

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 906

DATE: AUGUST 1, 2020

PROJECT RP0085

The following classification changes will be effected by this Notice of Changes:

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
SCHEME:		
Titles Changed:	C25D	SUBCLASS
	C25D	1/10, 1/12
	C25D	3/12, 3/562, 3/60
	C25D	5/003, 5/022, 5/06, 5/54, 5/56
	C25D	7/003, 7/005, 7/123, 7/126
	C25D	11/36
	C25D	17/00, 17/001, 17/007, 17/008
	C25D	21/04, 21/16
Indents Changed:	C25D	7/126
Warnings New:	C25D	5/022, 5/54, 5/56, 7/00, 7/005, 7/12, 7/123, 7/126, 11/022, 13/24, 21/16
DEFINITIONS:		
Definitions New:	C25D	1/003, 1/006, 1/08, 1/10, 1/12, 3/02, 3/665, 5/003, 5/04, 5/06, 7/005, 7/0607, 7/0614, 7/123, 7/126, 9/02, 9/04, 9/06, 9/08, 11/005, 11/38, 13/04, 13/12, 13/18, 17/001, 17/002, 17/005, 17/007, 17/008, 17/02, 21/12, 21/14, 21/16
Definitions Modified:	C25D	Subclass, 1/00, 3/00, 3/40, 3/56, 3/60, 3/66, 5/00, 5/16, 5/54, 5/56, 7/00, 7/06, 7/10, 7/12, 9/00, 11/00, 11/16, 11/18, 11/36, 13/00, 13/22, 15/00, 15/02, 17/00, 17/10, 21/04, 21/06, 21/10

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following [Check the ones included]:

1. CLASSIFICATION SCHEME CHANGES

- A. New, Modified or Deleted Group(s)
- B. New, Modified or Deleted Warning(s)
- C. New, Modified or Deleted Note(s)
- D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS

- A. New or Modified Definitions (Full definition template)
- B. Modified or Deleted Definitions (Definitions Quick Fix)

3. REVISION CONCORDANCE LIST (RCL)

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4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. CHANGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS C25D - PROCESSES FOR THE ELECTROLYTIC OR ELECTROPHORETIC PRODUCTION OF COATINGS; ELECTROFORMING (decorating textiles by metallising D06Q 1/04; manufacturing printed circuits by metal deposition H05K 3/18); APPARATUS THEREFOR

<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title</u> “CPC only” text should normally be enclosed in {curly brackets}**	<u>Transferred to#</u>
M	C25D		PROCESSES FOR THE ELECTROLYTIC OR ELECTROPHORETIC PRODUCTION OF COATINGS; ELECTROFORMING; APPARATUS THEREFOR	
M	C25D 1/10	1	Moulds; Masks; Masterforms	
M	C25D 1/12	1	by electrophoresis	
M	C25D 3/12	2	of nickel or cobalt	
M	C25D 3/562	3	{containing more than 50% by weight of iron or nickel or cobalt}	
M	C25D 3/60	3	containing more than 50% by weight of tin	
M	C25D 5/003	1	{Electroplating using gases, e.g. pressure influence}	
T	C25D 5/022	2	{using masking means}	
M	C25D 5/06	2	Brush or pad plating	
C	C25D 5/54	1	Electroplating of non-metallic surfaces (C25D 7/12 takes precedence)	C25D5/54, C25D5/56
T	C25D 5/56	2	of plastics	
C	C25D 7/00	0	Electroplating characterised by the article coated	C25D7/00, C25D7/005
M	C25D 7/003	1	{Threaded pieces, e.g. bolts or nuts}	
T	C25D 7/005	1	{Jewels; Clockworks; Coins}	
C	C25D 7/12	1	Semiconductors	C25D7/12, C25D7/123, C25D7/126
T	C25D 7/123	2	{Semiconductors first coated with a seed layer or a conductive layer}	
T	C25D 7/126	3	{for solar cells}	
C	C25D 11/022	2	{Anodisation on selected surface areas}	C25D5/022, C25D11/022
M	C25D 11/36	1	Phosphatising	
C	C25D 13/24	2	Regeneration of process liquids	C25D13/24, C25D21/16, C25D21/18, C25D21/20, C25D21/22
M	C25D 17/00	0	Constructional parts, or assemblies thereof, of cells for electrolytic coating	
M	C25D 17/001	1	{Apparatus specially adapted for electrolytic coating of wafers, e.g. semiconductors or solar cells}	
M	C25D 17/007	1	{Current directing devices}	

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<u>Type*</u>	<u>Symbol</u>	<u>Indent Level Number of dots (e.g. 0, 1, 2)</u>	<u>Title</u> <u>“CPC only” text should normally be enclosed in {curly brackets}**</u>	<u>Transferred to#</u>
M	C25D 17/008	1	{ Current shielding devices }	
M	C25D 21/04	1	Removal of gases or vapours { ; Gas or pressure control }	
T	C25D 21/16	1	Regeneration of process solutions	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T= existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required “anchor” symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types .
- “Transferred to” column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the “Transferred to” column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: “< administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD> , <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“Transferred to”) symbol, however it is required to specify “<no transfer>” in the “Transferred to” column for such cases.
- For finalisation projects, the deleted “F” symbols should have <no transfer> in the “Transferred to” column.
- For more details about the types of scheme change, see CPC Guide.

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B. New, Modified or Deleted Warning(s)

SUBCLASS C25D - PROCESSES FOR THE ELECTROLYTIC OR ELECTROPHORETIC PRODUCTION OF COATINGS; ELECTROFORMING (decorating textiles by metallising D06Q 1/04; manufacturing printed circuits by metal deposition H05K 3/18); APPARATUS THEREFOR

<u>Type*</u>	<u>Location</u>	<u>Old Warning</u>	<u>New/Modified Warning</u>
N	C25D 5/022		Group C25D 5/022 is incomplete pending reclassification of documents from group C25D 11/022. Groups C25D 11/022 and C25D 5/022 should be considered in order to perform a complete search.
N	C25D 5/54		Group C25D 5/54 is impacted by reclassification into group C25D 5/56. Groups C25D 5/54 and C25D 5/56 should be considered in order to perform a complete search.
N	C25D 5/56		Group C25D 5/56 is incomplete pending reclassification of documents from group C25D 5/54. Groups C25D 5/54 and C25D 5/56 should be considered in order to perform a complete search.
N	C25D 7/00		Group C25D 7/00 is impacted by reclassification into group C25D 7/005. Groups C25D 7/00 and C25D 7/005 should be considered in order to perform a complete search.
N	C25D 7/005		Group C25D 7/005 is incomplete pending reclassification of documents from group C25D 7/00. Groups C25D 7/00 and C25D 7/005 should be considered in order to perform a complete search.
N	C25D 7/12		Group C25D 7/12 is impacted by reclassification into groups C25D 7/123 and C25D 7/126. Groups C25D 7/12, C25D 7/123, and C25D 7/126 should be considered in order to perform a complete search.
N	C25D 7/123		Group C25D 7/123 is incomplete pending reclassification of documents from group C25D 7/12. Groups C25D 7/12 and C25D 7/123 should be considered in order to perform a complete search.
N	C25D 7/126		Group C25D 7/126 is incomplete pending reclassification of documents from group C25D 7/12. Groups C25D 7/12 and C25D 7/126 should be considered in order to perform a complete search.

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<u>Type*</u>	<u>Location</u>	<u>Old Warning</u>	<u>New/Modified Warning</u>
N	C25D 11/022		Group C25D 11/022 is impacted by reclassification into group C25D 5/022. Groups C25D 11/022 and C25D 5/022 should be considered in order to perform a complete search.
N	C25D 13/24		Group C25D 13/24 is impacted by reclassification into groups C25D 21/16, C25D 21/18, C25D 21/20, and C25D 21/22. All groups listed in this Warning should be considered in order to perform a complete search.
N	C25D 21/16		Groups C25D 21/16 - C25D 21/22 are incomplete pending reclassification of documents from group C25D 13/24. All groups listed in this Warning should be considered in order to perform a complete search.

*N = new warning, M = modified warning, D = deleted warning

NOTE: The "Location" column only requires the symbol PRIOR to the location of the warning. No further directions such as "before" or "after" are required.

2. A. DEFINITIONS (new)

Insert: The following new definitions.

C25D 1/003

Definition statement

This place covers:

Electroforming processes for building high-aspect-ratio structures extending from the surface of the base, wherein it would be inappropriate to describe the product obtained as a coated product in the sense of C25D7/00 and wherein the 3-D structure and the base will typically form the final product, e.g. a metal spring electroformed on a base by successive masking and deposition steps. However, the high-aspect-ratio structures may finally be removed from the base as well.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

LIGA (German acronym)	Lithographie, Galvanoformung, Abformung process
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C25D 1/006

Definition statement

This place covers:

Electroforming of nanostructures, e.g. electroforming of nanowire arrays using AAO templates.

References

Informative references

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Attention is drawn to the following places, which may be of interest for search:

Anodisation of aluminium for forming AAO templates	C25D 11/045
Manufacture or treatment of nano-structures	B82Y 40/00

Special rules of classification

Nanotubes, nanorings and hollow bodies of nanometric scale are classified in [C25D1/006](#) in combination with [C25D1/02](#).

Nanowires, nanostrips and nanofoils are classified in [C25D1/006](#) in combination with [C25D1/04](#).

Synonyms and Keywords

In patent documents the following abbreviations are often used:

AAO	Aluminum Anodic Oxidation
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C25D 1/08

Definition statement

This place covers:

Perforated objects, e.g. nozzle plates and foraminous objects, e.g. metal foams.

References

Limiting references

This group does not cover:

Moulds; Masks; Masterforms {, e.g. mandrels, stampers}	C25D 1/10
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Informative references

Attention is drawn to the following places, which may be of interest for search:

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Apparatus for spraying or atomising liquids or other fluent materials, using ultrasonics, the spray being produced by discharging the liquid or other fluent material through a plate comprising a plurality of orifices	B05B 17/0638
Manufacturing of the nozzle plates for inkjet printing	B41J 2002/062
Orifice plates for injection nozzles of fuel injectors	F02M 61/1853

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Foraminous	A material such as metal screen, netting, fabric, foam, etc. that has openings, holes, punctures, etc. penetrating through its entire depth
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C25D 1/10

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Mould; Masks by electrophoretic coating process	C25D 13/00
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Special rules of classification

Moulds, masks and masterforms used for electroforming are classified in [C25D 1/00](#).

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C25D 1/12

Definition statement

This place covers:

Electrophoretic forming processes, i.e. processes involving the reproduction or formation of objects by electrophoretic deposition in which, typically, the deposit does not permanently remain with the base upon which deposition is made.

Apparatus for performing an electrophoretic forming process.

Products obtained by such processes.

Baths for electroforming by electrophoresis.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electrophoretic coating	C25D 13/00
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C25D 3/02

Definition statement

This place covers:

Electrolytic solutions for electroplating, aqueous as well as nonaqueous.

Special rules of classification

Subject matter relating to both electroplating baths and electroplating processes is classified in both groups.

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Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Solution	A homogeneous mixture comprising metal cations dissolved in a molecular solvent, e.g. water or an organic solvent.
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C25D 3/665**Definition statement**

This place covers:

Electrolytic baths based on ionic liquids or deep eutectic solvents, which are liquid at a temperature typically, lower than 100°C, in particular Room Temperature Ionic Liquids (RTILs).

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Ionic liquid	System composed primarily of one type of discrete anion or cation
Deep eutectic solvent	Eutectic mixture containing a variety of anionic and/or cationic species

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C25D 5/003

Definition statement

This place covers:

- Processes comprising the use of a gas for controlling the atmosphere above the electrolytic bath, modifying the composition of the bath or agitating the bath
- Processes comprising the control or use of a gas generated at the electrode

Special rules of classification

Processes comprising the agitation of the electrolytic bath using a gas are classified in [C25D5/003](#) in combination with [C25D21/10](#).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Removal of gases or vapours

C25D 21/04

C25D 5/04

Definition statement

This place covers:

Processes of electroplating with moving electrodes, e.g. moving counter-electrodes.

Special rules of classification

The conveyance of substrates during continuous electroplating processes are classified in [C25D7/06](#) and/or [C25D17/06](#).

Processes of electroplating with a moving, e.g. rotating, substrate is classified in [C25D21/10](#).

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C25D 5/06

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electrodes for pad plating	C25D 17/14
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C25D 7/005

Definition statement

This place covers:

Electroplated jewels, clockworks, coins.

C25D 7/0607

Definition statement

This place covers:

- Electroplated wires
- Apparatuses and processes for electroplating wires

Special rules of classification

Apparatuses for electroplating wires are classified in [C25D7/0607](#) in combination with any relevant subgroups under [C25D17/00](#) and [C25D21/00](#).

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Processes for electroplating wires are classified in [C25D7/0607](#) in combination with any relevant subgroups under [C25D5/00](#) and [C25D21/00](#).

C25D 7/0614

Definition statement

This place covers:

- Electroplated strips, foils, sheets, plates, (cloth) webs, tapes and other elongated flexible strip-shaped articles (such as those having an indeterminate length)
- Apparatuses and processes for electroplating the aforementioned articles

Special rules of classification

Flat articles

In case of ambiguity regarding the characteristics “elongated” and “flexible” of a flat article, the latter is classified in both [C25D7/00](#) (or lower) and [C25D7/0614](#) and the corresponding apparatus/process is classified in both [C25D7/0614](#) (or lower) and [C25D17/00](#) (or lower).

In any case, the occurrence of one of the terms “sheet”, “strip” or “foil” should normally result in the classification of the document in [C25D7/0614](#) (or lower).

Rods, beams, flat works, boards (e.g. rigid PCBs) are classified in [C25D7/00](#).

Apparatuses

Apparatuses for electroplating elongate flexible strip-shaped articles are classified in the relevant subgroups [C25D7/0614](#) - [C25D7/0692](#).

The following subgroups under [C25D17/00](#) are used for classifying apparatuses for electroplating strip-shaped articles in combination with the subgroups [C25D7/0614](#) - [C25D7/0692](#).

Apparatuses for electroplating rods, beams, flat works, boards (e.g. rigid PCBs) are classified in [C25D17/00](#).

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[C25D17/004](#): sealing devices,
[C25D17/005](#): contacting devices, but [C25D7/0657](#) takes precedence for conducting rolls,
[C25D17/007](#): current conducting devices (i.e. thief electrodes, etc.),
[C25D17/008](#): current insulating devices (i.e. shielding devices, virtual anodes, etc.),
[C25D17/02](#) and [C25D17/04](#): tanks and external supporting frames or structures,
[C25D17/10](#) and [C25D17/12](#): electrodes, but [C25D7/0642](#) takes precedence for anodes.

The following subgroup under [C25D17/00](#) is not used for classifying apparatuses for electroplating strip-shaped articles:
[C25D17/002](#) since [C25D7/065](#) takes precedence.

The subgroups under [C25D21/00](#) are used for classification in combination with the subgroups [C25D7/0614](#) - [C25D7/0692](#).

Processes

Processes for electroplating elongate flexible strip-shaped articles are classified in the relevant subgroups [C25D7/0614](#) - [C25D7/0692](#) in combination with any relevant subgroups under [C25D5/00](#) and [C25D21/00](#).

The following subgroups under [C25D5/00](#) are not used for classifying processes for electroplating strip-shaped articles:
[C25D5/02](#), since [C25D7/0671](#) takes precedence,
[C25D5/022](#), since [C25D7/0678](#) takes precedence.

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- “sheet”, “foil”, “plate”, “elongated flexible strip-shaped article”

with the additional restrictions that a foil is very thin (e.g. thickness < 0.20 mm) and a strip of a limited width (e.g. < 600 mm).

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C25D 7/123

Definition statement

This place covers:

Details of processes of electroplating semiconductor substrates or devices, such as silicon wafers, including a seed layer or a conductive layer deposited prior to electroplating.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Seed layer	A thin conductive film providing a low resistance conduction path for the plating current that drives the electroplating process, and functioning as a nucleation layer for metal film growth during electroplating. The seed layer acts as the plating base and an underlying adhesion or barrier layer and is typically deposited using sputtering, evaporation, chemical vapour deposition or electroless plating.
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C25D 7/126

Definition statement

This place covers:

Details of processes of electroplating peculiar to the manufacture of solar cells, including a seed layer or a conductive layer deposited prior to electroplating.

References

Application-oriented references

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Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Processes or apparatus peculiar to the manufacture or treatment of semiconductor devices sensitive to radiation and adapted either for the conversion of the energy of such radiation into electrical energy or for the control of electrical energy by such radiation	H01L 31/18
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Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Seed layer	<p>A thin conductive film providing a low resistance conduction path for the plating current that drives the electroplating process, and functioning as a nucleation layer for metal film growth during electroplating.</p> <p>The seed layer acts as the plating base and an underlying adhesion or barrier layer and is typically deposited using sputtering, evaporation, chemical vapour deposition or electroless plating.</p>
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C25D 9/02

Definition statement

This place covers:

Processes of electrolytic coating with organic materials, e.g. by electrografting.

Articles obtained by such processes.

Relationships with other classification places

Compositions for electrophoretic coating of polymers are classified in [C09D5/44](#).

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Compositions for electrophoretic coating of polymers, comprising polymerization in situ, i.e. electropolymerization are classified in [C09D5/4476](#).

Special rules of classification

Since the processes involving the electrolysis of water and the protonation/deprotonation of organic compounds at the electrodes are covered by the groups under [C25D13/00](#) and [C09D5/44](#), the number of processes to be classified in [C25D9/02](#) is inherently limited. See the glossary of terms under [C25D13/00](#).

Electrophoretic coating with low molecular weight organic compounds is classified in [C25D13/04](#).

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Electrografting	Electrochemical modification of conducting and semi-conducting surfaces, wherein activated moieties are formed in the vicinity of the electrode from electroactive molecules present in the electrolyte, leading to the formation of strong chemical bonds between the molecules and the electrode.
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C25D 9/04

Definition statement

This place covers:

Electrolytic coating with inorganic materials, upon partial reduction/oxidation of the source of material to a lower/higher valence state to be deposited or upon variation of the conditions, e.g. variation of the pH further to the electrolysis of water at the working electrode, thereby inducing precipitation of the material.

Special rules of classification

[C25D9/04](#) relates to the electrolytic coating by deposition, not by surface reaction.

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If the material of the surface of the substrate explicitly participates to the formation of the coating by surface reaction, and is eventually present in the coating formed, such a conversion process is classified under [C25D11/00](#), not under [C25D9/00](#).

In case of doubt concerning a possible surface reaction, the process is classified in [C25D9/04](#) (or any of the relevant subgroups) in combination with [C25D11/00](#) (or any of the relevant subgroups).

C25D 9/06

Definition statement

This place covers:

Electrolytic coating with inorganic materials by anodic processes, e.g. an anodic coating process comprising the formation of a film comprising nickel in an average valence state between +2 and +4 from a solution containing NiSO₄.

Special rules of classification

Anodisation is classified in [C25D11/02](#).

Chromatizing, anodic chromating or anodic chromate treatment, when it results in the presence of the metal of the substrate in the coating is classified in [C25D11/36](#).

C25D 9/08

Definition statement

This place covers:

Electrolytic coating with inorganic materials by cathodic processes, e.g. a process comprising the electro-reduction of SiCl₄ to silicon on a copper substrate.

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C25D 11/005

Definition statement

This place covers:

Apparatus specially adapted for electrolytic conversion coating.

Special rules of classification

When a document is directed to an apparatus specially adapted for electrolytic coating by surface reaction, the latter is classified in [C25D11/005](#) in combination with any of the subgroups [C25D11/02](#) - [C25D11/38](#), if relevant for the process/product, and in combination with any of the subgroups [C25D17/001](#) - [C25D17/28](#), if relevant for the apparatus. [C25D21/00](#) and subgroups are also available for further classification of apparatus and/or process aspects.

C25D 11/38

Definition statement

This place covers:

Processes of coating by electrochemical reaction of hexavalent chromium with a metal surface in the presence of other components, or "activators," in an acid solution. The hexavalent chromium is partially reduced to trivalent chromium during the reaction, with a concurrent rise in pH, forming a complex mixture consisting largely of hydrated basic chromium chromate and hydrous oxides of both chromium and the basis metal. The typical substrate metals to which a chromate conversion coating is applicable are Al, Cd, Cu, Mg, Ag and Zn. Processes are known for Sn as well.

Processes of anodic chromating wherein the coating formed is a mixture of a chromate and an oxide of the coated metal.

Articles obtained by such processes.

Special rules of classification

The classification in [C25D11/38](#) implies a surface reaction.

If the metal of the substrate does explicitly not contribute to the formation of the coating, and no material of the surface is eventually present in the coating formed, such a "pure"

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precipitation process is classified in any of the subgroups [C25D9/04 - C25D9/12](#), not in [C25D11/38](#).

In case of doubt as to the contribution of the metal of the surface to the formation of the coating, the process is classified in [C25D11/38](#) in combination with anyone of the subgroups [C25D9/04 - C25D9/12](#).

Cathodic chromating, i.e. cathodic chromate treatment, of steel substrates is classified in [C25D9/10](#).

C25D 13/04

Definition statement

This place covers:

The electrophoretic deposition of low molecular weight organic compounds, i.e. non polymeric and non polymerizable compounds.

Relationships with other classification places

Compositions for electrophoretic coating of polymers are classified in [C09D5/44](#) and subgroups.

Special rules of classification

Since the bath compositions for the electrophoretic deposition of polymers are already classified under [C09D5/44](#), the classification in [C25D13/04](#) is restricted to low molecular weight organic compounds.

Electrografting is classified in [C25D9/02](#).

C25D 13/12

Definition statement

This place covers:

Articles coated by electrophoretic deposition.

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C25D 13/18**Definition statement***This place covers:*

Electrophoretic processes using a modulated, pulsed or reversing current, including dielectrophoretic processes.

Special rules of classification

C25D13/18 is also used to classify dielectrophoretic deposition processes although the latter are not electrophoretic processes.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Dielectrophoresis	Motion of matter as induced by its polarization in an inhomogeneous electric field, usually into regions of highest field strength, and most evident with neutral matter. The direction of the motion is independent of the sign of the field.
Electrophoresis	Motion of charged matter induced by an electric field. The direction of the motion here is dependent on the sign of the field.

C25D 17/001**Definition statement***This place covers:*

Apparatus specially adapted for electrolytically coating wafers, such as fountain platers, plating jigs for wafers, etc.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Wafer	A thin slice of conductor or semiconductor material
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C25D 17/002

Definition statement

This place covers:

Means such as membranes or diaphragms for dividing the plating cell into a plurality of regions having different bath compositions, e.g. anolyte chamber and catholyte chamber.

Special rules of classification

Current shielding devices are classified in [C25D17/008](#).

Electroplating of strips or foils in cells comprising a diaphragm are classified in [C25D7/065](#).

C25D 17/005

Definition statement

This place covers:

Means for electrically contacting the substrate, e.g. electrodes, pins, brushes, etc., e.g. ensuring a uniform current supply to the substrate.

Special rules of classification

Electroplating of strips or foils in cells comprising conducting rolls are classified in [C25D7/0657](#).

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C25D 17/007

Definition statement

This place covers:

Means made of a conductive material in contact with the plating bath, showing an electric potential, thereby modifying the electric field and the current density field in the plating bath.

Those means are often electrically connected to a power supply, as in the case of thief electrodes, auxiliary electrodes, etc., but not necessarily, as in the case of bipolar electrodes.

The current directing device conducts current density lines, contrary to the current shielding device in the sense of [C25D17/008](#), which acts as an obstacle.

Special rules of classification

Current contacting devices are classified in [C25D17/005](#).

Current shielding devices are classified in [C25D17/008](#).

C25D 17/008

Definition statement

This place covers:

Shielding means, not connected to an electric circuit, for modifying the current density field in the electroplating cell and the current density distribution over the substrate surface, e.g. "diaphragms", "screens", "shields", virtual anodes, for example, to avoid edge effects, etc.

Insulating spacers for avoiding short-circuits and arcing between the substrate and the counter-electrode.

The current shielding device influences the current density field in the plating bath by constituting an obstacle to the current lines in a first region, which normally implies concentrating the current lines in a second region.

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The current shielding device is not necessarily made of a dielectric material, but should it be made of a conductive material, it should not act as a current conducting device in the sense of [C25D17/007](#).

An electrolyte flow directing device (e.g. baffle, damping device, hydrodynamic diffuser, etc.) placed between anode and cathode and aiming at modifying the hydrodynamics of the cell, will normally influence the electric current density distribution as well as the hydrodynamics and is as such also considered as a current insulating device.

Special rules of classification

Cell separation using membranes or diaphragms is classified in [C25D17/002](#).

Current directing devices are classified in [C25D17/007](#).

Electroplating of selected surface areas using masking means is classified in [C25D5/022](#).

Electrolyte flow directing devices are classified in [C25D17/008](#) in combination with [C25D5/08](#) (moving electrolyte).

Synonyms and Keywords

In patent documents, the following words/expressions are often used with the meaning indicated:

virtual anode	current shielding device
current shaping element	current shielding device
channeled ionically resistive plate	current shielding device

C25D 17/02

Definition statement

This place covers:

Tanks characterized by their construction material, their shape or by integrated equipment, e.g. sealing devices, windows, integrated cooling or heating devices, etc.

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C25D 21/12

Definition statement

This place covers:

Processes and equipment (architectures, mechanisms and algorithms) for maintaining the output of the electrolytic coating process within a desired range, using open-loop or feedback control. Control and regulation implies that an action is taken during the electrolytic coating process, which results in the modification of a process variable.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electroplating using modulated, pulsed or reversing current	C25D 5/18
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C25D 21/14

Definition statement

This place covers:

Processes and equipment (architectures, mechanisms and algorithms) for maintaining the composition of the electrolyte within a desired range during the electrolytic coating process.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Regeneration of electrolytes	C25D 21/18
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C25D 21/16

Definition statement

This place covers:

Processes and equipment for replenishing and/or purifying spent solutions.

The regeneration can be carried out continuously (using e.g. circulation loops) or in the batch mode.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Regeneration of process liquids in electrophoretic coating process	C25D 13/24
Filtering	C25D 21/06
Process control or regulation	C25D 21/12

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2. A. DEFINITIONS (modified)

Insert: The following modifications in the definitions.

C25D

Definition statement

Delete: The last statement in the Definition statement

Plants for servicing or operating cells for electrolyting coating.

Insert: The following new statement at the end of the list of statements

Processes and equipment for servicing or operating cells for electrolytic coating.

Relationships with other classification places

Replace: The following existing paragraph (3rd paragraph)

- The electrolytic or electrophoretic purification of materials is classified according to the nature of the liquid in the relevant places, e.g. A01K63/00, C02F1/46, C25B15/08, C25D21/16, C25F7/02.

with the following new bullet:

- The regeneration of process solutions is classified according to the nature of the solution in the relevant places, e.g. [C02F 1/46 \(treatment of water\)](#), [C25B 15/08](#), [C25D 21/16](#), [C25D 13/24](#), [C25F 7/02](#).

References

Limiting references

Delete: The entire Limiting references section and all table rows.

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Application-oriented references

Replace: The following reference symbol in the Application-oriented references table:

Manufacturing printed circuits using electroplating	H05K 3/18
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with the following symbols:

Manufacturing printed circuits using electroplating	H05K 3/18, H05K 3/241
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Informative references

Insert: The following new eight references in the Informative references table.

Welding metals by means of an electrolyte	B23K 28/006
Laminating metals	B32B 15/00
Nano-technology for materials or surface science, e.g. nano-composites	B82Y 30/00
Manufacture or treatment of nano-structures	B82Y 40/00
Treatment of water, waste water, or sewage by electrochemical means, e.g. electrolysis	C02F 1/46
Coating for obtaining at least two superposed coatings by combinations of methods provided for in groups C23C18/16 and C25D5/00	C23C 18/1653
Anodic or cathodic protection	C23F 13/00
Singe crystal growth	C30B

Insert: The following new Special rules of classification section and text.

Special rules of classification

References H05K3/18, C23F13/00, and C30B are non-limiting in the subclass C25D. CPC will be updated once this inconsistency in IPC is resolved.

In this subclass C25D, multi-aspect classification is to be applied.

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For example, a claim in the product category may be conveniently classified using process features of the subgroups under [C25D5/00](#) (e.g. [C25D5/10](#): electroplating with more than one layer), in addition to any relevant entry under [C25D7/00](#).

Claims

The subject of claims are completely classified, in the light of the description, using as many entries of the scheme as possible. The various features constituting in combination the subject matter of a claim, i.e. the invention, are given their respective information symbols. An invention information symbol is allocated to the main features of the claim and additional information symbols to the secondary features.

Examples

The claim relates to a fountain plater comprising a shielding device. The subject matter is classified in [C25D17/001](#) (invention) and [C25D17/008](#) (invention as well, because the shielding device is most probably the core of the invention).

The claim relates to an electroplating apparatus comprising an ion-exchange membrane and an inert anode. The subject matter is classified in [C25D17/005](#) (invention) and [C25D17/10](#) (additional if any well-known inert anode can be used, invention if the examples actually focus on one particular material for the inert anode).

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C25D 1/00

Definition statement

Replace: The entire text in the Definition statement with the following:

Electroforming processes, i.e. processes involving the reproduction or formation of objects by electrodeposition or electrophoresis in which, typically, the deposit does not permanently remain with the base upon which deposition is made.

Apparatuses and devices especially designed for electroforming.

Electrolytic baths especially formulated for electroforming.

Electroformed products

References

Limiting references

Delete: The entire Limiting references section and all table rows.

Informative references

Insert: The following new table row in the Informative references table.

Layered products comprising essentially metals	B32B 15/00
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Special rules of classification

Replace: The entire existing text in the Special rules of classification section with the following:

Subgroups C25D1/003 - C25D1/22

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- Electroforming of 3D-structures, see [C25D1/003](#)
- Electroforming of nanostructures, e.g. using aluminum AAO templates or arrays, see [C25D1/006](#)
- Electroforming of tubes, wires, mirrors, perforated or foramina's objects, moulds, see [C25D1/02](#) - [C25D1/10](#)
- Electroforming by electrophoresis, apparatuses for electroforming by electrophoresis, electrophoretically formed products, see [C25D1/12](#) - [C25D1/18](#)

The criterion “the deposit does not permanently remain with the base upon which deposition is made” does not need to be fulfilled when the base, after deposition of the material, becomes actually irrelevant for the function of the electroformed object.

Examples:

- an electroformed metal foam for which the polymer template is not removed,
- a thick metal casing electroformed on a thin polymer template.

The step of removing the template may also intervene only at a later stage, not explicitly described in the document. For example, a process of manufacturing a peelable thin foil composite comprising a carrier layer, a release layer and a foil layer “electroplated” on the release layer, provides actually an electroformed foil, since the carrier layer will eventually be removed, e.g. after lamination of the foil composite on an insulating circuit board material.

In certain cases, the base may even remain and constitute the final object together with the electroformed part, but wherein it is still more appropriate to speak of electroforming than of electroplating in the sense of [C25D5/00](#), see the definition of [C25D1/003](#).

In case of doubt, the document is classified in both [C25D1/00](#) subgroups and [C25D5/00](#) subgroups and/or [C25D7/00](#) subgroups. For example, the process of manufacturing a peelable thin foil composite mentioned above is appropriately classified in both [C25D1/04](#) and [C25D7/0614](#).

Baths especially formulated for electroforming are classified in [C25D1/00](#) in combination with the relevant subgroups [C25D3/02](#) - [C25D3/665](#).

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When a document is directed to an apparatus or a device for electroforming, the latter is classified in [C25D1/00](#) (as a hint to specific apparatus features), in combination with the subgroups [C25D1/003](#) - [C25D1/22](#).

Synonyms and Keywords

Delete: The entire Synonyms and Keywords section and table row.

C25D 3/00

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Baths for electroplating, e.g. solutions, melts.

Insert: The following new Special rules of classification section and text.

Special rules of classification

Solid electrolytes used for electroplating are classified in [C25D3/00](#).

Baths especially formulated for electroforming are classified in [C25D1/00](#) in combination with the relevant subgroups [C25D3/02](#) - [C25D3/665](#).

Subject matter relating to both electroplating baths ([C25D3/00](#)) and electroplating processes ([C25D5/00](#)) is classified in both subgroups.

Insert: The following new Glossary of terms section and text.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

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Electroplating	Electrodeposition on a substrate of a firmly adhering metal or metal alloy
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C25D 3/40

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Copper electroplating baths containing cyanide ions, e.g. baths containing Cu^+ ions as copper source.

C25D 3/56

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Electrolytic baths for plating alloys.

C25D 3/60

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Electrolytic baths for plating tin alloys, including tin-phosphorous (Sn-P) alloys.

C25D 3/66

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Electrolytic baths based on melts, fused baths or ionic liquids.

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C25D 5/00

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Electroplating processes, i.e. processes of electrolytic coating the substrate with a firmly adhering metallic layer, including the preparation of the workpieces for subsequent electroplating.

References

Limiting references

Delete: The entire Limiting references section and table row.

Informative references

Insert: The following new references in the Informative references table.

Electroforming	C25D 1/00
Selective plating of, spraying of electrolyte for and regulating thickness of conveyed wires, strips or foils, e.g. using masks	C25D 7/06

Special rules of classification

Delete: The entire Special rules of classification section and text.

Insert: A new Glossary of terms section and term.

Glossary of terms

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In this place, the following terms or expressions are used with the meaning indicated:

Electroplating	Electrodeposition on a substrate of a firmly adhering metal or metal alloy
----------------	--

C25D 5/16

Definition statement

Delete: The first bullet statement from the Definition statement.

“Electroplating processes wherein the thickness of the deposit obtained is purposely not uniform all over the substrate (e.g. thickness increasing in one direction, like in a Hull cell).”

C25D 5/54

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Electroplating on non-metallic surfaces, e.g. graphite, ceramics, etc.
For example:

- the non-metallic substrates having an electroplating catalyst embedded therein,
- the non-metallic substrate being catalyzed with discrete catalytic cluster seeds prior to electroplating.

Insert: The following new Limiting reference section and table row.

References

Limiting references

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This place does not cover:

Semiconductors	C25D 7/12
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Insert: The following new Informative reference section and table rows.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Processes of forming a multilayer coating comprising the step of depositing a first metal layer on the non-metallic substrate, e.g. by physical vapour deposition, prior to electroplating	C23C 28/00
Processes of forming a multilayer coating comprising the steps of plating a first metal layer on the non-metallic substrate by electroless plating and plating a second metal layer on the first metal layer by electroplating	C23C 18/1653

Insert: The following new Special rules of classification section and text.

Special rules of classification

Aspects relating to electroplating on plastics or polymers (e.g. filled, catalysed, etc.) are classified in [C25D5/56](#).

Insert: The following new Glossary of terms section and table data.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Direct electroplating	Electroplating process comprising the deposition of catalytic cluster seeds on a non-metallic substrate prior to electroplating.
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C25D 5/56

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Electroplating of plastics and polymers, for example:

- The plastic/polymeric material being conductive per se (e.g. polythiophene)
- The plastic/polymeric material being catalyzed with discrete cluster seeds prior to electroplating (so-called direct electroplating process)
- The plastic/polymeric material having an electroplating catalyst embedded therein
- The plastic/polymeric layer covering a conductive substrate being thin enough not to prevent electroplating

Insert: The following new Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Coating metallic material	C23C
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Insert: The following new Glossary of terms section and table data.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Direct electroplating	Electroplating process comprising the deposition of catalytic cluster seeds on a non-metallic substrate prior to electroplating.
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C25D 7/00**Definition statement**

Replace: The entire existing text in the Definition statement with the following:

Processes of electroplating to form a specific electroplated article. However, certain aspects are directly classified in the relevant subgroups [C25D7/003](#) - [C25D7/126](#).

References**Limiting references**

Delete: The entire Limiting references section and table rows.

Informative references

Insert: The following new references in the Informative references table.

Laminating metals	B32B 15/00
Electroplating wafers comprising a seed layer	C23C 28/02 , H01L 21/00
Electroplating solar cells comprising a seed layer	C23C 28/02 , H01L 31/00

C25D 7/06**Definition statement**

Replace: The entire existing text in the Definition statement with the following:

Electroplated wires, strips or foils, apparatuses and processes for electroplating wires, strips or foils.

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Special rules of classification

Insert: The following new paragraph as the second paragraph in the Special rules of classification section.

The group [C25D7/06](#) is preferably not used. All the aspects are directly classified in the relevant subgroups [C25D7/0607](#) - [C25D7/0692](#).

C25D 7/10

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Electroplated antifriction means as balls or rollers, designed to receive a rotating shaft, or to be used in connection with a pivoted, sliding, or rotary element.

C25D 7/12

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Details of processes of electroplating semiconductor substrates or devices, such as silicon wafers.

Insert: The following new Application-oriented reference section and table row.

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

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Manufacture of electrodes on semiconductor bodies using an external electrical current, i.e. electro-deposition	H01L 21/2885
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Insert: The following new Special rules of classification section and texts.

Special rules of classification

Processes of electroplating semiconductor substrates or devices first coated with a seed layer prior to electroplating are classified in [C25D7/123](#).

C25D 9/00

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Processes of electrolytic coating with other materials than metals.

Apparatuses specially adapted for electrolytic coating other than with metals.

Articles electrolytically coated other than with metals.

References

Limiting references

This place does not cover:

Delete: The following table rows from the Limiting references table.

Lacquering	B44D
Anodic or cathodic protection (inhibit corrosion)	C23F 13/00
Single crystal growth	C30B

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Replace: The existing text for the reference C25D13/00 with the following:

Electrophoretic coating	C25D 13/00
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Insert: The following new references in the Limiting references table.

Electrolytic coated by surface reaction, i.e. forming conversion layers	C25D 11/00
Electrolytic or electrophoretic production of coatings containing embedded materials	C25D 15/00

Informative references

Insert: The following new reference in the Informative references table.

Lacquering	B44D
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Insert: The following new Special rules of classification section and texts.

Special rules of classification

When a document is directed to an apparatus or a device for electrolytic coating other than with metals, the latter is classified in [C25D9/00](#) (as a “tag” referring to apparatus features), in combination with any of the subgroups [C25D9/02](#) - [C25D9/12](#), if relevant for the process/product, and any of the subgroups [C25D17/001](#) - [C25D17/28](#), if relevant for the apparatus. [C25D21/00](#) and the subgroups thereof are also available for further classification of apparatus and/or process aspects.

C25D 11/00

Definition statement

This place covers:

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Insert: The following new bullets after the existing paragraph.

- Processes of electrolytic coating by surface reaction with formation of conversion layers
- Apparatuses specially adapted for electrolytic coating by surface reaction
- Articles coated by electrolytic conversion

References

Limiting references

Delete: The entire Limiting references section and table row.

Informative references

Insert: The following new references into the Informative references table.

Electroplating with an oxide, not a conversion of the surface	C25D 9/00
Coating with an oxide by electromigration of charged particles	C25D 13/02
Chemical surface treatment of metallic material by reaction of the surface (chemical conversion), like phosphatising or chromatising	C23C 22/00
Electrolytic removal of materials (etching, polishing, cleaning)	C25F

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

Delete: The following terms

and "eloxieren"

from the bullet list

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- "anodic oxidation", "anodisation", "electrochemical conversion coating" and "eloxieren"

C25D 11/16

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Pretreatment of the substrate surface, e.g. by desmutting.

C25D 11/18

Definition statement

Replace: The entire existing text in the Definition statement with the following:

After-treatment of electrolytic coated surface, e.g. physical or mechanical after-treatments.

C25D 11/36

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Electrolytic conversion processes comprising the formation of an adherent phosphate coating on a metal substrate by immersion thereof in a suitable aqueous phosphate solution and precipitation of insoluble metal phosphate compounds upon variation of the pH in the vicinity of the substrate, wherein part of the metal substrate reacts with the solution to form the coating. A metal source other than the substrate may be added to the solution (e.g. precipitation of zinc phosphate on steel substrate), thereby limiting the actual contribution of the metal of the substrate to the formation of the coating.

Articles obtained by such processes.

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Insert: The following new Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Bath solutions of NiP, CoP, FeP	C25D 3/562
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Special rules of classification

Replace: The existing 2nd, 3rd, and 4th paragraph in the Special rules of classification section with the following two paragraphs:

If the metal of the substrate does not explicitly contribute to the formation of the coating, and no material of the surface is eventually present in the coating formed, such a “pure” precipitation process is classified in any of the subgroups [C25D9/04](#) - [C25D9/12](#), not in [C25D11/36](#).

In case of doubt as to the contribution of the metal of the surface to the formation of the coating, the process is classified in [C25D11/36](#) in combination with anyone of the subgroups [C25D9/04](#) - [C25D9/12](#).

Insert: The following new Synonyms and Keywords section and texts.

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- “Phosphating” or “Phosphatising”

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C25D 13/00**Definition statement**

Replace: The entire existing text in the Definition statement with the following:

Processes wherein charged particles or molecules suspended or dissolved in a liquid medium, possibly forming a colloid, migrate under the influence of an electric field and are deposited onto an electrode by coagulation.

References**Limiting references**

Delete: The following table rows from the Limiting references table.

Lacquering	B44D
Electrolytic coating other than with metals, by deposition of ions, not through electromigration	C25D 9/00

Delete: The reference symbol C09D5/4476 and the preceding comma from the following table row in the Limiting references table.

Compositions for electrophoretic coating of polymers	C09D 5/44, C09D 5/4476
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Informative references

Insert: The following new references into the Informative references table.

Lacquering	B44D
Electrolytic coating other than with metals, by deposition of ions, not through electromigration	C25D 9/00
Electrografting	C25D 9/02

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Insert: The following new Special rules of classification section and texts.

Special rules of classification

Looping references between [C09D5/44](#) and [C25D13/00](#) have been identified. Until this inconsistency is resolved, the current classification practice in CPC is as follows:

Coatings compositions comprising polymers or additives for electrophoretic processes are classified in [C09D5/44](#) and subsubgroups.

Electrophoretic coating characterised by the process comprising inorganic material or organic material not being polymers or non polymerisable compounds are classified in [C25D13/00](#) and subgroups.

Insert: The following new Glossary of terms section and table.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Electrocoating, electropainting, e-coat	Processes called “electrocoating”, “electropainting”, “e-coat”, etc., wherein the first step is the protonation/deprotonation of the low molecular weight organic compound in the bath, followed by the deprotonation and deposition at the cathode (i.e. cataphoretic process with concomitant reduction of H ⁺ at the cathode according to $2\text{H}^+ + 2\text{e}^- \rightarrow \text{H}_2$) or protonation and deposition at the anode (i.e. anaphoretic process with concomitant oxidation of water at the anode according to $\text{H}_2\text{O} \rightarrow \frac{1}{2} \text{O}_2 + 2\text{e}^-$). Strictly speaking, such processes should be called “electrolytic” instead of “electrophoretic” because the films are not formed by coagulation, but by reaction at the working electrode. However, C25D13/00 and C09D5/44 use the expression “electrophoretic coating with polymers” for historical reasons, as generally does the patent and non-patent literature.
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Insert: The following new Synonyms and Keywords section and text.

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- “Chromating”, “chromatizing”, “chromate conversion coating”
- “anodic chromating”, “anodic chromate treatment”

C25D 13/22

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Equipment and processes for servicing and operating; covering aspects such as heating, cooling, filtering, agitating and process control.

Apparatus specially adapted for the electrophoretic coating process.

Multistep processes.

Details of processes of electrophoretic coating with polymers not classified elsewhere.

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C25D 15/00

Definition statement

Replace: Only the following statement in the Definition statement

“However, when electrophoretic and electrolytic processes are concomitant, the global process is directly classified in C25D15/02.”

with the following:

The coated products obtained by such processes.

Replace: The term “substrate” in the 3rd bullet “...is formed on a substrate by ...” with the following term

substrate

References

Limiting references

Delete: The entire Limiting references section and table rows.

Special rules of classification

Delete: The entire Special rules of classification section and text.

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C25D 15/02

Definition statement

Insert: The following paragraph into the Definition statement as the second paragraph.

The coated articles obtained by such processes.

C25D 17/00

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Constructional parts, or assemblies thereof, of cells for electrolytic coating.
Electrolytic coating plants.

References

Limiting references

Delete: The entire Limiting references section and table rows.

Informative references

Insert: The following new references into the Informative references table.

Apparatus for electroplating wires	C25D 7/0607
Apparatus for electroplating strips or foils	C25D 7/0614
Apparatus specially adapted for electrolytic conversion coating	C25D 11/005
Apparatus for electroless plating	C23C 18/1619

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Special rules of classification

Replace: The entire existing text in the Special rules of classification section with the following:

Electrolytic coating plants are classified in [C25D17/00](#).

See the special rules of classification within [C25D7/0607](#), [C25D7/0614](#) and [C25D11/005](#).

Synonyms and Keywords

Delete: The entire Synonyms and Keywords section and text.

C25D 17/10

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Counter-electrodes, auxiliary electrodes, thief electrodes, including aspects relating to their composition.

Special rules of classification

Replace: The entire existing text in the Special rules of classification section with the following:

Certain working electrodes, such as rotating electrodes used in laboratories, while not being counter-electrodes, can be nevertheless classified in [C25D17/10](#).

Anodes of cells for electroplating strips or foils are classified in [C25D7/0657](#).

Electrodes serving for electrically contacting the substrate are classified in [C25D17/005](#).

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The biased substrate to be electrolytically coated is classified in [C25D7/00](#).

C25D 21/04

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Processes and equipment for the removal of gases or vapours emanating from the electrolytic coating bath, e.g. using a suction hood.

Insert: The following new Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Collecting or removing dirt or fumes, using chambers or hoods covering the area	B08B 15/02
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C25D 21/06

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Processes and equipment for filtering particles, not ions.

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C25D 21/10

Definition statement

Replace: The entire existing text in the Definition statement with the following:

Processes and equipment for moving vigorously the aqueous solution for electrolytic coating or for displacing the supports of the article to be treated.

Insert: The following new Informative reference section and table row.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electroplating with moving electrolyte	C25D 5/08
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Special rules of classification

Delete: The entire Special rules of classification section and text.

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3. REVISION CONCORDANCE LIST (RCL)

Type*	From CPC Symbol (existing)	To CPC Symbol(s)
C	C25D 5/54	C25D 5/54, C25D 5/56
C	C25D 7/00	C25D 7/00, C25D 7/005
C	C25D 7/12	C25D 7/12, C25D 7/123, C25D 7/126
C	C25D 11/022	C25D 5/022, C25D 11/022
C	C25D 13/24	C25D 13/24, C25D 21/16, C25D 21/18, C25D 21/20, C25D 21/22

* C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed.

NOTES:

- Only C, D, F, and Q type entries are included in the table above.
- When multiple symbols are included in the “To” column, do not use ranges of symbols.
- For administrative transfer of documents, the following text should be used: “< administrative transfer to XX>”, “<administrative transfer to XX and YY simultaneously>”, or “<administrative transfer to XX, YY, ...and ZZ simultaneously>” when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be “additional information”.
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations “ADD” or “INV”: <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the “D” entries of 2000-series or Y-series groups may not require a destination (“To”) symbol, however it is required to specify “<no transfer>” in the “To” column for such cases.
- RCL is not needed for finalisation projects.