

# CPC COOPERATIVE PATENT CLASSIFICATION

## F MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING (NOTE omitted)

### LIGHTING; HEATING

## F27 FURNACES; KILNS; OVENS; RETORTS (NOTES omitted)

## F27B FURNACES, KILNS, OVENS OR RETORTS IN GENERAL; OPEN SINTERING OR LIKE APPARATUS

### WARNING

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

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| <a href="#">F27B 1/09</a>                               | covered by | <a href="#">F27B 1/08</a>                              |
| <a href="#">F27B 5/05</a>                               | covered by | <a href="#">F27B 5/04</a>                              |
| <a href="#">F27B 14/16</a> , <a href="#">F27B 14/18</a> | covered by | <a href="#">F27B 14/0806</a>                           |
| <a href="#">F27B 21/08</a> - <a href="#">F27B 21/14</a> | covered by | <a href="#">F27D 3/00</a> , <a href="#">F27D 21/00</a> |

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| <b>1/00</b> | <b>Shaft or like vertical or substantially vertical furnaces</b>   | 3/06        | • with movable working chambers or hearths, e.g. tiltable {, oscillating or describing a composed movement}   |
| 1/005       | • {wherein no smelting of the charge occurs, e.g. calcining or sintering furnaces}   | 3/065       | • • {tiltable}  |
| 1/02        | • with two or more shafts or chambers, e.g. multi-storey   | 3/08        | • heated electrically, with or without any other source of heat   |
| 1/025       | • • {with fore-hearth}   | 3/085       | • • {Arc furnaces}  |
| 1/04        | • • Combinations or arrangements of shafts   | 3/10        | • Details, accessories or equipment, e.g. dust-collectors, specially adapted for hearth-type furnaces   |
| 1/06        | • of other than up-draught type  |             |   |
| 1/08        | • heated otherwise than by solid fuel mixed with charge  | 3/105       | • • {Slag chamber}  |
| 1/10        | • Details, accessories or equipment specially adapted for furnaces of these types  | 3/12        | • • Working chambers or casings; Supports therefor  |
| 1/12        | • • Shells or casings; Supports therefor   | 2003/125    | • • • {Hearths}   |
| 1/14        | • • • Arrangements of linings  | 3/14        | • • • Arrangements of linings   |
| 1/16        | • • Arrangements of tuyeres  | 3/16        | • • • Walls; Roofs  |
| 1/18        | • • Arrangements of dust collectors  | 2003/165    | • • • • {Roofs}   |
| 1/20        | • • Arrangements of devices for charging   | 3/18        | • • Arrangements of devices for charging  |
| 1/21        | • • Arrangements of devices for discharging  | 3/183       | • • • {Charging of arc furnaces vertically through the roof, e.g. in three points}  |
| 1/22        | • • Arrangements of heat-exchange apparatus  | 3/186       | • • • • {Charging in a vertical chamber adjacent to the melting chamber}  |
| 1/24        | • • Cooling arrangements   |             |   |
| 1/26        | • • Arrangements of controlling devices  | 3/19        | • • Arrangements of devices for discharging   |
| 1/28        | • • Arrangements of monitoring devices, of indicators, of alarm devices  | 3/20        | • • Arrangements of heating devices   |
|             |  | 3/205       | • • • {Burners}   |
| <b>3/00</b> | <b>Hearth-type furnaces, e.g. of reverberatory type (<a href="#">F27B 9/00</a>, <a href="#">F27B 11/00</a>, <a href="#">F27B 13/00</a>, <a href="#">F27B 14/00</a>, <a href="#">F27B 15/00</a>, <a href="#">F27B 21/00</a> take precedence); Electric arc furnaces {; Tank furnaces}</b> | 3/22        | • • Arrangements of air or gas supply devices   |
| 3/002       | • {Siemens-Martin type furnaces}   | 3/225       | • • • {Oxygen blowing}  |
| 3/005       | • • {Port construction}  | 3/24        | • • Cooling arrangements  |
| 3/007       | • • • {Removable burner head}  | 3/26        | • • Arrangements of heat-exchange apparatus   |
| 3/02        | • of single-chamber fixed-hearth type  | 3/263       | • • • {Regenerators}  |
| 3/04        | • of multiple-hearth type; of multiple-chamber type; Combinations of hearth-type furnaces  | 3/266       | • • • • {Exhaust gases reversing flow devices}  |
| 3/045       | • • {Multiple chambers, e.g. one of which is used for charging}  | 3/28        | • • Arrangement of controlling, monitoring, alarm or the like devices   |
|             |  | <b>5/00</b> | <b>Muffle furnaces; Retort furnaces; Other furnaces in which the charge is held completely isolated (furnaces through which the charge is moved mechanically or in which the charge moves by gravity <a href="#">F27B 9/00</a>)</b> |
|             |  | 5/02        | • of multiple-chamber type  |

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| 5/04        | . adapted for treating the charge in vacuum or special atmosphere   | 7/162     | . . . . {the projections consisting of separate lifting elements, e.g. lifting shovels}              |
| 5/06        | . Details, accessories or equipment specially adapted for furnaces of these types   | 2007/163  | . . . . {using only a ring of lifting elements to lift the charge}                                   |
| 2005/062    | . . {Cooling elements}  | 2007/165  | . . . . {forming a helical lifting projection}   |
| 2005/064    | . . . {disposed in the furnace, around the chamber, e.g. coils}   | 7/166     | . . . {the means comprising chains}  |
| 2005/066    | . . . {disposed around the fan}   | 7/167     | . . . {the means comprising partitions}  |
| 2005/068    | . . . {for external cooling}  | 2007/168  | . . . . {Annular partition}  |
| 5/08        | . . Arrangements of linings   | 7/18      | . . the means being movable within the drum  |
| 5/10        | . . Muffles   | 7/20      | . Details, accessories or equipment specially adapted for rotary-drum furnaces                       |
| 5/12        | . . Arrangement of devices for charging   | 2007/2008 | . . {Devices for reintroducing dust in the drum}   |
| 5/13        | . . Arrangement of devices for discharging  | 7/2016    | . . {Arrangements of preheating devices for the charge}  |
| 5/14        | . . Arrangements of heating devices   | 7/2025    | . . . {consisting of a single string of cyclones}  |
| 2005/143    | . . . {Heating rods disposed in the chamber}  | 7/2033    | . . . . {with means for precalcining the raw material}   |
| 2005/146    | . . . . {the heating rods being in the tubes which conduct the heating gases}   | 7/2041    | . . . {consisting of at least two strings of cyclones with two different admissions of raw material} |
| 5/16        | . . Arrangements of air or gas supply devices   | 7/205     | . . . . {with precalcining means on the string supplied with exhaust gases from the cooler}          |
| 2005/161    | . . . {Gas inflow or outflow}   | 7/2058    | . . . . {with precalcining means on each string}   |
| 2005/162    | . . . . {through closable or non-closable openings of the chamber walls}  | 7/2066    | . . . {comprising a band transporter}  |
| 2005/163    | . . . . {Controlled openings, e.g. orientable}  | 7/2075    | . . {Removing incrustations}   |
| 2005/164    | . . . . {Air supply through a set of tubes with openings}   | 7/2083    | . . {Arrangements for the melting of metals or the treatment of molten metals}                       |
| 2005/165    | . . . . {Controlled tubes, e.g. orientable or with closable openings}   | 2007/2091 | . . {Means for eliminating compounds from gases by condensation, e.g. alkali metals}                 |
| 2005/166    | . . . {Means to circulate the atmosphere}   | 7/22      | . . Rotary drums; Supports therefor  |
| 2005/167    | . . . . {the atmosphere being recirculated through the treatment chamber by a turbine}  | 7/2206    | . . . {Bearing rings}  |
| 2005/168    | . . . . {by more than one turbine}  | 2007/2213 | . . . . {mounted floatingly on the drum}   |
| 2005/169    | . . . . {the atmosphere being continuously renewed by exterior means}   | 2007/222  | . . . . {the mounting comprising radially resilient elements, e.g. springs}                          |
| 5/18        | . . Arrangement of controlling, monitoring, alarm or like devices   | 2007/2226 | . . . . {the mounting comprising elements to maintain the ring between series of abutments}          |
| <b>7/00</b> | <b>Rotary-drum furnaces, i.e. horizontal or slightly inclined</b>   | 2007/2233 | . . . . {the ring being fixed to the drum, e.g. welded}  |
| 2007/005    | . {for the treatment of slurries or wet materials}  | 7/224     | . . . {Discharge ends}   |
| 7/02        | . of multiple-chamber or multiple-drum type   | 2007/2246 | . . . {Support rollers}  |
| 2007/022    | . . {the drum having a non-uniform section along its length}  | 2007/2253 | . . . . {mounted movable, e.g. resiliently on the ground}  |
| 2007/025    | . . {with different chambers, e.g. treatment zones}   | 2007/226  | . . . . {constituted of series of two rollers mounted on tiltable support along the drum}            |
| 2007/027    | . . {with more than one drum}   | 2007/2266 | . . . . {the mounting allowing a movement of the rollers support in a horizontal plane}              |
| 7/04        | . . with longitudinal divisions   | 2007/2273 | . . . . {with arrangements, e.g. rollers, to maintain the drum against longitudinal movement}        |
| 2007/041    | . . . {Longitudinal tubes}  | 2007/228  | . . . . {comprising rollable bodies}   |
| 2007/043    | . . . {the partition being a cylinder, coaxial to the rotary drum, defining two chambers}   | 2007/2286 | . . . . {supporting the drum directly, without the use of a bearing ring}                            |
| 2007/045    | . . . . {the charge going in one direction in one chamber, then after a turn coming back in the other direction in the other chamber} | 2007/2293 | . . . {the furnace being suspended}  |
| 2007/046    | . . . {Radial partitions}   | 7/24      | . . . Seals between rotary and stationary parts  |
| 2007/048    | . . . . {defining an helical chamber}   | 7/26      | . . Drives   |
| 7/06        | . adapted for treating the charge in vacuum or special atmosphere   | 2007/261  | . . . {working with a ring embracing the drum}   |
| 7/08        | . externally heated   | 2007/262  | . . . . {A gear ring combined with a dented wheel drive}   |
| 7/10        | . internally heated, e.g. by means of passages in the wall  | 2007/263  | . . . . {A gear ring combined with a ram drive}  |
| 7/12        | . tiltable  | 2007/265  | . . . . {the ring being mounted floatingly}  |
| 7/14        | . with means for agitating or moving the charge   | 2007/266  | . . . . {the ring being a bearing ring}  |
| 7/16        | . . the means being fixed relatively to the drum, {e.g. composite means} (F27B 7/04 takes precedence)                                 | 2007/267  | . . . . {A gear ring combined with a chain drive}  |
| 7/161       | . . . {the means comprising projections jutting out from the wall}  | 2007/268  | . . . {Details of the motor or the pinions}  |

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| 7/28        | . . Arrangements of linings   | 9/042    | . . {Vacuum furnaces}   |
| 7/30        | . . Arrangements of partitions  | 9/045    | . . {Furnaces with controlled atmosphere}   |
| 7/32        | . . Arrangement of devices for charging   | 9/047    | . . . {the atmosphere consisting of protective gases}   |
| 7/3205      | . . . {Charging}  | 9/06     | . heated without contact between combustion gases and charge; electrically heated   |
| 2007/3211   | . . . . {at the open end of the drum}   | 9/061    | . . {with at least two longitudinal chambers carrying combustion gases, i.e. of the Dressler type}  |
| 2007/3217   | . . . . . {axially, optionally at some distance in the kiln}  | 9/062    | . . {electrically heated}   |
| 2007/3223   | . . . . . {the charging device being movable axially, e.g. reciprocable}  | 9/063    | . . . {Resistor heating, e.g. with resistors also emitting IR rays}   |
| 2007/3229   | . . . . . {via a centrifugal device}  | 9/065    | . . . . {the resistance being transported by the conveyor}  |
| 2007/3235   | . . . . . {the introducing device comprising a spray or a lance}  | 9/066    | . . . {heated by lamps}   |
| 2007/3241   | . . . . . {in the flame of the burner}  | 9/067    | . . . {heated by induction}   |
| 2007/3247   | . . . . {through a lateral opening in the drum}   | 9/068    | . . {heated by radiant tubes, the tube being heated by a hot medium, e.g. hot gases}  |
| 2007/3252   | . . . . . {with lifting scoops attached to the drum}  | 9/08     | . . heated through chamber walls  |
| 2007/3258   | . . . . {at the open end of the drum}   | 9/082    | . . . {Muffle furnaces}   |
| 2007/3264   | . . . . . {using special discharge means located around the discharge end, e.g. lifting scoops or a transversal annular partition}  | 9/084    | . . . . {the muffle being fixed and in a single piece}  |
| 2007/327    | . . . . {centrifugally through lateral openings in the drum}  | 9/086    | . . . . {with two or more fixed muffles}  |
| 2007/3276   | . . . . {with a collector means extending longitudinally into the drum}   | 9/088    | . . . . {Series of separate muffles conveyed through the furnace}   |
| 2007/3282   | . . . {Details}   | 9/10     | . . heated by hot air or gas  |
| 2007/3288   | . . . . {Sieves or grading means}   | 9/12     | . with special arrangements for preheating or cooling the charge  |
| 2007/3294   | . . . . {Means to fluidise the charge in the air}   | 2009/122 | . . {Preheating}  |
| 7/33        | . . Arrangement of devices for discharging  | 2009/124 | . . {Cooling}   |
| 7/34        | . . Arrangements of heating devices   | 2009/126 | . . . {involving the circulation of cooling gases, e.g. air}  |
| 7/36        | . . Arrangements of air or gas supply devices   | 2009/128 | . . . . {the gases being further utilised as oxidants in the burners}   |
| 7/362       | . . . {Introducing gas into the drum axially or through the wall}   | 9/14     | . characterised by the path of the charge during treatment; characterised by the means by which the charge is moved during treatment (for treating continuous lengths of work <a href="#">F27B 9/28</a> ) |
| 2007/365    | . . . . {longitudinally}  | 9/142    | . . {the charge moving along a vertical axis}   |
| 2007/367    | . . . . {transversally through the wall of the drum}  | 9/145    | . . {the charge moving along a serpentine path}   |
| 7/38        | . . Arrangements of cooling devices   | 9/147    | . . {the charge moving on an inclined floor}  |
| 7/383       | . . . {Cooling devices for the charge}  | 9/16     | . . the charge moving in a circular or arcuate path   |
| 7/386       | . . . . {Rotary-drum cooler}  | 9/18     | . . . under the action of scrapers or pushers   |
| 7/40        | . . . Planetary coolers   | 9/185    | . . . . {multiple hearth type furnaces}   |
| 7/42        | . . Arrangement of controlling, monitoring, alarm or like devices   | 9/20     | . . the charge moving in a substantially straight path  |
| <b>9/00</b> | <b>Furnaces through which the charge is moved mechanically, e.g. of tunnel type (rotary-drum furnaces with means for agitating or moving the charge <a href="#">F27B 7/14</a>); Similar furnaces in which the charge moves by gravity</b> | 9/201    | . . . {walking beam furnace}  |
| 9/02        | . of multiple-track type; of multiple-chamber type; Combinations of furnaces  | 9/202    | . . . . {Conveyor mechanisms therefor}  |
| 9/021       | . . {having two or more parallel tracks}  | 9/203    | . . . . . {having ramps ( <a href="#">F27B 9/206 takes precedence</a> )}  |
| 9/022       | . . . {With two tracks moving in opposite directions}   | 9/205    | . . . . . {having excentrics or lever arms ( <a href="#">F27B 9/206 takes precedence</a> )}   |
| 9/023       | . . . . {with a U turn at one end}  | 9/206    | . . . . . {consisting of a single central beam}   |
| 9/024       | . . . . . {with superimposed tracks}  | 9/207    | . . . . . {consisting of two or more conveyors}   |
| 9/025       | . . . {having two or more superimposed tracks ( <a href="#">F27B 9/024 takes precedence</a> )}  | 9/208    | . . . . {the workpieces being rotated during their advance}   |
| 2009/026    | . . {Two or more conveyors, e.g. mounted successively}  | 9/22     | . . . {on rails, e.g.} under the action of scrapers or pushers ( <a href="#">F27B 9/26 takes precedence</a> )   |
| 2009/027    | . . . {working in parallel}   | 9/222    | . . . . {the path comprising a section specially adapted for effecting equalisation of the temperature of the charge}   |
| 9/028       | . . {Multi-chamber type furnaces, ( <a href="#">F27B 9/029 takes precedence</a> )}  | 9/225    | . . . . {the charge being subjected to an additional manipulation along the path}   |
| 9/029       | . . {Multicellular type furnaces constructed with add-on modules}   | 9/227    | . . . . {with rotation of the charge ( <a href="#">F27B 9/147 takes precedence</a> )}   |
| 9/04        | . adapted for treating the charge in vacuum or special atmosphere   | 9/24     | . . . being carried by a conveyor   |

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| 9/2407    | . . . . {the conveyor being constituted by rollers (roller hearth furnace)}                                   | 9/34         | . . . Arrangements of linings   |
| 9/2415    | . . . . {the charge rotating about an axis transversal to the axis of advancement of the charge}              | 9/36         | . . Arrangements of heating devices   |
| 9/2423    | . . . . {the charge rotating about an axis parallel to the axis of advancement of the charge}                 | 2009/3607    | . . . {Heaters located above the track of the charge}   |
| 9/243     | . . . . {Endless-strand conveyor}   | 2009/3615    | . . . . {Burner in the ceiling directed vertically downwards}   |
| 2009/2438 | . . . . {with means to transfer the heat from the outgoing band to the incoming band}                         | 2009/3623    | . . . {Heaters located under the track}   |
| 2009/2446 | . . . . {with means to control the tension of the band}   | 2009/363     | . . . . {Burners in the hearth directed towards the ceiling}  |
| 9/2453    | . . . . {Vibrating conveyor (shaker hearth furnace)}  | 2009/3638    | . . . {Heaters located above and under the track}   |
| 9/2461    | . . . . {the charge being suspended from the conveyor}  | 2009/3646    | . . . {Heating the ceiling or the walls for a reverberatory effect}   |
| 9/2469    | . . . . {the conveyor being constituted by rollable bodies}   | 2009/3653    | . . . {Preheated fuel}  |
| 9/2476    | . . . . {the conveyor being constituted by air cushion}   | 2009/3661    | . . . . {preheated with the exhaust gases}  |
| 2009/2484 | . . . . {the conveyor being a helical device}   | 2009/3669    | . . . . {preheated with the gases of the cooling zone}  |
| 2009/2492 | . . . . {the conveyor being constituted by series of little rams or ratchets, moving the charge along}        | 2009/3676    | . . . . {preheated with the gases of the preheating zone}   |
| 9/26      | . . . on or in trucks, sleds, or containers   | 2009/3684    | . . . {Combustion within a combustion chamber with outlets in the kiln chamber}   |
| 9/262     | . . . . {on or in trucks}   | 2009/3692    | . . . {The charge containing combustible materials}   |
| 2009/264  | . . . . {the truck carrying a partition}  | 9/38         | . . Arrangements of devices for charging  |
| 2009/266  | . . . . {the truck having conducts for guiding the oven atmosphere}   | 2009/382     | . . . {Charging}  |
| 2009/268  | . . . . . {through the structure of the car and through the charge}   | 2009/384     | . . . {Discharging}   |
| 9/28      | . for treating continuous lengths of work   | 2009/386     | . . . {Lateral intake or outtake}   |
| 9/30      | . Details, accessories or equipment specially adapted for furnaces of these types                             | 2009/388     | . . . . {Centrally in the lateral wall}   |
| 9/3005    | . . {arrangements for circulating gases}  | 9/39         | . . Arrangements of devices for discharging   |
| 9/3011    | . . . {arrangements for circulating gases transversally}  | 9/40         | . . Arrangements of controlling or monitoring devices   |
| 2009/3016 | . . . . {with arrangements to circulate gases through the charge}   | <b>11/00</b> | <b>Bell-type furnaces</b>   |
| 2009/3022 | . . . . {with arrangements to maintain oxidising reducing or neutral zones}                                   | <b>13/00</b> | <b>Furnaces with both stationary charge and progression of heating, e.g. of ring type or of the type in which a segmental kiln moves over a stationary charge</b> |
| 2009/3027 | . . . {Use of registers, partitions}  | 13/02        | . of multiple-chamber type with permanent partitions; Combinations of furnaces  |
| 2009/3033 | . . . {Fumes circulating in the same direction as the charge}   | 13/04        | . of single-chamber type with temporary partitions  |
| 2009/3038 | . . . {Fumes or gases alternatively changing their longitudinal direction}                                    | 13/06        | . Details, accessories or equipment specially adapted for furnaces of this type   |
| 9/3044    | . . {Furnace regenerators}  | 13/08        | . . Casings   |
| 2009/305  | . . {Particular conformation of the furnace}  | 13/10        | . . . Arrangements of linings   |
| 2009/3055 | . . . {Non-uniform section through the length of the furnace}   | 13/12        | . . Arrangements of heating devices   |
| 2009/3061 | . . . {Furnaces with longitudinal grooves}  | 13/14        | . . Arrangement of controlling, monitoring, alarm or like devices   |
| 2009/3066 | . . {Cooling the under-structure of the kiln, e.g. under the cars}  | <b>14/00</b> | <b>Crucible or pot furnaces</b>   |
| 2009/3072 | . . {Balancing the pressure between the upper part and the lower part of the kiln, above and under the track} | 2014/002     | . {Smelting process, e.g. sequences to melt a specific material}  |
| 9/3077    | . . {Arrangements for treating electronic components, e.g. semiconductors}                                    | 2014/004     | . . {Process involving a smelting step, e.g. vaporisation}  |
| 2009/3083 | . . {Arrangements to handle skid marks}   | 2014/006     | . . {involving a salt bath or help metal bath}  |
| 2009/3088 | . . {Drying arrangements}   | 2014/008     | . {Continuous casting}  |
| 2009/3094 | . . {Means to store a part of the charge in the furnace}  | 14/02        | . with tilting or rocking arrangements ( <a href="#">F27B 14/04 takes precedence</a> )  |
| 9/32      | . . Casings   | 14/04        | . adapted for treating the charge in vacuum or special atmosphere   |
|           |   | 2014/045     | . . {Vacuum}  |
|           |   | 14/06        | . heated electrically, e.g. induction crucible furnaces with or without any other source of heat ( <a href="#">F27B 14/04 takes precedence</a> )                  |
|           |   | 14/061       | . . {Induction furnaces}  |
|           |   | 14/063       | . . . {Skull melting type}  |
|           |   | 14/065       | . . . {Channel type}  |

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| 2014/066     | . . . {Construction of the induction furnace}  | 17/0033      | . . {the floor of the furnaces consisting of the support carrying the charge, e.g. car type furnaces}   |
| 2014/068     | . . {with the use of an electrode producing a current in the melt}   | 17/0041      | . . {specially adapted for burning bricks or pottery <a href="#">(F27B 17/0033 takes precedence)</a> }  |
| 14/08        | . Details specially adapted for crucible or pot furnaces   | 17/005       | . . . {with cylindrical chambers}   |
| 14/0806      | . . {Charging or discharging devices}  | 17/0058      | . . . . {with superposed cylindrical chambers}  |
| 2014/0812    | . . . {Continuously charging}  | 17/0066      | . . . {arrangement of the charge, e.g. bricks}  |
| 2014/0818    | . . . {Discharging}  | 17/0075      | . . . {Heating devices therefor}  |
| 2014/0825    | . . {Crucible or pot support}  | 17/0083      | . . {with means for circulating the atmosphere}   |
| 2014/0831    | . . . {Support or means for the transport of crucibles}  | 2017/0091    | . . {Series of chambers, e.g. associated in their use}  |
| 2014/0837    | . . {Cooling arrangements}   | 17/02        | . specially designed for laboratory use   |
| 2014/0843    | . . {Lining or casing}   | 17/025       | . . {for dental workpieces}   |
| 2014/085     | . . {Preheating of the charge}   | <b>19/00</b> | <b>Combinations of different kinds of furnaces that are not all covered by any single one of main groups <a href="#">F27B 1/00</a> - <a href="#">F27B 17/00</a></b> |
| 2014/0856    | . . . {Preheating of the crucible}   | 19/02        | . combined in one structure   |
| 2014/0862    | . . {Flux guides}  | 19/04        | . arranged for associated working   |
| 2014/0868    | . . {Magnetic shields}   | <b>21/00</b> | <b>Open or uncovered sintering apparatus; Other heat-treatment apparatus of like construction</b>   |
| 2014/0875    | . . {Two zones or chambers, e.g. one used for charging}  | 21/02        | . Sintering grates or tables  |
| 2014/0881    | . . {Two or more crucibles}  | 21/04        | . Sintering pots or sintering pans  |
| 2014/0887    | . . {Movement of the melt}   | 21/06        | . Endless-strand sintering machines   |
| 2014/0893    | . . {Heat-conductive material disposed on the surface of the melt}   |              |   |
| 14/10        | . . Crucibles  |              |   |
| 2014/102     | . . . {Form of the crucibles}  |              |   |
| 2014/104     | . . . {Crucible linings}   |              |   |
| 2014/106     | . . . {Ladles}   |              |   |
| 2014/108     | . . . {Cold crucibles (transparent to electromagnetic radiations)}   |              |   |
| 14/12        | . . . Covers therefor  |              |   |
| 14/14        | . . Arrangements of heating devices  |              |   |
| 14/143       | . . . {Heating of the crucible by convection of combustion gases}  |              |   |
| 2014/146     | . . . {Recuperation of lost heat, e.g. regenerators}   |              |   |
| 14/20        | . . Arrangement of controlling, monitoring, alarm or like devices  |              |   |
| <b>15/00</b> | <b>Fluidised-bed furnaces; Other furnaces using or treating finely-divided materials in dispersion</b>   |              |   |
| 15/003       | . {Cyclones or chain of cyclones}  |              |   |
| 15/006       | . {Equipment for treating dispersed material falling under gravity with ascending gases}   |              |   |
| 15/02        | . Details, accessories or equipment specially adapted for furnaces of these types  |              |   |
| 15/04        | . . Casings; Supports therefor   |              |   |
| 15/06        | . . . Arrangements of linings  |              |   |
| 15/08        | . . Arrangements of devices for charging   |              |   |
| 15/09        | . . Arrangements of devices for discharging  |              |   |
| 15/10        | . . Arrangements of air or gas supply devices  |              |   |
| 15/12        | . . Arrangements of dust collectors  |              |   |
| 15/14        | . . Arrangements of heating devices  |              |   |
| 15/16        | . . Arrangements of cooling devices  |              |   |
| 15/18        | . . Arrangements of controlling devices  |              |   |
| 15/20        | . . Arrangements of monitoring devices, of indicators, of alarm devices  |              |   |
| <b>17/00</b> | <b>Furnaces of a kind not covered by any of groups <a href="#">F27B 1/00</a> - <a href="#">F27B 15/00</a> (structural combinations of furnaces <a href="#">F27B 19/02</a>)</b> |              |   |
| 17/0008      | . {Open field furnace for burning bricks}  |              |   |
| 17/0016      | . {Chamber type furnaces}  |              |   |
| 17/0025      | . . {specially adapted for treating semiconductor wafers}  |              |   |