

The **KEY** to Casting Industry and Suppliers 2010

Classification by Nomenclature

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Are there any headwords you would like to have included? If so, please, enter them in the order form.

List of headwords

01. Foundry Plants and Equipment

- 10 Foundry Plants, Planning and Construction
- 20 Foundry Equipment and Facilities, in general
- 30 Foundry Plants, fully and partially automatic
- 40 Maintenance and Repairing of Foundry Plants
- 45 Second Hand Foundry Plants and Equipment
- 47 Spray Deposition Plants

01.01 Components

- 50 Charging Systems, in general
- 52 Cored Wire Treatment Stations

02. Melting Plants and Equipment for Iron and Steel Castings and for Malleable Cast Iron

02.01 Cupolas

- 55 Cupolas
- 60 Hot-Blast Cupolas
- 70 Cold-Blast Cupolas
- 80 Circulating Gas Cupolas
- 90 Gas Fired Cupolas
- 100 Cupolas, cokeless
- 110 Cupolas with Oxygen-Enrichment
- 120 Cupolas with Secondary Blast Operation

02.02 Cupola Accessories and Auxiliaries

- 130 Lighter
- 140 Cupola Charging Equipment
- 150 Tuyères
- 160 Burners for Cupolas

- 180 Blowing-In Equipment for Carbo Fer
- 190 Blowing-In Equipment for Filter Dusts into Cupolas
- 210 Blowing-In Equipment for Carbon
- 211 Blowing-In Equipment for Metallurgical Processes
- 220 Dedusting, Cupolas
- 225 Gas Cleaning
- 230 Charging Plants, fully and partially automatic
- 240 Blowers, Cupolas
- 270 Recuperators
- 280 Oxygen Injection for Cupolas
- 290 Shaking Ladles, Plants
- 295 Dust Briquetting
- 300 Monitoring Plants, Cupola
- 310 Forehearth, Cupola
- 320 Blast Heater

02.03 Melting and Holding Furnaces, Electrically Heated

- 330 Electric melting Furnaces, in general
- 340 Induction Channel Furnaces
- 350 Crucible Induction Furnaces, medium Frequency
- 360 Crucible Induction Furnaces, Mains Frequency
- 370 Short-Coil Induction Furnaces
- 390 Filters, in general
- 400 Holding Furnaces

02.04 Accessories and Auxiliaries for Electric Furnaces

- 410 Charging Units
- 420 Blowing-In Equipment for Carbo Fer
- 430 Blowing-In Equipment for Filter Dusts
- 440 Blowing-In Equipment for Carbon
- 445 Inert Gas Systems for EAF and EIF

Melting Plants and Equipment for Iron and Steel Castings and for Malleable Cast Iron / Melting Plants and Equipment for NFM / Refractories Technology

- 450 Electro-magnetic Conveyor Chutes
- 460 Dust Separation Plant
- 470 Charging Equipment
- 480 Graphite Electrodes
- 500 Lime Dosing Device
- 510 Condensers
- 520 Cooling Equipment
- 540 Scrap preheating Plants
- 550 Secondary Metallurgical Plants
- 560 Control Installations
- 570 Equipment for induction stirring

02.05 Rotary Furnaces

- 580 Rotary Furnaces

02.06 Maintenance and Repairing

- 584 Repairing of Induction Furnaces
- 586 Maintenance of Complete Induction Furnace Plants

03. Melting Plants and Equipment for NFM

03.01 Melting Furnaces, Fuel Fired

- 590 Hearth-Type (Melting) Furnaces
- 599 Tower Furnaces
- 600 Bale-Out Furnaces
- 610 Crucible Furnaces
- 620 Drum-Type Melting Furnaces

03.02 Melting and Holding Furnaces, Electrically Heated

- 630 Aluminium Melting Furnaces
- 640 Dosing Furnace
- 655 Heating Elements for Resistance Furnaces
- 660 Induction Furnaces (Mains, Medium, and High Frequency)
- 665 Magnesium Melting Plants and Dosing Devices
- 670 Melting Furnaces, in general
- 680 Bale-Out Furnaces

- 690 Crucible Furnaces
- 700 Remelting Furnaces
- 710 Holding Furnaces
- 720 Electric Resistance Furnaces
- 902 Vacuum Melting and Casting Furnaces

03.03 Accessories and Auxiliaries

- 730 Exhausting Plants
- 740 Molten Metal Refining by Argon
- 742 Gassing Systems for Aluminium Melting
- 750 Gassing Systems for Magnesium Melting
- 760 Charging Plants
- 770 Blowing-in Equipment for Alloying and Inoculating Agents
- 774 Blowing-in Equipment for Inoculating Agents
- 778 Degassing Equipment
- 780 Dedusting Equipment
- 785 Crucibles, Ready-To-Use
- 790 Charging Equipment
- 800 Graphite Melting Pots
- 825 Emergency Iron Collecting Reservoirs
- 848 Cleaning Device and Gripper for Deslagging - Induction Furnaces
- 850 Crucibles
- 860 Inert Gas Systems
- 870 Silicon Carbide Pots
- 875 Special Vibrating Grippers for the Removal of Loose Dross and Caking
- 880 Gas Flushing Installations
- 890 Crucibles, Pots
- 895 Power Supply, Plasma Generators
- 900 Vacuum Degassing Equipment

04. Refractories Technology

04.01 Plants, Equipment and Tools for Lining in Melting and Casting

- 910 Spraying Tools for Furnace Lining

- 920 Breakage Equipment for Cupolas, Crucibles, Pots, Torpedo Ladles and Ladles
- 923 Lost Formers
- 930 Mixers and Chargers for Refractory Mixes
- 940 Charging Units for Furnaces
- 950 Gunning for Relining of Cupolas
- 954 Ramming Mix Formers
- 956 Ramming Templates
- 980 Wear Indicators for Refractory Lining
- 982 Wear Measuring and Monitoring for Refractory Lining

04.02 Refractory Materials (Shaped and Non Shaped)

- 990 Coating and Filling Materials, Protective Coatings
- 1000 Boron-Nitride Isolation
- 1005 Sand Gaskets, Isolation Materials (up to 1260 °C)
- 1009 Running and Feeding Systems (Gating Systems)
- 1010 Running and Feeding Systems (Runner Bricks, Centre Bricks, Sprue Cups)
- 1020 Fibrous Mould Parts
- 1030 Refractory Castables
- 1040 Refractories, in general
- 1050 Insulating Refractory Bricks
- 1060 Refractory Cements
- 1070 Refractories for Aluminium Melting Furnaces
- 1080 Refractory Materials for Anode Kilns
- 1090 Refractory Materials for Melting Furnaces, in general
- 1100 Refractory Materials for Holding Furnaces
- 1103 Ceramic Fibre Mould Parts and Modules
- 1109 Precasts
- 1110 Pouring Lip Bricks
- 1113 Fibreglass Mats
- 1114 Slip Foils for Glowing Materials

- 1120 Induction Furnace Compounds
- 1123 Insulating and Sealing Panels up to 1200 °C
- 1125 Insulating Fabrics up to 1260 °C
- 1128 Insulating Felts and Mats up to 1260 °C
- 1130 Insulating Products
- 1140 Insulating Products (such as Fibres, Micanites)
- 1150 Insulating Bricks
- 1155 Ceramic Fibre Mats, Papers, Plates, and Felts
- 1160 Ceramic Fibre Modules
- 1169 Ceramic Fibre Substitutes
- 1170 Ceramic Fibre Products
- 1180 Loamy Sands
- 1190 Carbon Bricks
- 1200 Cupola and Siphon Mixes
- 1210 Cupola Bricks
- 1220 Micro Porous Insulating Materials
- 1222 Nano Porous Insulating Materials
- 1225 Furnace Door Sealings, Cords, and Packings
- 1230 Furnace Linings
- 1240 Ladle Refractory Mixes
- 1250 Ladle Bricks
- 1260 Plates, free from Ceramic Fibres
- 1270 Acid and Silica Mixes
- 1280 Fire-Clay Mixes and Cements
- 1290 Fire-Clay Bricks
- 1310 Porous Plugs
- 1312 Stirring Cones for Steel, Grey Cast Iron and Aluminium
- 1320 Moulding Mixtures for Steel Casting
- 1330 Ramming, Relining, Casting, Gunning, and Vibration Bulks
- 1333 Ramming, Casting, Gunning, and Repairing Compounds
- 1340 Plugs and Nozzles
- 1345 Textile Fabrics up to 1260° C

04.03 Refractory Raw Materials

- 1350 Glass Powder
- 1360 Loamy Sands
- 1370 Magnesite, Chrom-Magnesite, Forsterite

**Refractories Technology / Non-metal Raw Materials and Auxiliaries
for Melting Shop / Metallic Charge Materials for Iron and Steel
Castings and for Malleable Cast Iron**

- 1390 Chamotte, Ground Chamotte
- 1400 Clays, Clay Powders

04.04 Refractory Building

- 1410 Bricking-Up of Furnaces
- 1420 Refractory Building/Installation
- 1430 Fire and Heat Protection
- 1435 Furnace Door Joints
- 1440 Furnace Reconstruction
- 1450 Repairing of Furnaces and Refractories
- 1460 Heat Insulation
- 1462 Maintenance of Refractory Linings

05. Non-metal Raw Materials and Auxiliaries for Melting Shop

05.01 Coke

- 1480 Lignite Coke
- 1490 Foundry Coke
- 1510 Petroleum Coke

05.02 Additives

- 1520 Desulphurization Compounds
- 1530 Felspar
- 1540 Fluorspar
- 1550 Casting Carbide
- 1560 Glass Granulate
- 1570 Lime, Limestones
- 1580 Slag Forming Addition

05.03 Gases

- 1590 Argon
- 1600 Oxygen
- 1610 Inert Gases
- 1620 Nitrogen
- 1622 Hydrogen

05.04 Carburization Agents

- 1630 Carburization Agents, in general
- 1640 Lignite Coke
- 1650 Electrode Butts
- 1660 Electrode Graphite

- 1670 Graphite
- 1680 Coke Breeze, Coke-Dust
- 1700 Petroleum Coke
- 1710 Silicon Carbide

05.05 Melting Fluxes for NF-Metals

- 1720 Aluminium Covering Fluxes
- 1730 Desoxidants, in general
- 1740 Degassing Fluxes
- 1750 Desulphurisers
- 1760 Charcoal
- 1770 Refiners
- 1780 Fluxing Agents
- 1785 Melt Treatment Agents
- 1790 Fluxing Agents

06. Metallic Charge Materials for Iron and Steel Castings and for Malleable Cast Iron

06.01 Scrap Materials

- 1810 Cast Scrap
- 1811 Cast Turnings
- 1813 Cuttings/Stampings
- 1817 Steel Scrap

06.02 Pig Iron

- 1820 Hematite Pig Iron
- 1830 Foundry Pig Iron
- 1838 DK Pig Iron
- 1840 DK-Perlit Special Pig Iron
- 1880 DK Pig Iron for Malleable Cast Iron
- 1898 DK Pig Iron, low-carbon, Quality DKC
- 1900 DK-Perlit Special Pig Iron, Low Carbon, DKC Quality
- 1936 DK Phosphorus Alloy Pig Iron
- 1940 DK-Perlit Special Pig iron, Type Siegerlaender
- 1950 Spiegel Eisen
- 1970 Blast Furnace Ferro Silicon

Metallic Charge Materials for Iron and Steel Castings and for Malleable Cast Iron

06.03 Specials (Pig Iron)

- 1990 Foundry Pig Iron
- 2000 Hematite Pig Iron
- 2010 Sorel Metal
- 2020 Special Pig Iron for s. g. Cast Iron Production
- 2030 Special Pig Iron for s.g. Cast Iron
- 2040 Steelmaking Pig Iron

06.04 Ferro Alloys

- 2050 Ferro-Boron
- 2060 Ferro-Chromium
- 2070 Ferroalloys, in general
- 2080 Ferro-Manganese
- 2090 Ferro-Molybdenum
- 2100 Ferro-Nickel
- 2110 Ferro-Niobium
- 2120 Ferro-Phosphorus
- 2130 Ferro-Selenium
- 2140 Ferro-Silicon
- 2150 Ferro-Silicon-Magnesium
- 2160 Ferro-Titanium
- 2170 Ferro-Vanadium
- 2180 Ferro-Tungsten
- 2190 Silicon-Manganese

06.05 Other Alloy Metals and Master Alloys

- 2200 Aluminium Granulates
- 2210 Aluminium, Aluminium Alloys
- 2220 Aluminium Powder
- 2230 Aluminium Master Alloys
- 2250 Calcium Carbide
- 2260 Calcium-Silicon
- 2265 Cerium Mischmetal
- 2280 Chromium Metals
- 2290 Cobalt
- 2300 Chromium Metal, Aluminothermic
- 2310 Deoxidation Alloys
- 2318 High-grade Steel
- 2320 Iron Powder
- 2350 Copper
- 2360 Cupola Briquets
- 2370 Alloying Metals, in general
- 2380 Alloying Additives
- 2390 Magnesium, Magnesium Alloys
- 2410 Manganese Metal
- 2420 Manganese Metal, Electrolytic
- 2430 Molybdenum

- 2440 Molybdenum Alloys
- 2450 Molybdenum Oxide
- 2460 Nickel, Nickel Alloys
- 2470 Nickel-Magnesium
- 2490 Furnace Additives
- 2500 Ladle Additives
- 2510 High-Purity Iron, Low-Carbon
- 2520 Sulphuric Iron
- 2530 Silicon Carbide
- 2540 Silicon Metal
- 2550 Special Alloys
- 2570 Titanium Sponge
- 2575 Master Alloys for Precious Metals
- 2580 Bismuth
- 2590 Tungsten
- 2600 Tin
- 2610 Alloying Metals, Master Alloys

06.06 Nodularizing Additives and Auxiliaries

- 2620 Magnesium Treatment Alloys for s.g. Cast Iron
- 2630 Mischmetal

06.07 Inoculants and Auxiliary Appliances

- 2640 Cored-Wire Injectors
- 2645 Injection Appliances for Cored Wire
- 2650 Cored Wires for Secondary and Ladle Metallurgy
- 2653 Cored Wires for Magnesium Treatment
- 2656 Cored Wires for Inoculation of Cast Iron Melts
- 2658 Stream Inoculants
- 2660 Automatic IDA-Type Inoculation Dosing Devices
- 2670 Injection Appliances
- 2680 Inoculants and Inoculation Alloys, in general
- 2690 Inoculants for Cast Iron
- 2692 MSI Pouring Stream Inoculation Devices
- 2694 Ladle Inoculants

07. Metallic Charge and Treatment Materials for Light and Heavy Metal Castings

07.01 Scrap

2730 Metal Residues

07.02 Ingot Metal

2740 Standard Aluminium Alloys
2750 Brass Ingots
2770 High-Grade Zinc Alloys
2790 Copper
2800 Copper Alloys
2810 Magnesium, Magnesium Alloys
2830 Tin

07.03 Alloying Addition for Treatment

2838 Aluminium-Beryllium Master Alloys
2840 Aluminium-Copper
2852 Aluminium Master Alloys
2870 Arsenic Copper
2875 Beryllium-Copper
2890 Calcium
2891 Calcium Carbide, Desulphurisers
2893 Chromium-Copper
2900 Ferro-Copper
2910 Grain Refiner
2920 Granulated Copper
2925 Copper Salts
2927 Copper Master Alloys
2930 Alloy Metals, in general
2935 Alloy Biscuits
2938 Manganese Chloride (anhydrate)
2940 Manganese Copper
2950 Metal Powder
2960 Niobium
2970 Phosphor-Copper
2980 Phosphor-Tin
2990 Silicon-Copper
3000 Silicon Metal
3010 Strontium, Strontium Alloys
3020 Tantalum
3025 Titanium, powdery
3030 Refining Agents for Aluminium
3033 Zirconium-Copper

08. Plants and Machines for Molding and Coremaking Processes

08.01 Molding Plants

3050 Molding Plants, in general
3058 Molding Machines, Boxless
3060 Moulding Machines, Fully Automatic
3070 Moulding Machines, Fully and Partially Automatic

08.02 Molding and Coremaking Machines

3080 Lifting Moulding Machine
3090 Pneumatic Moulding Machines
3100 Automatic Molding Machines
3110 High-Pressure Squeeze Moulding Machines
3130 Impact Moulding Machines
3140 Molding Plants and Machines for Cold-Setting Processes
3150 Moulding Machines, Boxless
3160 Core Blowers
3170 Coremaking Machines
3180 Core Shooters
3190 Air-flow Squeeze Moulding Machines and Plants
3200 Shell Molding Machines
3210 Shell Molding Machines
3220 Shell Molding Machines and Hollow Core Blowers
3225 Multi-Stage Vacuum Processes for Pressure Die Casting Processes
3235 Rapid Prototyping
3240 Jolt Squeeze Moulding Machines
3250 Suction Squeeze Moulding Machines and Plants
3260 Pinlift Moulding Machines
3270 Rollover Moulding Machines

- 3280 Vacuum Moulding
Machines and Processes
- 3290 Multi-Piston Squeeze
Moulding Machines
- 3300 Turnover Moulding
Machines

**08.03 Additives and
Accessories**

- 3310 Exhaust Air Cleaning
Plants for Moulding
Machines
- 3320 Gassing Units for Moulds
and Cores
- 3325 Seal Bonnets for
Immersion Nozzles
- 3330 Metering Dosing Devices
for Binders and Additives
- 3340 Electrical Equipment for
Moulding Machines and
Accessories
- 3350 Electrical and Electronic
Controlling Devices for
Molding Machines
- 3355 Mold Dryer
- 3360 Vents
- 3370 Screen-Vents
- 3380 Spare Parts for Molding
Machines
- 3390 Flow Coating Plants
- 3400 Pattern Plates
- 3420 Manipulators
- 3430 Core Setting Equipment
- 3440 Core Removal Handling
- 3450 Core Handling
- 3460 Coremaking Manipulators
- 3462 Core Transport Racks
- 3470 Shell Mould Sealing
Equipment and Presses
- 3480 Mixers for Blackings and
Coatings
- 3500 Plastic Blowing and
Gassing Plates
- 3510 Coating Equipment
- 3512 Coating Dryers
- 3520 Equipment for Alcohol-
based Coatings
- 3525 Coating Stores and
Preparation Equipment
- 3530 Coating Mixers, Coating
Preparation Equipment
- 3540 Screen Vents, front
Armoured
- 3560 Swing Conveyors
- 3570 Screening Machines
- 3580 Plug Connections, Heat-
Resisting

**08.04 Mold Boxes and
Accessories**

- 3590 Moulding Boxes
- 3610 Moulding Box Round-
hole and Long-hole
Guides

09. Molding Sands

09.01 Basic Molding Sands

- 3630 Chromite Sands
- 3640 Molding Sands
- 3645 Ceramic Sands/Chamotte
Sands
- 3650 Core Sands
- 3660 Molochite
- 3670 Mullite Chamotte
- 3690 Olivine Sands
- 3700 Fused Silica
- 3705 Lost Foam Backing
Sands
- 3710 Silica Flour
- 3720 Silica Sands
- 3730 Zircon Powder
- 3740 Zircon Sands

09.02 Binders

- 3750 Alkyd Resins
- 3755 Inorganic Binders
- 3760 Asphalt Binders
- 3770 Bentonite
- 3790 Binders for Investment
Casting
- 3800 Cold-Box Binders
- 3803 Resins for the Shell
Moulding Process
- 3820 Ethyl Silicate
- 3830 Molding Sand Binders,
in general
- 3840 Resins
- 3860 Oil Binders
- 3870 Core Sand Binders,
in general
- 3875 Silica Sol
- 3880 Synthetic Resin Binders,
in general
- 3890 Synthetic Resin Binders
for Refractories
- 3900 Synthetic Resin Binder
for Gas Curing Processes
- 3910 Synthetic Resin Binder
for Hot Curing Processes

Molding Sands / Sand Conditioning and Reclamation

- 3920 Synthetic Resin Binder for Cold Setting Processes
- 3930 Facing Sand Binders
- 3940 Binders for the Methyl-Formate Process
- 3950 Phenolic Resins
- 3960 Phenolic Resins (alkaline)
- 3970 Polyurethane Binders and Resins
- 3980 Swelling Binders
- 3990 Swelling Clays
- 4000 Quick-Setting Binders
- 4010 Silicate Binders
- 4020 Silica Sol
- 4030 Binders for the SO₂ Process
- 4040 Cereal Binders
- 4050 Warm-Box Binders
- 4060 Water-Glass Binders (CO₂-Process)

09.03 Molding Sand Additives

- 4066 Addition Agents
- 4070 Iron Oxide
- 4080 Red Iron Oxide
- 4090 Lustrous Carbon Former
- 4100 Pelleted Pitch
- 4110 Coal Dust
- 4120 Coal Dust Substitute (Liquid or Solid Carbon Carrier)
- 4130 Coal Dust (Synthetic)

09.04 Mold and Core Coating

- 4140 Inflammable Coating
- 4150 Alcohol-Based Coatings
- 4160 Alcohol-based Granulated Coatings
- 4170 Boron-Nitride Coatings
- 4180 Coatings, Ready-to-Use
- 4190 Mold Varnish
- 4200 Mold Coating
- 4210 Black Washes
- 4220 Graphite Blackings
- 4224 Lost-Foam Coatings
- 4225 Ceramic Coatings
- 4230 Core Coatings
- 4240 Core Blackings
- 4260 Paste Coatings
- 4266 Coatings (with metallurgical effects)
- 4270 Blackings, in general
- 4280 Steel Mould Coatings
- 4290 Talc

- 4298 Coatings for Full Mold Casting
- 4300 Water-based Coatings
- 4310 Granulated Water-based Coatings
- 4320 Zircon Coatings
- 4321 Zircon-free Coatings

09.05 Molding Sands Ready-to-Use

- 4340 Sands for Shell Molding, Ready-to-Use
- 4350 Sands Ready-to-Use, Oil-Bonded (Water-free)
- 4360 Precoated Quartz Sands, Zircon Sands, Chromite Sands, Ceramic Sands
- 4370 Moulding Sands for Precision Casting
- 4380 Steel Moulding Sands
- 4390 Synthetic Moulding and Core Sand

09.06 Molding Sands Testing

- 4400 Strength Testing Equipment for Molding Sand
- 4410 Moisture Testing Equipment for Molding Sand
- 4420 Molding Sand Testing Equipment, in general
- 4426 Core Gas Meters for Al + Fe
- 4440 Sand Testing

10. Sand Conditioning and Reclamation

- 4446 Sand Preparation and Reclamation

10.01 Molding Sand Conditioning

- 4450 Nozzles for Moistening
- 4459 Continuous Mixers
- 4460 Continuous Mixers for Cold-Setting Sands
- 4470 Aerators for Molding Sand Ready-to-Use
- 4480 Sand Preparation Plants and Machines
- 4490 Sand Mullers

Sand Conditioning and Reclamation / Molding Auxiliaries

- 4500 Measuring Instruments for Compactibility, Shear Strength, and Deformability
- 4510 Measuring Instruments for Moldability Testing (Moisture, Density, Temperature)
- 4520 Mixers
- 4550 Sand Mixers
- 4560 Aerators
- 4567 Vibration Sand Lump Crusher
- 4568 Vibratory Screens
- 4570 Sand Precoating Plants
- 4590 Scales and Weighing Control
- 4610 Dosing Devices for Core Binders and Casting Consumables
- 4620 Core Sand Preparation Machines and Plants
- 4630 Core Sand Mixers
- 4631 Core Sand Mixer
- 4632 Vibratory Screens
- 4640 Vibratory Compaction of Core and Moulding Sand

10.03 Conditioning of Cold, Warm, and Hot Coated Sands

- 4650 Preparation Plants for Resin Coated Sand

10.04 Sand Reconditioning

- 4660 Used Sand Preparation Plants
- 4662 Batch Coolers for Used Sand
- 4664 Flow Coolers for Used Sand
- 4670 Magnetic Separators
- 4690 Core Sand Lump Preparation Plants
- 4700 Reclamation Plants for Core Sands
- 4710 Ball Mills
- 4720 Sand Coolers
- 4730 Sand Reclamation Plants
- 4740 Sand Screens
- 4760 Separation of Chromite/Silica Sand

10.05 Reclamation of Used Sand

- 4780 Reclamation Plants, in general
- 4785 Reclamation Plants, Chemical-Combined
- 4790 Reclamation Plants, Mechanical
- 4800 Reclamation Plants, Mechanical/ Pneumatic
- 4810 Reclamation Plants, Mechanical-Thermal
- 4820 Reclamation Plants, Mechanical/Thermal/Mechanical
- 4830 Reclamation Plants, wet
- 4840 Reclamation Plants, Thermal
- 4850 Reclamation Plants, Thermal-Mechanical

11. Molding Auxiliaries

- 4880 Mold Dryers
- 4890 Foundry Nails, Molding Pins
- 4910 Molders' Tools
- 4920 Mould Hardener
- 4950 Guide Pins and Bushes
- 4965 High Temperature Textile Fabrics up to 1260 °C
- 4970 Ceramic Pouring Filters
- 4980 Ceramic Auxiliaries for Investment Foundries
- 4990 Ceramic Cores for Investment Casting - Gunned, Pressed, Drawn
- 5000 Core Benches
- 5010 Core Wires
- 5020 Cores (Cold-Box)
- 5030 Cores (Shell)
- 5040 Core Boxes
- 5050 Core Box Dowels
- 5070 Core Adhesives
- 5080 Core Loosening Powder
- 5090 Core Nails
- 5100 Core Powders
- 5110 Chaplets
- 5130 Tubes for Core and Mould Venting
- 5140 Core Glueing
- 5150 Core Glueing Machines
- 5160 Adhesive Pastes
- 5170 Carbon Dioxide (CO₂ Process)

Molding Auxiliaries / Gating and Feeding / Casting Machines and Equipment

- 5180 Carbon Dioxide Dosing Devices
- 5210 Coal Dust and Small Coal
- 5220 Chill Nails
- 5230 Chill Coils
- 5240 Antipiping Compounds
- 5260 Shell Mold Sealers
- 5270 Mould Dryers, Micro-Wave
- 5280 Screening Machines
- 5290 Parting Agents for Core Shooters
- 5300 Parting Agents for Dewaxing
- 5310 Parting Agents

11.01 Molding Bay Equipment

- 5312 Glass Fabric Filters
- 5314 Strainer Cores

12. Gating and Feeding

- 5320 Covering Agents
- 5330 Heating-up Agents
- 5340 Breaker Cores
- 5350 Strainer Cores
- 5360 Exothermic Products
- 5365 Glass Fabric Filters
- 5370 Insulating Products and Fibres
- 5375 Insulating Sleeves
- 5380 Ceramic Filters
- 5390 Ceramic Breaker Cores
- 5400 Exothermic Mini-Feeders
- 5405 Non-Ceramic Foam Filters
- 5410 Ceramic Dross Filters
- 5420 Exothermic Feeder Sleeves
- 5430 Exothermic Feeding Compounds

13. Casting Machines and Equipment

- 5436 Pouring Machines and Equipment

13.01 Pouring Furnaces and their Equipment

- 5440 Aluminium Dosing Furnaces
- 5450 Pouring Equipment

- 5460 Pouring Ladles
- 5461 Pouring Ladles, Insulating
- 5468 Pig and Ingot Casting Machines
- 5470 Pouring Equipment for Moulding Plants, Railborn or Crane-operated
- 5480 Pouring Ladles
- 5490 Drum-Type Ladles
- 5500 Ingot Casting Machines
- 5520 Pouring Ladles, Electrically Heated

13.02 Die Casting and Accessories

- 5530 Trimming Presses for Diecastings
- 5540 Trimming Tools for Diecastings (Standard Elements)
- 5545 Exhausting and Filtering Plants for Diecastings
- 5550 Ejectors for Diecasting Dies
- 5560 Ejectors for Diecasting Dies (Manganese Phosphate Coated)
- 5570 Feeding, Extraction, Spraying, and Automatic Trimming for Diecasting Machines
- 5580 Trimming Tools
- 5600 Dosing Devices for Diecasting Machines
- 5610 Dosing Furnaces for Diecasting Machines
- 5620 Diecasting Dies
- 5630 Heating and Cooling Devices for Diecasting Dies
- 5640 Diecasting Machines
- 5641 Diecasting Machines and Plants
- 5644 Diecasting Machines for Rotors
- 5650 Diecasting Machine Monitoring and Documentation Systems
- 5660 Diecasting Coatings
- 5670 Diecasting Lubricants
- 5675 Lost Diecasting Cores
- 5680 Diecasting Parting Agents
- 5690 Extraction Robots for Diecasting Machines
- 5695 Frames and Holders for Diecasting Dies

Casting Machines and Equipment

- 5700 Spraying Equipment for Diecasting Machines
- 5710 Goosenecks and Shot Sleeves
- 5720 Hand Spraying Devices
- 5730 Heating Cartridges
- 5740 High-duty Heating Cartridges
- 5750 Hydraulic Cylinders
- 5760 Core Pins
- 5770 Cold Chamber Diecasting Machines
- 5780 Pistons for Diecasting Machines
- 5790 Piston Lubricants
- 5800 Piston Spraying Devices
- 5810 Mixing Pumps for Parting Agents
- 5815 Electric Nozzle Heatings
- 5817 Oil Filters
- 5820 Melting and Molten Metal Feeding in Zinc Die Casting Plants
- 5830 Steel Molds for Diecasting Machines
- 5838 Heating and Cooling of Dies
- 5840 Temperature Control Equipment for Diecasting Dies
- 5850 Parting Agents for Dies
- 5860 Parting Agent Spraying Devices for Diecasting Machines
- 5865 Dry Lubricants (Beads)
- 5870 Vacural-Type Plants
- 5880 Vacuum Die Casting Plants
- 5890 Hot Working Steel for Diecasting Dies
- 5900 Hot Working Steel for Diecasting Tools
- 5910 Hot Chamber Diecasting Machines

13.03 Gravity Die Casting

- 5914 Dosing Devices for Gravity Diecasting Stations
- 5920 Permanent Moulds
- 5930 Automatic Permanent Molding Machines
- 5940 Gravity Diecasting Stations
- 5941 Gravity and High Pressure Diecasting Automation

- 5945 Cement and Fillers for Permanent Moulds up to 1600 °C
- 5950 Cleaning Devices for Permanent Molds
- 5960 Coatings for Permanent Molds
- 5970 Colloidal Graphite
- 5975 Chills
- 5980 Low-pressure Permanent Molding Plants

13.04 Centrifugal Casting

- 5990 Centrifugal Casting Machines

13.05 Continuous Casting

- 6000 Anode Rotary Casting Machines
- 6001 Length and Speed Measuring, non-contact, for Continuous Casting Plants
- 6002 Thickness and Width Measurement for Continuous Casting Plants, non-contact
- 6006 Casting and Shear Plants for Copper Anodes
- 6007 Casting and Rolling Plants for Copper Wire
- 6008 Casting and Rolling Plants for Copper Narrow Strips
- 6010 Continuous Casting Plant, horizontal, for Tube Blanks with integrated Planetary Cross Rolling Mill for the Production of Tubes
- 6020 Continuous Casting Moulds
- 6030 Continuous Casting Machines and Plants
- 6032 Continuous Casting, Accessories
- 6033 Continuous Casting Machines and Plants (non-ferrous)

13.06 Investment and Precision Casting

- 6040 Burning Kilns for Investment Moulds

- 6045 Investment Casting Waxes
- 6050 Embedding Machines for Investment Casting Moulding Materials
- 6060 Investment Casting Plants
- 6062 Centrifugal Investment Casting Machines

13.07 Full Mold Process Plants

- 6070 Lost-Foam Pouring Plants

13.08 Auxiliaries, Accessories, and Consumables

- 6080 Pouring Manipulators
- 6090 Slag Machines
- 6093 Copper Templates
- 6100 Nozzles, Cooling
- 6110 Electrical and Electronic Control for Casting Machines
- 6120 Extraction Devices
- 6130 Pouring Consumables, in general
- 6140 Rotary Casting Machines
- 6150 Pouring Ladle Heaters
- 6160 Ladle Bails
- 6170 Stream Inoculation Devices
- 6175 Graphite Chills
- 6176 Marking and Identification
- 6177 Bone Ash (TriCalcium Phosphate)
- 6190 Long-term Pouring Ladle Coatings
- 6200 Long-term Lubricants
- 6210 Manipulators
- 6220 Ladle Covering Compounds
- 6240 Robots
- 6245 Protective Jacket for Robots, Heat and Dust Resistant
- 6250 Dosing Devices for Slag Formers Addition
- 6270 Silicon Carbide Chills
- 6280 Silicon Carbide Cooling Compounds
- 6290 Crucible Coatings
- 6300 Heat Transfer Fluids

14. Discharging, Cleaning, Finishing of Raw Castings

- 6305 Casting Cooling Plants

14.01 Discharging

- 6330 Knock-out Drums
- 6340 Vibratory Shake-out Tables
- 6345 Knock-out Vibratory Conveyors
- 6350 Decoring Equipment
- 6352 Discharging of Metal Chips
- 6360 Hooking
- 6370 Manipulators
- 6373 Manipulators for Knock-out Floors
- 6380 Robots
- 6390 Vibratory Grids, Hangers, and Chutes
- 6400 Vibratory Tables

14.02 Blast Cleaning Plants and Accessories

- 6410 Turntable Blasting Fans
- 6420 Pneumatic Blasting Plants
- 6430 Automatic Continuous Shot-blasting plants
- 6440 Descaling Plants
- 6445 Spare Parts for Blasting Plants
- 6450 Hose Blasting Plants, Fans
- 6460 Hose Blasting Chambers
- 6470 Monorail Fettleing Booths
- 6475 Efficiency Tuning for Blasting Plants
- 6480 Manipulator Shotblast Plants
- 6485 Tumbling Belt Blasting Plants, Compressed Air Driven
- 6490 Wet and Dry Shotblast Plants
- 6500 Fettleing Machines
- 6530 Airless Blast Cleaning Machines
- 6540 Blasting Plants Efficiency Tuning
- 6550 Shot Transport, Pneumatic
- 6560 Shot-Blasting Plants

- 6569 Shot Blasting Machines
- 6570 Shot Blasting Machines,
with/without Compressed
Air Operating
- 6572 Dry Ice Blasting
- 6574 Dry Ice Production

14.03 Blasts

- 6580 Aluminium Shots
- 6590 Wire-Shot
- 6600 High-Grade Steel Shots
- 6610 Granulated Chilled Iron,
Chilled Iron Shots
- 6630 Cast Steel Shots
- 6650 Shot-Blast Glass
- 6660 Shot-Blast Glass Beads
- 6670 Blasts

14.04 Grinding Machines and Accessories

- 6680 Belt Grinders
- 6690 Flexible Shafts
- 6700 Compressed Air Grinders
- 6710 Fibre discs
- 6714 Centrifugal Grinders
- 6720 Vibratory Cleaning
Machines and Plants
- 6730 Rough Grinding
Machines
- 6735 Abrasive Wheels, visual,
with Flakes/ Lamellas
- 6740 Numerical Controlled
Grinders
- 6750 Swing Grinders
- 6760 Polishing Machines
- 6770 Polishing Tools
- 6773 Precision Cutting Wheels,
0,8 mm
- 6780 Tumbling Drums
- 6790 Pipe Grinders
- 6800 Floor Type Grinders
- 6810 Grinding Textiles
- 6820 Emery Paper
- 6830 Grinding Wheel Dresser
- 6850 Grinding Wheels and
Rough Grinding Wheels
- 6855 Grinding Pins
- 6860 Grinding Fleece
- 6870 Grinding Tools
- 6874 Drag Grinding Plants
- 6880 Rough Grinding
Machines
- 6885 Cutting Wheels
- 6890 Abrasive Cut-off
Machines
- 6900 Vibratory Cleaning
Machines

- 6910 Angle Grinders

14.05 Additional Cleaning Plants and Devices

- 6920 Gate Break-off Wedges
- 6925 Plants for Casting
Finishing
- 6930 Automation
- 6940 Pneumatic Hammers
- 6950 Deflashing Machines
- 6954 Deburring Machines,
robot-supported
- 6955 Robot Deburring Systems
- 6960 Fettling Cabins
- 6970 Fettling Manipulators
- 6980 Fettling Benches
- 6990 Core Deflashing
Machines
- 7000 Chipping Hammers
- 7010 Dedusting of Fettling
Shops
- 7020 Fettling Hammers
- 7030 Fettling Shops, Cabins,
Cubicles
- 7035 Refining Plants
- 7040 Robot Fettling Cubicles
- 7041 Robot Deflashing Units
for Casting
- 7050 Feeder Break-off
Machines
- 7052 Stamping Deflashing
Equipment (tools,
presses)
- 7055 Break-off Wedges
- 7056 Cutting and Sawing
Plants
- 7060 Cut-off Saws for Risers
and Gates

14.06 Jig Appliances

- 7066 Magnetic Clamping
Devices for Casting Dies
- 7068 Core-Slides and
Clamping Elements for
Casting Dies
- 7070 Clamping Devices

14.07 Tribology

- 7073 Lubricants for High
Temperatures
- 7074 Chain Lubricating
Appliances
- 7075 Cooling Lubricants
- 7077 Central Lubricating
Systems

15. Surface Treatment

- 7083 Anodizing of Aluminium
- 7100 Pickling of High Quality Steel
- 7105 CNC Machining
- 7110 Paint Spraying Plants
- 7115 Yellow/Green Chromating
- 7130 Priming Paints
- 7140 Casting Sealing
- 7150 Casting Impregnation
- 7166 Hard Anodic Coating of Aluminium
- 7180 High Wear-Resistant Surface Coating
- 7190 Impregnation
- 7200 Impregnating Devices and Accessories for Porous Castings
- 7210 Anticorrosion Agents
- 7220 Corrosion and Wearing Protection
- 7230 Shot Peening
- 7232 Wet Varnishing
- 7234 Surface Treatment
- 7235 Surface Coatings
- 7240 Polishing Pastes
- 7245 Powder Coatings
- 7250 Repair Metals
- 7260 Slide Grinding, free of Residues
- 7290 Quick Repair Spaddle
- 7292 Special Coatings
- 7295 Special Adhesives up to 1200 °C
- 7296 Shot-Blasting
- 7297 Power Supply, Plasma Generators
- 7300 Galvanizing Equipment
- 7302 Zinc Phosphating
- 7310 Scaling Protection
- 7312 Subcontracting

16. Welding and Cutting

16.01 Welding Machines and Devices

- 7330 Welding Consumables, Electrodes

16.02 Cutting Machines and Torches

- 7350 Gougers

- 7352 Special Machines for Machining
- 7360 Coal/Graphite Electrodes
- 7365 Water Jet Cutting
- 7370 Oxygen Core Lances

16.03 Accessories

- 7394 Protective Blankets, Mats, and Curtains, made of Fabric, up to 1250 °C
- 7397 Protective Welding Paste, up to 1400 °C

17. Surface Treatment and Drying

- 7398 Heat Treatment and Drying

17.01 Plants and Furnaces

- 7400 Tempering Furnaces
- 7401 Ageing Furnaces
- 7402 Combustion Chambers
- 7404 Baking Ovens for Ceramic Industries
- 7420 Mould Drying Stoves
- 7430 Annealing and Hardening Furnaces
- 7440 Induction Hardening and Heating Equipment
- 7450 Core Drying Stoves
- 7452 Microwave Drying Stoves and Chambers
- 7455 Solution Annealing Furnaces
- 7460 Ladle Dryers
- 7470 Sand Dryers
- 7480 Inert Gas Plants
- 7490 Annealing Furnaces
- 7500 Drying Stoves and Chambers
- 7510 Quenching and Tempering Furnaces
- 7520 Heat Treating Furnaces
- 7525 Hearth Bogie Type Furnaces

17.02 Components, Accessories, Operating Materials

- 7550 Multi-purpose Gas Burners
- 7560 Heating Equipment, in general

7564 Special Torches
7580 Firing Plants
7590 Gas Torches
7600 Gas Heatings
7610 Capacitors
7616 Furnace Optimization
7620 Oil Burners
7630 Recuperative Burners
7640 Oxygen Burners
7650 Heat Recovery Plants

18. Plant, Transport, Stock, and Handling Engineering

7654 Lifting Trucks
7656 Transport, Stock, and Handling Technology

18.01 Continuous Conveyors and Accessories

7660 Belt Conveyors
7670 Bucket Elevators
7680 Conveyors, in general
7690 Conveyors, Fully Automatic
7710 Conveyor Belts
7720 Conveyor Belt Ploughs
7730 Conveyor Belt Idlers
7740 Conveyor Chutes
7750 Conveying Tubes
7760 Belt Guides
7780 Overhead Rails
7790 Hot Material Conveyors
7810 Chain Conveyors
7820 Chain Adjusters
7850 Conveyors, Pneumatic
7860 Roller Beds, Roller Conveyor Tables, Roller Tables
7870 Sand Conveyors
7890 Bulk Material Conveyors
7900 Swing Conveyor Chutes
7910 Elevators
7920 Chip Dryers
7950 Idlers and Guide Rollers
7960 Transport Equipment, in general
7970 Conveyor Screws
7980 Vibratory Motors
7981 Vibration Conveyors

18.02 Cranes, Hoists, and Accessories

8000 Grippers
8010 Lifting Tables and Platforms
8020 Jacks and Tilters
8030 Operating Platforms, Hydraulic
8032 Hydraulic and Electric Lifting Trucks
8040 Cranes, in general
8050 Lifting Magnets
8060 Lifting Magnet Equipment

18.03 Vehicles and Transport Containers

8080 Container Parking Systems
8090 Fork Lift Trucks, in general
8100 Fork Lift Trucks for Fluid Transports
8110 Equipment for Melt Transport

18.04 Bunkers, Siloes and Accessories

8140 Linings
8145 Big-bag Removal Systems
8150 Hopper Discharger and Discharge Chutes
8160 Hoppers
8170 Conveyor Hoses
8190 Silos
8200 Silo Discharge Equipment
8210 Silo Over-charging Safety Devices
8218 Wearing Protection
8220 Vibrators

18.05 Weighing Systems and Installations

8230 Charging and Charge Make-up Scales
8240 Metering Scales
8250 Monorail Scales
8260 Crane Weighers
8280 Computerized Prescription Plants
8290 Scales, in general

18.07 Handling Technology

- 8320 Manipulators
- 8340 Industrial Robots
- 8350 Industrial Robots,
Resistant to Rough
Environment, Sensor
Controlled
- 8364 Chipping Plants with
Robots

18.08 Fluid Mechanics

- 8365 Pumps
- 8367 Compressors

**18.09 Storage Systems,
Marshalling Stores**

- 8368 Marking and Identification

18.10 Components

- 8374 Marking and Identification

**19. Pattern- and
Diemaking**

**19.01 Engines for
Patternmaking and
Permanent Mould**

- 8380 Band Sawing Machines
for Patternmaking
- 8400 CAD/CAM/CAE Systems
- 8410 CAD Constructions
- 8420 CAD Standard Element
Software
- 8423 CNC Milling Machines
- 8425 Automatic CNC Post-
Treatment Milling
Machines
- 8430 CNC Programming
Systems
- 8440 CNC, Copying, Portal
and Gantry Milling
Machines
- 8470 Dosing Equipment and
Suction Casting
Machines for the
Manufacture of
Prototypes
- 8480 Electrochemical
Discharge Plants
- 8490 Spark Erosion Plants

- 8500 Spark Erosion
Requirements
- 8510 Development and
Production of Lost-Foam
Machines
- 8520 Milling Machines for
Lost-Foam Patterns
- 8522 Hard Metal Alloy Milling
Pins
- 8525 Lost-Foam Glueing
Equipment
- 8527 Patternmaking Machines
- 8576 Rapid Prototyping
- 8610 Wax Injection Machines

**19.02 Materials, Standard
Elements and Tools for
Pattern- and Diemaking**

- 8630 Thermosetting Plastics
for Patternmaking
- 8650 Toolmaking Accessories
- 8660 Milling Cutters for Lost-
Foam Patterns
- 8670 Free-hand Milling Pins
made of Hard Metal
Alloys and High-speed
Steels
- 8675 Hard Metal Alloy Milling
Pins
- 8680 Adhesives for Fabrication
- 8690 Synthetic Resins for
Patternmaking
- 8700 Plastic Plates Foundry
and Patternmaking
- 8705 Lost-Foam Tools and
Patterns
- 8710 Patternmaking
Requirements, in general
- 8720 Patternmaking Materials,
in general
- 8730 Pattern Letters, Signs,
Type Faces
- 8740 Pattern Dowels (metallic)
- 8750 Pattern Resins
- 8760 Pattern Resin Fillers
- 8770 Pattern Plaster
- 8780 Pattern Gillet
- 8790 Lumber for Patterns
- 8800 Pattern Varnish
- 8810 Pattern-Plate Pins
- 8820 Pattern Spaddles
- 8830 Standard Elements for
Tools and Dies
- 8840 Precision-shaping
Silicone
- 8846 Rapid Tooling

19.03 Pattern Appliances

- 8890 Development and Manufacture of Lost-Foam Patterns
- 8900 Molding Equipment
- 8910 Wood Patterns
- 8930 Core Box Equipment for Series Production
- 8940 Resin Patterns
- 8960 Metal Patterns
- 8970 Pattern Equipment, in general
- 8980 Pattern Plates
- 8985 Pattern Shop for Lost-Foam Processes
- 9000 Stereolithography Patterns
- 9010 Evaporative Patterns for the Lost-Foam Process

19.04 Rapid Prototyping

- 9021 Design
- 9022 Engineering
- 9023 Hardware and Software
- 9024 Complete Investment Casting Equipment for Rapid Prototyping
- 9025 Model and Prototype Making
- 9026 Rapid Prototyping for the Manufacture of Investment Casting Patterns
- 9027 Integrable Prototypes
- 9028 Tools
- 9029 Tooling Machines

20. Control Systems and Automation

20.01 Control and Adjustment Systems

- 9030 Automation and Control for Sand Preparation
- 9040 Automation
- 9042 Software for Production Planning and Control
- 9050 Electric and Electronic Control
- 9070 Equipment for the Inspection of Mass Production

- 9080 Load Check Systems for Recording and Monitoring Energy Costs
- 9090 Control Systems and Automation, in general
- 9120 Control Systems, in general
- 9130 Switch and Control Systems
- 9160 Temperature Control Devices

20.02 Measuring and Control Instruments

- 9166 Compensation Leads
- 9185 Contactless Temperature Measurement, Heat Image Cameras
- 9190 Leakage Testing and Volume Measuring Instruments
- 9210 Flow Meters
- 9220 Flow control Instruments
- 9230 Immersion Thermo Couples
- 9240 Moisture Controller
- 9250 Level Indicator
- 9280 Bar Strein Gauge
- 9306 Calibration and Repair Services
- 9310 Laser Measurement Techniques
- 9320 Multi-coordinate Measuring Machine
- 9330 Measuring and Controlling Appliances, in general
- 9335 Measuring and Controlling Appliances for Fully Automatic Pouring
- 9350 Pyrometers
- 9370 Radiation Pyrometers
- 9375 Measuring Systems for Nuclear Radiation (receiving inspection)
- 9376 Measuring Systems for Radioactivity, Incoming Goods' Inspection
- 9380 Temperature Measurement
- 9382 Temperature Control Units
- 9385 Molten Metal Level Control
- 9390 Temperature Measuring and Control Devices
- 9391 Thermoregulator

- 9395 Molten Metal Level Control
- 9400 Thermal Analysis Equipment
- 9410 Thermo Couples
- 9420 Protection Tubes for Thermocouples
- 9430 Heat Measuring Devices
- 9433 Resistance Thermometers

20.03 Data Acquisition and Processing

- 9440 Data Logging and Communication
- 9450 Data Processing/Software Development
- 9456 ERP/PPS - Software for Foundries
- 9470 EDP/IP Information and Data Processing
- 9480 Machine Data Logging
- 9484 Machine Identification
- 9490 Data Logging Systems
- 9500 Numerical Solidification Analysis and Process Simulation
- 9502 Numerical Solidification Simulation and Process Optimization
- 9504 ERP - Software for Foundries
- 9506 Process Optimization with EDP, Information Processing for Foundries
- 9510 Computer Programmes for Foundries
- 9520 Computer Programmes and Software for Foundries
- 9522 Simulation Software
- 9523 Software for Foundries
- 9525 Software for Coordinate Measuring Techniques
- 9527 Software for Spectrographic Analyses
- 9530 Statistical Process Control
- 9540 Fault Indicating Systems, Registration and Documentation

20.04 Process Monitoring

- 9541 High Speed Video

21. Testing of Materials

21.01 Testing of Materials and Workpieces

- 9548 Calibration of Material Testing Machines
- 9550 Aluminium Melt Testing Instruments
- 9554 Acoustic Materials Testing
- 9560 CAQ Computer-Aided Quality Assurance
- 9564 Image Documentation
- 9580 Chemical Analyses
- 9585 Computerized Tomography, CT
- 9586 Core Gas - System for Measurement and Condensation
- 9587 Die Cast Control
- 9590 Endoscopes
- 9600 Dye Penetrants
- 9610 Instruments for Non-destructive Testing
- 9620 Hardness Testers
- 9630 Inside Pressure Testing Facilities for Pipes and Fittings
- 9645 Calibration of Material Testing Machines
- 9650 Low-temperature Source of Lighting Current
- 9670 Arc-baffler
- 9680 Magnetic Crack Detection Equipment
- 9690 Material Testing Machines and Devices
- 9695 Metallographic and Chemical Analysis
- 9696 Microscopic Image Analysis
- 9697 Surface Analysis
- 9700 Surface Testing Devices
- 9710 Testing Institutes
- 9719 X-ray Film Viewing Equipment and Densitometers
- 9720 X-Ray Films
- 9730 X-Ray Testing Equipment
- 9740 Spectroscopy
- 9750 Ultrasonic Testing Equipment
- 9758 UV-Lamps
- 9760 Ultraviolet Crack Detection Plants

- 9765 Hydrogen Determination Equipment
- 9770 Material Testing Equipment, in general
- 9780 Testing of Materials
- 9800 Inside Pressure Measuring for Tools
- 9836 Devices for Testing of Materials, non-destructive, in general
- 9838 NDT Non-destructive Testing of Materials
- 9840 NDT X-ray Non-destructive Testing of Materials
- 9850 Tensile Testing Machines
- 9652 Low Pressure Density Samples Unit

22. Analysis Technique and Laboratory Equipment

00.00 Analysis Technique and Laboratory Equipment

- 9860 Analyses
- 9865 Image Analysis
- 9880 Gas Analysis Appliances
- 9890 Carbon and Sulphur Determination Equipment
- 9900 Laboratory Automation
- 9910 Laboratory Equipment, Devices, and Requirements, in general
- 9920 Laboratory Kilns
- 9930 Metallographic Laboratory Equipment
- 9940 Microscopes
- 9948 Optical Emission Spectrometers
- 9950 Microscopic Low-temperature Illumination
- 9955 Continuous Hydrogen Measurement
- 9960 Polishing Machines for Metallography
- 9970 Sampling Systems
- 9980 Sample Transport
- 10000 Sample Preparation Machines
- 10010 Quantometers
- 10018 X-Ray Analysis Devices
- 10020 Spectrographic Analysis Devices

- 10040 Cut-off Machines for Metallography

23. Air Technique and Equipment

23.01 Compressed Air Technique

- 10050 Compressed Air Plants
- 10060 Compressed Air Fittings
- 10070 Compressed Air Tools
- 10080 Compressors
- 10100 Compressor Oils

23.02 Fans and Blowers

- 10120 Fans, in general

23.03 Ventilators

- 10150 Axial Ventilators
- 10160 Hot-gas Circulating Ventilators
- 10170 Radial Ventilators
- 10180 Ventilators, in general

23.04 Other Air Technique Equipments

- 10188 Waste Gas Cleaning
- 10190 Exhausting Plants
- 10220 Air-engineering Plants, in general

24. Environmental Protection and Disposal

- 10230 Environmental Protection and Disposal
- 10232 Fume Desulphurization for Boiler and Sintering Plants
- 10235 Radiation Protection Equipment

24.01 Dust Cleaning Plants

- 10240 Extraction Hoods
- 10258 Pneumatic Industrial Vacuum Cleaners
- 10260 Pneumatic Vacuum Cleaners

Environmental Protection and Disposal / Accident Prevention and Ergonomics

- 10270 Equipment for Air Pollution Control
- 10280 Dust Cleaning Plants, in general
- 10290 Gas Cleaning Plants
- 10300 Hot-gas Dry Dust Removal
- 10309 Industrial Vacuum Cleaners
- 10310 Industrial Vacuum Cleaners
- 10320 Leakage Indication Systems for Filter Plants
- 10340 Multicyclone Plants
- 10350 Wet Separators
- 10360 Wet Dust Removal Plants
- 10370 Wet Cleaners
- 10380 Cartridge Filters
- 10400 Pneumatic Filter Dust Conveyors by Pressure Vessels
- 10410 Punctiform Exhausting Plants
- 10420 Dust Separators
- 10430 Vacuum Cleaning Plants
- 10440 Dry Dust Removal Plants
- 10450 Multi-Cell Separators
- 10458 Central Vacuum Cleaning Plants
- 10460 Cyclones

24.02 Filters

- 10470 Compressed Air Filters
- 10490 Dedusting Filters
- 10500 Filters, in General
- 10510 Filter Gravel
- 10520 Filter Materials
- 10530 Filter Bags/Hoses
- 10550 Fabric Filters
- 10560 Air Filters
- 10570 Cartridge Filters
- 10580 Hose Filters
- 10585 Electro-Filters
- 10590 Air Filters
- 10610 Fabric Filters

24.03 Waste Disposal, Repreparation, and Utilization

- 10618 Waste Air Cleaning
- 10620 Waste Water Analyzers
- 10630 Waste Water Cleaning and -Plants

- 10640 Clean-up of Contaminated Site
- 10646 Used Sands, Analysing of Soils
- 10650 Waste Sand Reutilization and Reconditioning
- 10655 Amine Recycling
- 10660 Foundry Debris-conditioning Plants
- 10680 Soil Clean-up
- 10690 Briquetting Presses
- 10695 Briquetting of Foundry Wastes/Filter Dusts
- 10700 Disposal of Foundry Wastes
- 10702 Hazardous Waste Disposal
- 10705 Bleeding Plants
- 10710 Reconditioning of Foundry Wastes
- 10720 Ground Water Cleaning
- 10740 Dross Recovery Plants
- 10760 Cooling Towers
- 10780 Cooling Water Treatment
- 10810 Post-combustion Plants
- 10830 Recooling Systems
- 10840 Recycling of Investment Casting Waxes
- 10850 Slag Reconditioning
- 10870 Waste Water Cooling Towers
- 10880 Scrap Preparation
- 10890 Transport and Logistic for Industrial Wastes
- 10900 Rentilization of Foundry Wastes
- 10910 Rentilization of Furnace Dusts and Sludges
- 10920 Roll Scale De-oilers
- 10940 Rentilization of Slide Grinding Sludges

25. Accident Prevention and Ergonomics

- 10970 Asbestos Replacements
- 10990 Ventilators
- 10993 Fire Protection Blankets and Curtains made of Fabrics
- 10996 Fire-extinguishing Blankets and Containers
- 11020 Heat Protection

- 11025 Heat-Protection Clothes and Gloves
- 11030 Climatic Measurement Equipment for Workplace Valuation
- 11040 Protection against Noise
- 11050 Light Barriers
- 11060 Sound-protected Cabins
- 11070 Sound-protected Equipment and Parting Walls
- 11080 Vibration Protection

26. Other Products for Casting Industry

26.01 Plants , Components, and Materials

- 11100 Concreting Plants
- 11102 Devellopping and Optimizing of Casting Components
- 11118 Vibration Technology

26.02 Industrial Commodities

- 11120 Joints, Asbestos-free
- 11125 Sealing and Insulating Products up to 1260 °C
- 11130 Dowels
- 11150 Foundry Materials, in general
- 11155 Heat-protecting and Insulating Fabrics up to 1260 °C
- 11160 Hydraulic Oil, Flame-resistant
- 11165 Marking and Identification
- 11170 Signs for Machines
- 11175 Fire-proof Protection Blankets, -mats, and -curtains
- 11180 Screen and Filter Fabrics

26.04 Job Coremaking

- 11182 Inorganic Processes
- 11183 Hot Processes
- 11184 Cold Processes

27. Consulting and Service

- 11186 Ordered Research
- 11190 CAD Services
- 11200 Interpreters
- 11205 EDP Consulting
- 11208 Wage Models
- 11210 Emission, Immission, and Workplace Measurements
- 11211 E-Business
- 11212 eProcurement
- 11213 Technical Literature
- 11215 Investment Casting Engineering
- 11220 Foundry Consulting
- 11230 Foundry Legal Advice
- 11240 Lean Foundry Organization
- 11250 Foundry Planning
- 11253 Casting, Construction and Consulting, Optimizing of Mold Core Production and Casting Techniques
- 11260 Nuclear Engineering Consulting
- 11280 Customer Service for Diecasting Machines
- 11283 Jobbing Foundry
- 11290 Management of Approval Procedures
- 11291 Management Consulting
- 11292 Machining
- 11293 Metallurgical Consulting
- 11294 Patinating
- 11295 Human Resources Services
- 11296 Personnel Consulting
- 11298 Process Optimization
- 11299 Testing Status and Safety Labels
- 11300 Rationalization
- 11303 Recruitment
- 11305 Centrifugal Casting Engineering
- 11320 Castings Machining
- 11325 Steel Melting Consulting
- 11330 Technical Translation and Documentation
- 11336 Environmental Protection Management Systems (Environmental Audits)
- 11340 Environmental Consulting

11342 Management Consulting
11343 Leasing of Industrial
Vacuum Cleaners
11345 Heat Treatment
11346 Associations
11360 Material Consulting
11370 Material Advices
11380 Time Studies
11382 Carving

28. Castings

11387 Aluminium Casting
11389 ADI
11390 Aluminium Pressure
Diecasting
11400 Aluminium Permanent
Molding (Gravity
Diecasting)
11410 Aluminium Sand Casting
11420 Billet Casting
11430 Cast Carbon Steel, Alloy
and High-alloy Cast
Steel
11440 Pressure Diecasting
11450 High-grade Investment
Cast Steel
11460 High-grade Steel
Casting
11470 High-grade Centrifugal
Cast Steel
11472 Ingot Casting
11480 Castings
11485 Rolled Wire
11489 Grey Cast Iron
11490 Large-size Grey Iron
Castings
11492 Direct Chill Casting
11496 Art Casting
11498 Light Metal Casting
11499 Magnesium Pressure
Diecasting
11501 Brass Pressure
Diecasting
11510 Non-ferrous Metal Sand
Casting
11520 Prototype Casting
11530 Centrifugal Casting
11540 Spheroidal Graphite
Cast Iron
11550 Continuously Cast
Material
11552 Thixoforming
11555 Full Mould (lost-foam)
Casting
11558 Rolls

11560 Zinc Pressure
Diecasting
11570 Cylinder Pipes and
Cylinder Liners

29. By-Products

11580 Sporting Field Sands

30. Data Processing Technology

11700 Mold Filling and
Solidification Simulation
11800 Simulation Programmes
for Foundry Processes
11820 Software for Foundries

31. Foundries

11850 Foundries, in general

31.01 Iron, Steel, and Malleable-Iron Foundries

11855 Iron Foundries
11856 Steel Foundries
11857 Malleable-Iron
Foundries

31.02 NFM Foundries

11860 Heavy Metals Foundries
11861 Die Casting Plants
11862 Light Metal Casting
Plants

