

# CPC COOPERATIVE PATENT CLASSIFICATION

## C CHEMISTRY; METALLURGY

(NOTES omitted)

### METALLURGY

#### C25 ELECTROLYTIC OR ELECTROPHORETIC PROCESSES; APPARATUS THEREFOR

(electrodialysis, electro-osmosis, separation of liquids by electricity [B01D](#); {separation of isotopes by electrochemical methods [B01D 59/38](#)}; working of metal by the action of a high concentration of electric current [B23H](#); treatment of water, waste water or sewage by electrochemical methods [C02F 1/46](#); surface treatment of metallic material or coating involving at least one process provided for in class [C23](#) and at least one process covered by this class [C23C 28/00](#), [C23F 17/00](#); anodic or cathodic protection [C23F](#); single-crystal growth [C30B](#); metallising textiles [D06M 11/83](#); decorating textiles by locally metallising [D06Q 1/04](#); electrochemical methods of analysis [G01N](#); electrochemical measuring, indicating or recording devices [G01R](#); electrolytic circuit elements, e.g. capacitors, [H01G](#); electrochemical current or voltage generators [H01M](#))

(NOTES omitted)

#### C25B ELECTROLYTIC OR ELECTROPHORETIC PROCESSES FOR THE PRODUCTION OF COMPOUNDS OR NON-METALS; APPARATUS THEREFOR (anodic or cathodic protection [C23F 13/00](#); single-crystal growth [C30B](#))

##### NOTES

1. In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place.
2. Compounds of particular interest are also classified in the relevant classes, e.g. [C01](#), [C07](#).

##### WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
 

<a href="#">C25B 11/06</a>	covered by	<a href="#">B01J</a> , <a href="#">C25B 11/0442</a>
<a href="#">C25B 11/08</a>	covered by	<a href="#">B01J</a> , <a href="#">C25B 11/0442</a>
<a href="#">C25B 11/10</a>	covered by	<a href="#">C25B 11/0442</a>
2. 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.

<p><b>1/00 Electrolytic production of inorganic compounds or non-metals</b></p> <p>1/003 . {by photo-electrolysis with or without external current source}</p> <p>1/006 . {of silicon}</p> <p>1/02 . of hydrogen or oxygen</p> <p>1/04 . . by electrolysis of water</p> <p>1/06 . . . in cells with flat or platelike electrodes</p> <p>1/08 . . . . of the filter-press type</p> <p>1/10 . . . in diaphragm cells</p> <p>1/12 . . . in pressure cells</p> <p>1/13 . of ozone</p> <p>1/14 . of alkali metal compounds</p> <p>1/16 . . Hydroxides</p> <p>1/18 . of alkaline earth metal compounds or magnesium compounds</p> <p>1/20 . . Hydroxides</p> <p>1/21 . of manganese oxides</p> <p>1/22 . of inorganic acids</p>	<p>1/24 . of halogens or compounds thereof</p> <p>1/245 . . {Fluorine; Compounds thereof}</p> <p>1/26 . . Chlorine; Compounds thereof</p> <p>1/265 . . . {Chlorates}</p> <p>1/28 . of per-compounds</p> <p>1/285 . . {Persulfates}</p> <p>1/30 . . Peroxides</p> <p>1/32 . . Perborates</p> <p>1/34 . Simultaneous production of alkali metal hydroxides and chlorine, its oxyacids or salts</p> <p>1/36 . . in mercury cathode cells</p> <p>1/38 . . . with vertical mercury cathode</p> <p>1/40 . . . with horizontal mercury cathode</p> <p>1/42 . . . Decomposition of amalgams</p> <p>1/44 . . . . with the aid of catalysts</p> <p>1/46 . . in diaphragm cells</p> <p><b>3/00 Electrolytic production of organic compounds</b></p> <p>3/02 . by oxidation</p> <p>3/04 . by reduction</p>
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- 3/06 . by halogenation
- 3/08 . . by fluorination
- 3/10 . by coupling reactions, e.g. dimerisation
- 3/105 . . {hydrodimerisation}
- 3/12 . of organo-metallic compounds
- 5/00 Electrogenative processes, i.e. processes for producing compounds in which simultaneously electricity is generated**
- 7/00 Electrophoretic production of compounds or non-metals (separation or purification of peptides, e.g. of proteins, by electrophoresis [C07K 1/26](#))**
- 9/00 Cells or assemblies of cells; Constructional parts of cells; Assemblies of constructional parts, e.g. electrode-diaphragm assemblies**
  - 9/005 . {Amalgam decomposition cells}
  - 9/02 . Holders for electrodes
  - 9/04 . Devices for current supply ([electrical connections in general H01R](#)); Electrode connections; Electric inter-cell connections
  - 9/045 . . {Electric inter-cell connections including jumper switches}
  - 9/06 . Cells comprising dimensionally-stable non-movable electrodes; Assemblies of constructional parts thereof
    - 9/063 . . {including bipolar electrodes}
    - 9/066 . . . {and diaphragms}
    - 9/08 . . with diaphragms
    - 9/10 . . . including an ion-exchange membrane in or on which electrode material is embedded
    - 9/12 . Cells or assemblies of cells comprising at least one movable electrode, e.g. rotary electrodes; Assemblies of constructional parts thereof
      - 9/125 . . {Rotary electrodes}
      - 9/14 . . Liquid electrodes, e.g. mercury electrodes
      - 9/142 . . . {of the horizontal type}
      - 9/144 . . . . {Grouping of such cells into batteries}
      - 9/146 . . . {of the vertical type}
      - 9/148 . . . . {Grouping of such cells into batteries}
    - 9/16 . Cells or assemblies of cells comprising at least one electrode made of particles; Assemblies of constructional parts thereof
      - 9/162 . . {comprising fluidised bed electrodes}
      - 9/164 . . . {Grouping of such cells into batteries}
      - 9/166 . . {comprising static bed electrodes}
      - 9/168 . . . {Grouping of such cells into batteries}
    - 9/18 . Assemblies comprising a plurality of cells ([C25B 9/005](#) takes precedence); assemblies of cells with movable electrodes [C25B 9/12](#); assemblies of cells with electrodes made of particles [C25B 9/16](#)
  - 9/20 . . of the filter-press type
  - 9/203 . . . {with bipolar electrodes}
  - 9/206 . . . . {with diaphragms}
- 11/00 Electrodes; Manufacture thereof not otherwise provided for**
  - 11/02 . characterised by shape or form
  - 11/03 . . perforated or foraminous
  - 11/035 . . . {Porous electrodes}
  - 11/04 . characterised by the material
  - 11/0405 . . {of electrodes having a substrate and a coating}
  - 11/041 . . {characterised by the material of the substrate}
- 11/0415 . . . {consisting of one single element or compound}
- 11/0421 . . . . {Silicon}
- 11/0426 . . . {consisting of plurality elements or compounds}
- 11/0431 . . . . {Metal alloys}
- 11/0436 . . . . {comprising metal powder and a non-metallic binder}
- 11/0442 . . {characterised by the material of the coating}
- 11/0447 . . . {Coatings consisting of a single component}
- 11/0452 . . . . {Non-noble metal oxides}
- 11/0457 . . . . . {of the spinel type}
- 11/0463 . . . . . {of the perovskite type}
- 11/0468 . . . . . {of the rutile type}
- 11/0473 . . . . {Noble metals}
- 11/0478 . . . {Coatings consisting of two or more components}
- 11/0484 . . . . {comprising at least a noble metal or noble metal oxide and a non-noble metal oxide}
- 11/0489 . . . . {at least one of the components being an organic compound}
- 11/0494 . . . . {comprising two or more noble metals or noble metal alloys}
- 11/12 . . Electrodes based on carbon ([carbon masses in general C04B 35/52](#)) ([C25B 11/0405](#) takes precedence)}
- 11/14 . . . Impregnation of carbon electrodes ([C25B 11/0405](#) takes precedence)}
- 11/16 . . Electrodes based on manganese dioxide or lead dioxide ([C25B 11/0405](#) takes precedence)}
- 11/18 . . Mercury or amalgam electrodes ([C25B 11/0405](#) takes precedence)}
- 13/00 Diaphragms; Spacing elements**
  - 13/02 . characterised by form or shape
  - 13/04 . characterised by the material
  - 13/06 . . based on asbestos
  - 13/08 . . based on organic materials
- 15/00 Operating or servicing of cells**
  - 15/02 . Process control or regulation ([controlling or regulating in general G05](#))
  - 15/04 . Regulation of the inter-electrode distance ([electro-machining B23P](#))
  - 15/06 . Detection or inhibition of short circuits in the cell
  - 15/08 . Supplying or removing reactants or electrolytes; Regeneration of electrolytes