

Symbol	Typ	Titel
C	Sektion	CHEMISTRY; METALLURGY
C22	Klasse	METALLURGY (of iron C21); FERROUS OR NON-FERROUS ALLOYS; TREATMENT OF ALLOYS OR NON-FERROUS METALS (general methods or devices for heat treatment of ferrous or non-ferrous metals or alloys C21D; production of metals by electrolysis or electrophoresis C25)
C22B	Unterklasse	PRODUCTION OR REFINING OF METALS (making metallic powder or suspensions thereof B22F 9/00; electrolytic C25); PRETREATMENT OF RAW MATERIALS
C22B 1/00	Hauptgruppe	Preliminary treatment of ores or scrap (furnaces, sintering apparatus F27B)
C22B 1/02	1-Punkt Untergruppe	. Roasting processes (C22B 1/16 takes precedence)
C22B 1/04	2-Punkt Untergruppe	. . Blast roasting
C22B 1/06	2-Punkt Untergruppe	. . Sulfating roasting
C22B 1/08	2-Punkt Untergruppe	. . Chloridising roasting
C22B 1/10	2-Punkt Untergruppe	. . in fluidised form
C22B 1/11	1-Punkt Untergruppe	. Removing sulfur, phosphorus or arsenic, other than by roasting [2]
C22B 1/14	1-Punkt Untergruppe	. Agglomerating; Briquetting; Binding; Granulating
C22B 1/16	2-Punkt Untergruppe	. . Sintering; Agglomerating
C22B 1/18	3-Punkt Untergruppe	. . . in sinter pots
C22B 1/20	3-Punkt Untergruppe	. . . in sintering machines with movable grates
C22B 1/212	3-Punkt Untergruppe	. . . in tunnel furnaces [2]
C22B 1/214	3-Punkt Untergruppe	. . . in shaft furnaces [2]
C22B 1/216	3-Punkt Untergruppe	. . . in rotary furnaces [2]
C22B 1/22	3-Punkt Untergruppe	. . . in other sintering apparatus
C22B 1/24	2-Punkt Untergruppe	. . Binding; Briquetting
C22B 1/242	3-Punkt Untergruppe	. . . with binders [2]
C22B 1/243	4-Punkt Untergruppe	 inorganic [2]
C22B 1/244	4-Punkt Untergruppe	 organic [2]
C22B 1/245	5-Punkt Untergruppe	 with carbonaceous material for the production of coked agglomerates [2]
C22B 1/248	3-Punkt Untergruppe	. . . of metal scrap or alloys [2]
C22B 1/26	1-Punkt Untergruppe	. Cooling of roasted, sintered, or agglomerated ores
C22B 3/00	Hauptgruppe	Extraction of metal compounds from ores or concentrates by wet processes [5]
C22B 3/02	1-Punkt Untergruppe	. Apparatus therefor
C22B 3/04	1-Punkt Untergruppe	. by leaching (C22B 3/18 takes precedence) [5]
C22B 3/06	2-Punkt Untergruppe	. . in inorganic acid solutions [5]
C22B 3/08	3-Punkt Untergruppe	. . . Sulfuric acid [5]

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C22B 3/10	3-Punkt Untergruppe	. . . Hydrochloric acid [5]
C22B 3/12	2-Punkt Untergruppe	. . in inorganic alkaline solutions [5]
C22B 3/14	3-Punkt Untergruppe	. . . containing ammonia or ammonium salts [5]
C22B 3/16	2-Punkt Untergruppe	. . in organic solutions [5]
C22B 3/18	1-Punkt Untergruppe	. with the aid of micro-organisms or enzymes, e.g. bacteria or algae [5]
C22B 3/20	1-Punkt Untergruppe	. Treatment or purification of solutions, e.g. obtained by leaching (C22B 3/18 takes precedence) [5]
C22B 3/22	2-Punkt Untergruppe	. . by physical processes, e.g. by filtration, by magnetic means (C22B 3/26 takes precedence) [5]
C22B 3/24	3-Punkt Untergruppe	. . . by adsorption on solid substances, e.g. by extraction with solid resins [5]
C22B 3/26	2-Punkt Untergruppe	. . by liquid-liquid extraction using organic compounds [5]
C22B 3/28	3-Punkt Untergruppe	. . . Amines [5]
C22B 3/30	3-Punkt Untergruppe	. . . Oximes [5]
C22B 3/32	3-Punkt Untergruppe	. . . Carboxylic acids [5]
C22B 3/34	3-Punkt Untergruppe	. . . containing sulfur [5]
C22B 3/36	3-Punkt Untergruppe	. . . Heterocyclic compounds (C22B 3/34 takes precedence) [5]
C22B 3/38	3-Punkt Untergruppe	. . . containing phosphorus [5]
C22B 3/40	3-Punkt Untergruppe	. . . Mixtures [5]
C22B 3/42	2-Punkt Untergruppe	. . by ion-exchange extraction [5]
C22B 3/44	2-Punkt Untergruppe	. . by chemical processes (C22B 3/26 , C22B 3/42 take precedence) [5]
C22B 3/46	3-Punkt Untergruppe	. . . by substitution, e.g. by cementation [5]
C22B 4/00	Hauptgruppe	Electrothermal treatment of ores or metallurgical products for obtaining metals or alloys (general methods of refining or remelting metals C22B 9/00; obtaining iron or steel C21B , C21C) [2]
C22B 4/02	1-Punkt Untergruppe	. Light metals [2]
C22B 4/04	1-Punkt Untergruppe	. Heavy metals [2]
C22B 4/06	1-Punkt Untergruppe	. Alloys [2]
C22B 4/08	1-Punkt Untergruppe	. Apparatus (electric heating elements H05B) [2]
C22B 5/00	Hauptgruppe	General processes of reducing to metals
C22B 5/02	1-Punkt Untergruppe	. Dry processes
C22B 5/04	2-Punkt Untergruppe	. . by aluminium, other metals, or silicon
C22B 5/06	2-Punkt Untergruppe	. . by carbides or the like
C22B 5/08	2-Punkt Untergruppe	. . by sulfides; Roasting reaction processes
C22B 5/10	2-Punkt Untergruppe	. . by solid carbonaceous reducing agents
C22B 5/12	2-Punkt Untergruppe	. . by gases
C22B 5/14	3-Punkt Untergruppe	. . . fluidised material

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C22B 5/16	2-Punkt Untergruppe	. . with volatilisation or condensation of the metal being produced
C22B 5/18	2-Punkt Untergruppe	. . Reducing step-by-step
C22B 5/20	2-Punkt Untergruppe	. . from metal carbonyls
C22B 7/00	Hauptgruppe	Working-up raw materials other than ores, e.g. scrap, to produce non-ferrous metals or compounds thereof
C22B 7/02	1-Punkt Untergruppe	. Working-up flue dust
C22B 7/04	1-Punkt Untergruppe	. Working-up slag
C22B 9/00	Hauptgruppe	General processes of refining or remelting of metals; Apparatus for electroslag or arc remelting of metals
C22B 9/02	1-Punkt Untergruppe	. Refining by liquating, filtering, centrifuging, distilling or supersonic wave action
C22B 9/04	1-Punkt Untergruppe	. Refining by applying a vacuum [3]
C22B 9/05	1-Punkt Untergruppe	. Refining by treating with gases, e.g. gas flushing [3]
C22B 9/10	1-Punkt Untergruppe	. with refining or fluxing agents; Use of materials therefor (C22B 9/18 takes precedence) [3]
C22B 9/14	1-Punkt Untergruppe	. Refining in the solid state
C22B 9/16	1-Punkt Untergruppe	. Remelting metals (liquating C22B 9/02) [3]
C22B 9/18	2-Punkt Untergruppe	. . Electroslag remelting [3]
C22B 9/187	3-Punkt Untergruppe	. . . Apparatus therefor, e.g. furnaces [5]
C22B 9/193	4-Punkt Untergruppe	 Moulds, bottom plates or starter plates [5]
C22B 9/20	2-Punkt Untergruppe	. . Arc remelting [3]
C22B 9/21	3-Punkt Untergruppe	. . . Apparatus therefor [5]
C22B 9/22	2-Punkt Untergruppe	. . with heating by wave energy or particle radiation [3]
C22B 11/00	Hauptgruppe	Obtaining noble metals
C22B 11/02	1-Punkt Untergruppe	. by dry processes
C22B 11/06	1-Punkt Untergruppe	. Chloridising
C22B 11/08	1-Punkt Untergruppe	. by cyaniding
C22B 11/10	1-Punkt Untergruppe	. by amalgamating
C22B 11/12	2-Punkt Untergruppe	. . Apparatus therefor
C22B 13/00	Hauptgruppe	Obtaining lead
C22B 13/02	1-Punkt Untergruppe	. by dry processes
C22B 13/06	1-Punkt Untergruppe	. Refining
C22B 13/08	2-Punkt Untergruppe	. . Separating metals from lead by precipitating, e.g. by Parkes process
C22B 13/10	2-Punkt Untergruppe	. . Separating metals from lead by crystallising, e.g. by Pattison process
C22B 15/00	Hauptgruppe	Obtaining copper
C22B 15/02	1-Punkt Untergruppe	. in blast furnaces
C22B 15/04	1-Punkt Untergruppe	. in reverberatory furnaces

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C22B 15/06	1-Punkt Untergruppe	. in converters
C22B 15/14	1-Punkt Untergruppe	. Refining
C22B 17/00	Hauptgruppe	Obtaining cadmium
C22B 17/02	1-Punkt Untergruppe	. by dry processes
C22B 17/06	1-Punkt Untergruppe	. Refining
C22B 19/00	Hauptgruppe	Obtaining zinc or zinc oxide
C22B 19/02	1-Punkt Untergruppe	. Preliminary treatment of ores; Preliminary refining of zinc oxide
C22B 19/04	1-Punkt Untergruppe	. Obtaining zinc by distilling
C22B 19/06	2-Punkt Untergruppe	. . in muffle furnaces
C22B 19/08	2-Punkt Untergruppe	. . in blast furnaces
C22B 19/10	2-Punkt Untergruppe	. . in reverberatory furnaces
C22B 19/12	2-Punkt Untergruppe	. . in crucible furnaces
C22B 19/14	2-Punkt Untergruppe	. . in vertical retorts
C22B 19/16	2-Punkt Untergruppe	. . Distilling vessels
C22B 19/18	3-Punkt Untergruppe	. . . Condensers; Receiving vessels
C22B 19/20	1-Punkt Untergruppe	. Obtaining zinc otherwise than by distilling
C22B 19/28	1-Punkt Untergruppe	. from muffle furnace residues
C22B 19/30	1-Punkt Untergruppe	. from metallic residues or scraps
C22B 19/32	1-Punkt Untergruppe	. Refining zinc
C22B 19/34	1-Punkt Untergruppe	. Obtaining zinc oxide (purifying zinc oxide C01G 9/02)
C22B 19/36	2-Punkt Untergruppe	. . in blast or reverberatory furnaces
C22B 19/38	2-Punkt Untergruppe	. . in rotary furnaces
C22B 21/00	Hauptgruppe	Obtaining aluminium
C22B 21/02	1-Punkt Untergruppe	. with reducing
C22B 21/04	1-Punkt Untergruppe	. with alkali metals
C22B 21/06	1-Punkt Untergruppe	. Refining
C22B 23/00	Hauptgruppe	Obtaining nickel or cobalt
C22B 23/02	1-Punkt Untergruppe	. by dry processes
C22B 23/06	1-Punkt Untergruppe	. Refining
C22B 25/00	Hauptgruppe	Obtaining tin
C22B 25/02	1-Punkt Untergruppe	. by dry processes
C22B 25/06	1-Punkt Untergruppe	. from scrap, especially tin scrap (by electrolytic process C25C 1/14)
C22B 25/08	1-Punkt Untergruppe	. Refining
C22B 26/00	Hauptgruppe	Obtaining alkali, alkaline earth metals or magnesium [2]

Symbol	Typ	Titel
C22B 26/10	1-Punkt Untergruppe	. Obtaining alkali metals [2]
C22B 26/12	2-Punkt Untergruppe	. . Obtaining lithium [2]
C22B 26/20	1-Punkt Untergruppe	. Obtaining alkaline earth metals or magnesium [2]
C22B 26/22	2-Punkt Untergruppe	. . Obtaining magnesium [2]
C22B 30/00	Hauptgruppe	Obtaining antimony, arsenic or bismuth [2]
C22B 30/02	1-Punkt Untergruppe	. Obtaining antimony [2]
C22B 30/04	1-Punkt Untergruppe	. Obtaining arsenic [2]
C22B 30/06	1-Punkt Untergruppe	. Obtaining bismuth [2]
C22B 34/00	Hauptgruppe	Obtaining refractory metals [2]
C22B 34/10	1-Punkt Untergruppe	. Obtaining titanium, zirconium or hafnium [2]
C22B 34/12	2-Punkt Untergruppe	. . Obtaining titanium [2]
C22B 34/14	2-Punkt Untergruppe	. . Obtaining zirconium or hafnium [2]
C22B 34/20	1-Punkt Untergruppe	. Obtaining niobium, tantalum or vanadium [2]
C22B 34/22	2-Punkt Untergruppe	. . Obtaining vanadium [2]
C22B 34/24	2-Punkt Untergruppe	. . Obtaining niobium or tantalum [2]
C22B 34/30	1-Punkt Untergruppe	. Obtaining chromium, molybdenum or tungsten [2]
C22B 34/32	2-Punkt Untergruppe	. . Obtaining chromium [2]
C22B 34/34	2-Punkt Untergruppe	. . Obtaining molybdenum [2]
C22B 34/36	2-Punkt Untergruppe	. . Obtaining tungsten [2]
C22B 35/00	Hauptgruppe	Obtaining beryllium
C22B 41/00	Hauptgruppe	Obtaining germanium
C22B 43/00	Hauptgruppe	Obtaining mercury
C22B 47/00	Hauptgruppe	Obtaining manganese
C22B 58/00	Hauptgruppe	Obtaining gallium or indium [2]
C22B 59/00	Hauptgruppe	Obtaining rare earth metals
C22B 60/00	Hauptgruppe	Obtaining metals of atomic number 87 or higher, i.e. radioactive metals [2]
C22B 60/02	1-Punkt Untergruppe	. Obtaining thorium, uranium or other actinides [2]
C22B 60/04	2-Punkt Untergruppe	. . Obtaining plutonium [2]
C22B 61/00	Hauptgruppe	Obtaining metals not elsewhere provided for in this subclass (iron C21) [2]