</a>	<i>Milling cutters</i>
<i>N</i>	<a href="#">B 23 D 59/02,</a>	
<i>N</i>	<a href="#">B 23 D 59/04</a>	<i>Metal saws</i>
<i>N</i>	<a href="#">B 23 Q 11/10,</a>	
<i>N</i>	<a href="#">B 23 Q 11/12</a>	<i>Machine tools</i>
	<a href="#">B 25 D 17/26</a>	Portable power-driven percussive tools
<i>N</i>	<a href="#">B 26 B 19/40</a>	<i>Hair-clippers or dry-shavers</i>
<i>N</i>	<a href="#">B 27 B 13/12</a>	<i>Band saw blades for wood or the like</i>
	<a href="#">B 60 R 17/00</a>	Vehicles
<i>N</i>	<a href="#">B 61 B 12/08</a>	<i>Cable systems for railways</i>
	<a href="#">B 61 C 17/08</a>	Railway locomotives
<i>N</i>	<a href="#">B 61 F 17/00</a>	<i>Axle-boxes of rail vehicles</i>
<i>N</i>	<a href="#">B 61 K 3/00</a>	<i>Rail or wheel flanges of railways</i>
	<a href="#">B 62 D 55/092</a>	Endless-track units for vehicles
<i>N</i>	<a href="#">B 62 J 31/00</a>	<i>Cycles</i>
<i>N</i>	<a href="#">B 65 G 45/02</a>	<i>Conveyers</i>

N	<a href="#">B 66 B 7/12</a>	<i>Ropes, cables or guides of elevators</i>
N	<a href="#">D 01 H 7/20</a>	<i>Spindles of machines for spinning or twisting threads or fibres</i>
	<a href="#">D 04 B 35/28</a>	<i>Knitting machines</i>
N	<a href="#">D 05 B 71/00</a>	<i>Sewing machines</i>
N	<a href="#">D 05 C 13/04</a>	<i>Embroidering machines</i>
N	<a href="#">E 01 B 7/26</a>	<i>Switches for railways</i>
	<a href="#">E 05 B 17/08</a>	<i>Locks</i>
	<a href="#">E 05 D 11/02</a>	<i>Hinges</i>
	<a href="#">E 21 B 10/22</a>	<i>Roller bits for earth drilling</i>
N	<a href="#">F 01 C 21/04</a>	<i>Rotary-piston or oscillating-piston machines or engines</i>
N	<a href="#">F 01 D 25/18</a>	<i>Non-positive-displacement machines</i>
N	<a href="#">F 01 M</a>	<i>Machines or engines in general</i>
N	<a href="#">F 02 C 7/06</a>	<i>Gas-turbine plants</i>
N	<a href="#">F 02 F 1/20</a>	<i>Cylinders of combustion engines</i>
N	<a href="#">F 04 B 39/02</a>	<i>Pumps for liquids</i>
N	<a href="#">F 04 C 29/02</a>	<i>Rotary-piston or oscillating-piston pumps for liquids</i>
N	<a href="#">F 04 D 29/04</a>	<i>Non-positive-displacement pumps</i>
N	<a href="#">F 16 C 1/24</a>	<i>Flexible shafts</i>
N	<a href="#">F 16 C 33/10</a>	<i>Sliding-contact bearings</i>
N	<a href="#">F 16 C 33/66</a>	<i>Ball or roller bearings</i>
N	<a href="#">F 16 F 1/24</a>	<i>Springs</i>
N	<a href="#">F 16 H 57/04</a>	<i>Transmissions</i>
N	<a href="#">F 41 A 29/04</a>	<i>Smallarms or ordnance</i>
N	<a href="#">G 04 B 31/08</a>	<i>Clocks</i>
N	<a href="#">H 01 R 39/56</a>	<i>Rotary current collectors, distributors or interrupters</i>

ANNEX	28	H 01 H	[Project-Rapporteur : 379/GB]	<CE32012E>
C	11/00	<p>– – – <b>switches</b> (processes specially adapted for manufacture of rectilinearly movable switches having a plurality of operating members associated with different sets of contacts, e.g. keyboards, <a href="#">13/88</a>; processes or apparatus specially – – –</p>		
C	13/02	<ul style="list-style-type: none"> <li>• Details (specially adapted for rectilinearly movable switches having operating members associated with different sets of contacts, e.g. keyboards, <a href="#">13/70</a>)</li> </ul>		
N	13/703	<ul style="list-style-type: none"> <li>• • • characterised by spacers between contact carrying layers</li> </ul>		
N	13/704	<ul style="list-style-type: none"> <li>• • • characterised by the layers, e.g. by their material or structure (<a href="#">13/703</a> takes precedence)</li> </ul>		
	13/705	<ul style="list-style-type: none"> <li>• • • characterised by construction, mounting or arrangement of operating parts, e.g. push-buttons or keys</li> </ul>		
N	13/7057	<ul style="list-style-type: none"> <li>• • • • characterised by the arrangement of operating parts in relation to each other, e.g. pre-assembled groups of keys</li> </ul>		
N	13/7065	<ul style="list-style-type: none"> <li>• • • • characterised by the mechanism between keys and layered keyboards</li> </ul>		
N	13/7073	<ul style="list-style-type: none"> <li>• • • • • characterised by springs, e.g. Euler springs</li> </ul>		
N	13/78	<ul style="list-style-type: none"> <li>• • characterised by the contacts or the contact sites</li> </ul>		
N	13/785	<ul style="list-style-type: none"> <li>• • • characterised by the material of the contacts, e.g. conductive polymers</li> </ul>		
N	13/79	<ul style="list-style-type: none"> <li>• • • characterised by the form of the contacts, e.g. interspersed fingers or helical networks</li> </ul>		
N	13/80	<ul style="list-style-type: none"> <li>• • • characterised by the manner of cooperation of the contacts, e.g. with both contacts movable or with bounceless contacts</li> </ul>		
N	13/803	<ul style="list-style-type: none"> <li>• • • characterised by the switching function thereof, e.g. normally closed contacts or consecutive operation of contacts</li> </ul>		
N	13/807	<ul style="list-style-type: none"> <li>• • • characterised by the spatial arrangement of the contact sites, e.g. superimposed sites</li> </ul>		
N	13/81	<ul style="list-style-type: none"> <li>• • characterised by electrical connections to external devices</li> </ul>		
N	13/82	<ul style="list-style-type: none"> <li>• • characterised by contact space venting means</li> </ul>		
N	13/83	<ul style="list-style-type: none"> <li>• • characterised by legends, e.g. Braille, liquid crystal displays, light emitting or optical elements</li> </ul>		



- N 13/84 • • *characterised by ergonomic functions, e.g. for miniature keyboards; characterised by operational sensory functions, e.g. sound feedback (legends 13/83)*
- N 13/85 • • • *characterised by tactile feedback features*
- N 13/86 • • *characterised by the casing, e.g. sealed casings or casings reducible in size*
- N 13/88 • • *Processes specially adapted for manufacture of rectilinearly movable switches having a plurality of operating members associated with different sets of contacts, e.g. keyboards*

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ANNEX	29	H 02 P	[Project-Rapporteur : 410/DE]	<CE32013E>
C	1/00	<i>– – – <b>dynamo-electric converters</b> (starting of synchronous motors with electronic commutators 6/20, 6/22; starting dynamo-electric motors rotating step by step 8/04; vector control 21/00)</i>		
C	3/00	<i>– – – <b>dynamo-electric converters</b> (stopping of synchronous motors with electronic commutators 6/24; stopping dynamo-electric motors rotating step by step 8/24; vector control 21/00)</i>		
N	4/00	<i><b>Arrangements specially adapted for regulating or controlling the speed or torque of electric motors that can be connected to two or more different voltage or current supplies</b> (starting 1/00; stopping or slowing 3/00; vector control 21/00)</i>		
C	5/00	<i><b>Arrangements specially adapted for regulating or controlling the speed or torque of two or more electric motors</b> (starting 1/00; stopping or slowing 3/00; vector control 21/00)</i>		
D	5/04	<i>(transferred to 29/04)</i>		
D	5/05	<i>(transferred to 25/08)</i>		
D	5/06	<i>(covered by 7/06)</i>		
D	5/08	<i>(covered by 7/06 - 7/22)</i>		
D	5/10	<i>(covered by 7/06 - 7/22)</i>		
D	5/12	<i>(covered by 7/24)</i>		
D	5/14	<i>(covered by 7/26)</i>		
D	5/16	<i>(covered by 7/28)</i>		
D	5/162	<i>(covered by 7/282)</i>		
D	5/165	<i>(covered by 7/285)</i>		

D	5/168	(covered by 7/288)
D	5/17	(covered by 7/29)
D	5/172	(covered by 7/292)
D	5/175	(covered by 7/295)
D	5/178	(covered by 7/298)
D	5/18	(covered by 7/30)
D	5/20	(covered by 7/32)
D	5/22	(covered by 7/34)
D	5/24	(covered by 7/34)
D	5/26	(covered by 7/34)
D	5/28	(transferred to 23/00, 25/00, 27/00)
D	5/30	(transferred to 25/18)
D	5/32	(transferred to 25/18)
D	5/34	(transferred to 27/04)
D	5/36	(transferred to 23/00, 25/00, 27/00)
D	5/38	(transferred to 25/32)
D	5/40	(transferred to 23/00, 25/00, 27/00)
D	5/402	(transferred to 27/02)
D	5/405	(transferred to 25/26)
D	5/408	(transferred to 27/04)
D	5/41	(transferred to 27/06)
D	5/412	(transferred to 27/16)
D	5/415	(transferred to 23/00, 27/05)
D	5/418	(transferred to 25/10)
D	5/42	(transferred to 25/28)
D	5/44	(transferred to 25/12, 25/16)
N	5/60	<ul style="list-style-type: none"><li>controlling combinations of dc and ac dynamo-electric motors (5/46 takes precedence)</li></ul>
N	5/68	<ul style="list-style-type: none"><li>controlling two or more dc dynamo-electric motors (5/46, 5/60 take precedence)</li></ul>
N	5/685	<ul style="list-style-type: none"><li>• electrically connected in series, i.e. carrying the same current</li></ul>
N	5/69	<ul style="list-style-type: none"><li>• mechanically coupled by gearing</li></ul>
N	5/695	<ul style="list-style-type: none"><li>• Differential gearing</li></ul>

- N 5/74
  - *controlling two or more ac dynamo-electric motors (5/46, 5/60 take precedence)*
- N 5/747
  - • *mechanically coupled by gearing*
- N 5/753
  - • • *Differential gearing*
- 6/00**
  - – – **commutators therefor** (stepping motors 8/00; vector control 21/00)
- C 7/00
  - Arrangements for regulating or controlling the – – – of electric dc-motors** (starting 1/00; stopping or slowing 3/00; vector control 21/00)
- D 7/01
  - (transferred to 4/00)
- D 7/04
  - (transferred to 29/04)
- D 7/05
  - (transferred to 25/08)
- 7/06
  - for regulating or controlling an individual – – –
- D Note(s) before 7/10
  - <Deleted>
- 7/20
  - • • – – – of relays (7/24, 7/30 take precedence)
- 7/22
  - • • – – – variable resistance (7/24, 7/30 take precedence)
- D 7/36
  - (transferred to 23/00, 25/00, 27/00)
- D 7/38
  - (transferred to 23/00, 25/00, 27/00)
- D 7/40
  - (transferred to 25/24)
- D 7/42
  - (transferred to 27/04)
- D 7/44
  - (transferred to 27/04)
- D 7/46
  - (transferred to 27/05)
- D 7/48
  - (transferred to 25/20)
- D 7/50
  - (transferred to 25/12)
- D 7/52
  - (transferred to 23/00, 25/00, 27/00)
- D 7/54
  - (transferred to 25/18)
- D 7/56
  - (transferred to 25/18)
- D 7/58
  - (transferred to 23/00, 25/00, 27/00)
- D 7/60
  - (transferred to 25/32)
- D 7/62
  - (transferred to 23/00, 25/00, 27/00)
- D 7/622
  - (transferred to 27/02)
- D 7/625
  - (transferred to 25/26)
- D 7/628
  - (transferred to 27/04)
- D 7/63
  - (transferred to 27/06)
- D 7/632
  - (transferred to 27/16)

D	7/635	(transferred to 23/00, 27/05)
D	7/638	(transferred to 25/10)
D	7/64	(transferred to 25/28)
D	7/66	(transferred to 25/30)
D	7/67	(transferred to 5/00)
D	7/68	(transferred to 5/68)
D	7/685	(transferred to 5/685)
D	7/69	(transferred to 5/69)
D	7/695	(transferred to 5/695)
D	7/74	(transferred to 5/74)
D	7/747	(transferred to 5/747)
D	7/753	(transferred to 5/753)
D	7/80	(transferred to 5/60)
C	<b>8/00</b>	--- <b>by step</b> (vector control 21/00)
C	<b>9/00</b>	--- arrangements 7/34; vector control 21/00; feeding a ---
C	<b>11/00</b>	--- slowing 3/00; vector control 21/00; feeding a ---
C	<b>15/00</b>	--- separate brake 29/04, vector control 21/00)
C	<b>17/00</b>	--- <b>dynamo-electric gears</b> (vector control 21/00)
D	19/00	(transferred to 1/00, 3/00, 5/00, 7/00, 23/00 - 31/00)
D	19/02	(transferred to 29/02)
C	<b>21/00</b>	<b>Arrangements or methods for the control of electric machines by vector control, e.g. by control of field orientation</b>
N	Note(s) after 21/00	
		<i>When classifying in this group, it is desirable to also classify in groups 25/00 to 27/00 if the kind of ac-motor, structural details, or the kind of supply voltage are of interest.</i>
N	21/02	• specially adapted for optimising the efficiency at low load
N	21/04	• specially adapted for very low speeds
N	21/05	• specially adapted for damping motor oscillations, e.g. for reducing hunting

- |   |                     |   |
|---|---------------------|---|
| N | 21/06               | • Rotor flux based control  |
| N | 21/08               | • • Indirect field-oriented control, e.g. field phase angle calculation based on rotor voltage equation by adding slip frequency and speed proportional frequency   |
| N | 21/10               | • • Direct field-oriented control   |
| N | 21/12               | • Stator flux based control   |
| N | 21/13               | • Observer control, e.g. using Luenberger observers or Kalman filters   |
| N | 21/14               | • Estimation or adaptation of machine parameters, e.g. rotor time constant, flux, speed, current or voltage   |
| N | 23/00               | <b>Arrangements or methods for the control of ac-motors characterised by a control method other than vector control</b> (starting 1/00; stopping or slowing 3/00; of two or more motors 5/00; of synchronous motors with electronic commutators 6/00; of dc-motors 7/00; of stepping motors 8/00) |
| N | Note(s) after 23/00 |   |
|   |                     | <i>When classifying in this group, it is desirable to also classify in groups 25/00 to 27/00 if the kind of ac-motor, structural details, or the kind of supply voltage are of interest.</i>  |
| N | 23/02               | • specially adapted for optimising the efficiency at low load   |
| N | 23/03               | • specially adapted for very low speeds   |
| N | 23/04               | • specially adapted for damping motor oscillations, e.g. for reducing hunting   |
| N | 23/06               | • Controlling the motor in four quadrants   |
| N | 23/08               | • Controlling based on slip frequency, e.g. adding slip frequency and speed proportional frequency  |
| N | 23/10               | • Controlling by adding a dc current (dc current braking 3/24)  |
| N | 23/12               | • Observer control, e.g. using Luenberger observers or Kalman filters   |
| N | 23/14               | • Estimation or adaptation of motor parameters, e.g. rotor time constant, flux, speed, current or voltage   |

*N 25/00 Arrangements or methods for the control of ac-motors characterised by the kind of ac-motor or by structural details (starting 1/00; stopping or slowing 3/00; of two or more motors 5/00; of synchronous motors with electronic commutators 6/00; of dc-motors 7/00; of stepping motors 8/00)*

*N Note(s) after 25/00*

*When classifying in this group, it is desirable to also classify in groups 21/00, 23/00 or 27/00 if the control method or the kind of supply voltage are of interest.*

*N 25/02 • characterised by the kind of motor*

*N 25/04 • • Single phase motors, e.g. capacitor motors*

*N 25/06 • • Linear motors*

*N 25/08 • • Reluctance motors*

*N 25/10 • • Commutator motors, e.g. repulsion motors*

*N 25/12 • • • with shiftable brushes*

*N 25/14 • • • Universal motors (25/12 takes precedence)*

*N 25/16 • characterised by the circuit arrangement or by the kind of wiring*

*N 25/18 • • with arrangements for switching the windings, e.g. with mechanical switches or relays*

*N 25/20 • • • for pole-changing*

*N 25/22 • • Multiple windings; Windings for more than three phases*

*N 25/24 • • Variable impedance in stator or rotor circuit*

*N 25/26 • • • with arrangements for controlling secondary impedance*

*N 25/28 • • using magnetic devices with controllable degree of saturation, e.g. transducers*

*N 25/30 • • the motor being controlled by a control effected upon an ac generator supplying it*

*N 25/32 • • using discharge tubes*

*N 27/00 Arrangements or methods for the control of ac-motors characterised by the kind of supply voltage (starting 1/00; stopping or slowing 3/00; of two or more motors 5/00; of synchronous motors with electronic commutators 6/00; of dc-motors 7/00; of stepping motors 8/00)*

N Note(s) after  
27/00

*When classifying in this group, it is desirable to also classify in groups 21/00, 23/00 or 25/00 if the control method, the kind of the ac-motor or structural details are of interest.*

- N 27/02
  - *using supply voltage with constant frequency and variable amplitude*
- N 27/04
  - *using variable-frequency supply voltage, e.g. inverter or converter supply voltage*
- N 27/05
  - • *using ac supply for both rotor and stator circuits, the frequency of supply to at least one circuit being variable*
- N 27/06
  - • *using dc to ac converters or inverters (27/05 takes precedence)*
- N 27/08
  - • • *with pulse width modulation*
- N 27/10
  - • • • *using bang-bang controllers*
- N 27/12
  - • • • *pulsing by guiding the flux-, current-, or voltage-vector on a circle or a closed curve, e.g. direct torque control*
- N 27/14
  - • • • *with three or more levels of voltage*
- N 27/16
  - • *using ac to ac converters without intermediate conversion to dc (27/05 takes precedence)*
- N 27/18
  - • • *varying the frequency by omitting half waves*
- N 29/00
  - ***Arrangements for regulating or controlling electric motors, appropriate for both ac- and dc-motors (starting 1/00; stopping or slowing 3/00; control of motors that can be connected to two or more different voltage or current supplies 4/00; vector control 21/00)***
- N 29/02
  - *Providing protection against overload without automatic interruption of supply, e.g. monitoring*

N Note(s) after  
29/02

Informative note

*References listed below indicate IPC places which could also be of interest when carrying out a search in respect of the subject matter covered by the preceding group:*

*Emergency protective circuit arrangements with automatic interruption of supply, in general, H 02 H 7/08;*

*Emergency protective circuit arrangements for limiting excess current or voltage without disconnection, in general, H 02 H 9/00.*

N 29/04

- *by means of a separate brake*

N 31/00

***Arrangements for regulating or controlling electric motors not provided for in groups 1/00 to 5/00, 7/00 or 21/00 to 29/00***

[End of Technical Annexes and of document]