

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

Bakers' ovens; Machines or equipment for baking	<a href="#">A21B</a>
Furnaces specially adapted for glass manufacture	<a href="#">C03B 5/00</a>
Retorts	<a href="#">C10B 1/00</a>
Coke ovens with vertical chambers	<a href="#">C10B 3/00</a>
Coke ovens with horizontal chambers	<a href="#">C10B 5/00</a>
Coke ovens with mechanical conveying means for the raw material inside the oven	<a href="#">C10B 7/00</a>
Beehive ovens	<a href="#">C10B 9/00</a>
Coke ovens with inclined chambers	<a href="#">C10B 11/00</a>
Coke ovens with means for bringing and keeping the charge under mechanical pressure	<a href="#">C10B 13/00</a>
Other coke ovens	<a href="#">C10B 15/00</a>
Furnaces, kilns, ovens or retorts specially adapted for cracking hydrocarbons	<a href="#">C10G</a>
Furnaces, kilns, ovens or retorts for production of gases containing carbon monoxide and hydrogen from solid carbonaceous materials by partial oxidation processes involving oxygen or steam	<a href="#">C10J</a>
Blast furnaces	<a href="#">C21B 7/00</a>
Stoves for heating the blast in blast furnaces	<a href="#">C21B 9/00</a>
Manufacture of steel in converters	<a href="#">C21C 5/28</a>
General devices for heat treatment of ferrous or non-ferrous metals or alloys	<a href="#">C21D</a>
Furnaces for electroslog or arc remelting of metals	<a href="#">C22B 9/00</a>
Apparatus or furnaces for melting or fritting enamels	<a href="#">C23D 1/00</a>
Ovens specially adapted for firing enamels	<a href="#">C23D 9/00</a>

**Informative references**

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

Combustion apparatus	<a href="#">F23</a>
Heat-exchangers	<a href="#">F28D</a>
Electric heating	<a href="#">H05B</a>

**F27B 1/00****Shaft or like vertical or substantially vertical furnaces****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:*

Preheating, burning, calcining or cooling lime, magnesia or dolomite in shaft or vertical furnaces	<a href="#">C04B 2/12</a>
Making pig-iron in blast furnaces	<a href="#">C21B 5/00</a>
Blast furnaces	<a href="#">C21B 7/00</a>
Shaft furnaces for making pig-iron	<a href="#">C21B 11/02</a>

**F27B 1/14****Arrangements of linings****References****Informative references**

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

Linings for furnaces, kilns, ovens or retorts in general	<a href="#">F27D 1/00</a>
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**F27B 1/16****Arrangements of tuyeres****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:*

Tuyères for blast furnaces	<a href="#">C21B 7/16</a>
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**F27B 1/20****Arrangements of devices for charging****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:*

Bell-and-hopper arrangements for blast furnaces	<a href="#">C21B 7/18</a>
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**Informative references**

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

Devices for charging furnaces	<a href="#">F27D 3/00</a>
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**F27B 1/21****Arrangements of devices for discharging****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:

Devices for discharging from blast furnaces	<a href="#">C21B 7/14</a>
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**Informative references**

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

Devices for discharging from furnaces	<a href="#">F27D 3/00</a>
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**F27B 1/22****Arrangements of heat-exchange apparatus****References****Informative references**

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

Heat-exchangers in general	<a href="#">F28C</a> ; <a href="#">F28D</a>
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**F27B 1/24****Cooling arrangements****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:

Cooling devices for blast furnaces	<a href="#">C21B 7/10</a>
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**Informative references**

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

Cooling of furnaces or of charges therein	<a href="#">F27D 9/00</a>
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**F27B 1/26****Arrangements of controlling devices****References****Informative references**

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

Controlling devices for furnaces in details	<a href="#">F27D 19/00</a>
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**F27B 1/28****Arrangements of monitoring devices, of indicators, of alarm devices****References****Informative references**

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

Monitoring devices for furnaces in details	<a href="#">F27D 21/00</a>
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**F27B 3/00**

**Hearth-type furnaces, e.g. of reverberatory type ([F27B 9/00](#), [F27B 11/00](#), [F27B 13/00](#), [F27B 14/00](#), [F27B 15/00](#), [F27B 21/00](#) take precedence); Electric arc furnaces {; Tank furnaces}**

**References****Limiting references**

This place does not cover:

Furnaces through which the charge is moved mechanically, e.g. of tunnel type; Similar furnaces in which the charge moves by gravity	<a href="#">F27B 9/00</a>
Bell-type furnaces	<a href="#">F27B 11/00</a>
Furnaces with both stationary charge and progression of heating	<a href="#">F27B 13/00</a>
Crucible or pot furnaces	<a href="#">F27B 14/00</a>
Fluidised-bed furnaces; Other furnaces using or treating finely-divided materials in dispersion	<a href="#">F27B 15/00</a>
Open or uncovered sintering apparatus; Other heat-treatment apparatus of like construction	<a href="#">F27B 21/00</a>

**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:

Converters used in making steel	<a href="#">C21C 5/28</a>
Manufacturing of steel in electric furnaces	<a href="#">C21C 5/52</a>
Furnaces for general processes of refining metals	<a href="#">C22B 9/00</a>

**F27B 3/04**

**of multiple-hearth type; of multiple-chamber type; Combinations of hearth-type furnaces**

**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:*

Manufacture of steel in electrically heated multi-chamber furnace, a combination of electric furnaces or an electric furnace arranged for associated working with a non-electric furnace	<a href="#">C21C 5/5252</a>
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**Informative references**

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

Linings in general	<a href="#">F27D 1/00</a>
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**F27B 3/08**

**heated electrically, with or without any other source of heat**

**References****Informative references**

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

Heated by electric discharge in details	<a href="#">F27D 11/08</a>
Electric heating elements or systems for furnaces in details	<a href="#">F27D 99/0006</a>

**F27B 3/14**

**Arrangements of linings**

**References****Informative references**

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

Linings in general	<a href="#">F27D 1/00</a>
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**F27B 3/16**

**Walls; Roofs**

**References****Informative references**

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

Linings and walls in details	<a href="#">F27D 1/00</a>
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Roofs and crowns in details	<a href="#">F27D 1/02</a>
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## F27B 3/18

### Arrangements of devices for charging

#### 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:*

Charging of electric furnaces used in the manufacture of steel	<a href="#">C21C 5/527</a>
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##### Informative references

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

Devices for charging furnaces	<a href="#">F27D 3/00</a>
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## F27B 3/19

### Arrangements of devices for discharging

#### References

##### Informative references

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

Devices for discharging in details	<a href="#">F27D 3/00</a>
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## F27B 3/20

### Arrangements of heating devices

#### 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:*

Burners in electric arc furnaces used in the manufacture of steel	<a href="#">C21C 5/5217</a>
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##### Informative references

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

Burners	<a href="#">F27B 3/205</a>
Heating elements or systems for furnaces, kilns, ovens or retorts	<a href="#">F27D 99/0001</a>
Electric heating	<a href="#">H05B</a>

**F27B 3/22****Arrangements of air or gas supply devices****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:*

Lances or injectors for converters used in the manufacture of steel	<a href="#">C21C 5/4606</a>
Injectors for electric arc furnaces used in the manufacture of steel	<a href="#">C21C 5/5217</a>

**Informative references**

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

Oxygen blowing	<a href="#">F27B 3/225</a>
Introducing a fluid jet or current into the charge in details	<a href="#">F27D 3/16</a>

**F27B 3/24****Cooling arrangements****References****Informative references**

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

Cooling of furnaces or charges therein in details	<a href="#">F27D 9/00</a>
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**F27B 3/26****Arrangements of heat-exchange apparatus****References****Informative references**

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

Heat-exchange apparatus	<a href="#">F28D 17/00</a>
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**F27B 3/28****Arrangement of controlling, monitoring, alarm or the like devices****References****Informative references**

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

Controlling devices for furnaces in details	<a href="#">F27D 19/00</a>
Monitoring devices for furnaces in details	<a href="#">F27D 21/00</a>

**F27B 5/00**

**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 [F27B 9/00](#))**

**References****Limiting references**

*This place does not cover:*

Furnaces through which the charge is moved mechanically or in which the charge moves by gravity	<a href="#">F27B 9/00</a>
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**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:*

Muffle or retort furnaces for heat treatment of particular metallic articles, e.g. annealing, hardening, quenching or tempering	<a href="#">C21D 9/0043</a>
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**F27B 5/04**

**adapted for treating the charge in vacuum or special atmosphere**

**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:*

Furnaces for heat treatment of ferrous or non-ferrous metals or alloys	<a href="#">C21D 9/00</a>
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**Informative references**

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

Methods of heat treatment of ferrous or non-ferrous metals or alloys in inert gas, controlled atmosphere, vacuum or pulverulent material	<a href="#">C21D 1/74</a>
Forming, maintaining or circulating atmosphere in heating chambers in details	<a href="#">F27D 7/00</a>

**F27B 5/08**

**Arrangements of linings**

**References****Informative references**

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

Linings in general	<a href="#">F27D 1/00</a>
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**F27B 5/12****Arrangement of devices for charging****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:*

Charging particular metallic articles in heat-treatment furnaces	<a href="#">C21D 9/0018</a>
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**Informative references**

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

Devices for charging furnaces	<a href="#">F27D 3/00</a>
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**F27B 5/13****Arrangement of devices for discharging****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:*

Discharging particular metallic articles from heat-treatment furnaces	<a href="#">C21D 9/0018</a>
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**Informative references**

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

Devices for discharging from furnaces	<a href="#">F27D 3/00</a>
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**F27B 5/14****Arrangements of heating devices****References****Informative references**

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

Methods of heating during heat treatment of ferrous or non-ferrous metals or alloys	<a href="#">C21D 1/34</a>
Arrangement of elements for electric heating in or on furnaces	<a href="#">F27D 11/00</a>
Heating elements or systems for furnaces, kilns, ovens or retorts	<a href="#">F27D 99/0001</a>

**F27B 5/16****Arrangements of air or gas supply devices****References****Informative references**

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

Methods of heat treatment of ferrous or non-ferrous metals or alloys in inert gas, controlled atmosphere, vacuum or pulverulent material	<a href="#">C21D 1/74</a>
Supplying steam, vapour, gases or liquids in heating chambers	<a href="#">F27D 7/02</a>

**F27B 5/18****Arrangement of controlling, monitoring, alarm or like devices****References****Informative references**

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

Process control or regulation for heat treatments of ferrous or non-ferrous metals or alloys	<a href="#">C21D 11/00</a>
Arrangement of controlling devices for furnaces	<a href="#">F27D 19/00</a>
Arrangement of monitoring devices for furnaces	<a href="#">F27D 21/00</a>

**F27B 7/00****Rotary-drum furnaces, i.e. horizontal or slightly inclined****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:*

Rotary retorts	<a href="#">C10B 1/10</a>
Destructive distillation of solid carbonaceous material with indirect heating in rotary ovens or retorts	<a href="#">C10B 47/30</a>
Making pig-iron in rotary kilns	<a href="#">C21B 11/06</a>
Making spongy iron or liquid steel, by direct processes in rotary furnaces	<a href="#">C21B 13/08</a>
Rotary furnaces with horizontal or slightly inclined axis for heat treatment of ferrous or non-ferrous metals or alloys	<a href="#">C21D 9/0031</a>

**Informative references**

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

Burning or melting of hydraulic cements	<a href="#">C04B 7/44</a>
Incineration of waste in rotating drums	<a href="#">F23G 5/20</a>

**F27B 7/06****adapted for treating the charge in vacuum or special atmosphere****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Methods of heat treatment of ferrous or non-ferrous metals or alloys in inert gas, controlled atmosphere, vacuum or pulverulent material	<a href="#">C21D 1/74</a>
Forming or maintaining special atmospheres or vacuum within heating chambers	<a href="#">F27D 7/06</a>

**F27B 7/20****Details, accessories or equipment specially adapted for rotary-drum furnaces****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Burning or melting of hydraulic cements	<a href="#">C04B 7/44</a> , <a href="#">C04B 7/43</a>
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**F27B 7/24****Seals between rotary and stationary parts****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Seals for furnaces in details	<a href="#">F27D 99/0073</a>
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**F27B 7/28****Arrangements of linings****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Linings for furnaces in details	<a href="#">F27D 1/0003</a>
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**F27B 7/30****Arrangements of partitions****References****Informative references**

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

Partitions for furnaces in details	<a href="#">F27D 99/007</a>
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**F27B 7/32****Arrangement of devices for charging****References****Informative references**

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

Devices for charging for furnaces in details	<a href="#">F27D 3/00</a>
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**F27B 7/33****Arrangement of devices for discharging****References****Informative references**

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

Devices for charging of furnaces in details	<a href="#">F27D 3/00</a>
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**F27B 7/38****Arrangements of cooling devices****Definition statement**

*This place covers:*

Arrangements of cooling devices

**References****Informative references**

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

Cooling of furnaces or charges therein in details	<a href="#">F27D 9/00</a>
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**F27B 7/40****Planetary coolers****Definition statement**

*This place covers:*

Planetary coolers

**References****Informative references**

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

Cooling of furnaces or charges therein in details	<a href="#">F27D 9/00</a>
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**F27B 7/42****Arrangement of controlling, monitoring, alarm or like devices****References****Informative references**

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

Controlling devices for furnaces in details	<a href="#">F27D 19/00</a>
Monitoring devices for furnaces in details	<a href="#">F27D 21/00</a>

**F27B 9/00**

**Furnaces through which the charge is moved mechanically, e.g. of tunnel type (rotary-drum furnaces with means for agitating or moving the charge [F27B 7/14](#)); Similar furnaces in which the charge moves by gravity**

**References****Limiting references**

*This place does not cover:*

Rotary-drum furnaces with means for agitating or moving the charge	<a href="#">F27B 7/14</a>
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**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:*

Furnaces for heat treatment of ferrous or non-ferrous metals or alloys	<a href="#">C21D 9/00</a>
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**F27B 9/04****adapted for treating the charge in vacuum or special atmosphere****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:*

Continuous furnaces for heat treating metal strip or wire with a controlled atmosphere or vacuum	<a href="#">C21D 9/561</a>
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**Informative references**

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

Method of heat treatment of ferrous or non-ferrous metals or alloys in inert gas, controlled atmosphere, vacuum or pulverulent material	<a href="#">C21D 1/74</a>
Forming or maintaining special atmospheres or vacuum within heating chambers	<a href="#">F27D 7/06</a>

**F27B 9/06****heated without contact between combustion gases and charge; electrically heated****References****Informative references**

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

Method of heating during heat treatment of ferrous or non-ferrous metals or alloys	<a href="#">C21D 1/34</a>
Arrangement of elements for electric heating in or on furnaces	<a href="#">F27D 11/00</a>
Heating elements or systems for furnaces, kilns, ovens or retorts	<a href="#">F27D 99/0001</a>

**F27B 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 [F27B 9/28](#))****References****Limiting references**

*This place does not cover:*

Furnaces for treating continuous lengths of work	<a href="#">F27B 9/28</a>
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**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:*

Furnaces in which the charge is moving up or down	<a href="#">C21D 9/005</a>
Furnaces for heat treatment through which the charge is moved in a horizontal straight path	<a href="#">C21D 9/0056</a>

**Informative references**

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

Travelling or movable supports or containers for the charge	<a href="#">F27D 3/12</a>
Furnace cars	<a href="#">F27D 3/123</a>

**F27B 9/20**

**the charge moving in a substantially straight path**

**Definition statement**

*This place covers:*

Furnaces through which the charge is moved mechanically, e.g. tunnel furnaces.

**F27B 9/24**

**being carried by a conveyor**

**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:*

Rolls in heat-treating furnaces	<a href="#">C21D 9/0012</a>
Rolls in continuous heat-treating furnaces	<a href="#">C21D 9/563</a>

**Informative references**

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

Transport by conveyors in general	<a href="#">B65G</a>
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**F27B 9/26**

**on or in trucks, sleds, or containers**

**References****Informative references**

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

Travelling or movable supports or containers for the charge; Furnace cars	<a href="#">F27D 3/12</a> ; <a href="#">F27D 3/123</a>
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**F27B 9/34****Arrangements of linings****References****Informative references**

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

Linings for furnaces in details	<a href="#">F27D 1/0003</a>
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**F27B 9/36****Arrangements of heating devices****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:*

Continuous furnaces for heat treating metal strip or wire	<a href="#">C21D 9/56</a>
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**Informative references**

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

Heating elements or system for furnaces, kilns, ovens or retorts	<a href="#">F27D 99/0001</a>
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**F27B 9/38****Arrangements of devices for charging****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:*

Charging particular metallic articles in heat-treatment furnaces	<a href="#">C21D 9/0018</a>
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**Informative references**

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

Devices for charging of furnaces	<a href="#">F27D 3/00</a>
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**F27B 9/39****Arrangements of devices for discharging****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:*

Discharging particular metallic articles from heat-treatment furnaces	<a href="#">C21D 9/0018</a>
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**Informative references**

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

Devices for discharging of furnaces	<a href="#">F27D 3/00</a>
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**F27B 9/40****Arrangements of controlling or monitoring devices****Definition statement**

*This place covers:*

Arrangement of controlling or monitoring devices

**References****Informative references**

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

Process control or regulation for heat treatments of ferrous or non-ferrous metals or alloys	<a href="#">C21D 11/00</a>
Arrangement of controlling devices for furnaces	<a href="#">F27D 19/00</a>
Arrangement of monitoring devices for furnaces	<a href="#">F27D 21/00</a>

**F27B 11/00****Bell-type furnaces****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:*

Bell-type furnaces for treating metal strips or wire	<a href="#">C21D 9/663</a>
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**F27B 13/10****Arrangements of linings****References****Informative references**

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

Linings for furnaces in details	<a href="#">F27D 1/0003</a>
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**F27B 13/12****Arrangements of heating devices****References****Informative references**

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

Heating elements or systems in details; especially burners	<a href="#">F27D 99/0001</a> ; <a href="#">F27D 99/0033</a>
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**F27B 13/14****Arrangement of controlling, monitoring, alarm or like devices****References****Informative references**

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

Controlling devices for furnaces in details	<a href="#">F27D 19/00</a>
Monitoring devices for furnaces in details	<a href="#">F27D 21/00</a>

**F27B 14/00****Crucible or pot furnaces****References****Informative references**

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

Single crystal growth	<a href="#">C30B</a>
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**F27B 14/04**

adapted for treating the charge in vacuum or special atmosphere

**References****Informative references**

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

Forming, maintaining or circulating atmosphere in heating chambers in details	<a href="#">F27D 7/00</a> ; <a href="#">F27D 7/02</a> ; <a href="#">F27D 7/06</a>
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**F27B 14/06**

heated electrically, e.g. induction crucible furnaces with or without any other source of heat ([F27B 14/04](#) takes precedence)

**References****Informative references**

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

Electric heating elements or systems	<a href="#">F27D 99/0033</a>
Electric heating elements in general	<a href="#">H05B</a>

**F27B 14/10**

**Crucibles**

**References****Informative references**

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

Crucibles for single crystal growth	<a href="#">C30B 13/14</a>
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**F27B 14/12**

**Covers therefor**

**References****Informative references**

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

Covers for furnaces in details	<a href="#">F27D 1/18</a> ; <a href="#">F27D 1/1808</a>
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**F27B 14/14****Arrangements of heating devices****References****Informative references**

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

Heating elements or systems for furnaces in details	<a href="#">F27D 99/0001</a> ; <a href="#">F27D 99/0033</a> ; <a href="#">F27D 99/0035</a>
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**F27B 14/20****Arrangement of controlling, monitoring, alarm or like devices****References****Informative references**

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

Controlling devices for furnaces in details	<a href="#">F27D 19/00</a>
Monitoring devices for furnaces in details	<a href="#">F27D 21/00</a>

**F27B 15/00****Fluidised-bed furnaces; Other furnaces using or treating finely-divided materials in dispersion****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:*

Making spongy iron or liquid steel, by direct processes in fluidised bed furnaces or apparatus containing a dispersion of the material	<a href="#">C21B 13/0033</a>
Heating metallic strips in fluidised beds	<a href="#">C21D 9/567</a>

**Informative references**

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

General apparatuses for carrying out chemical or physical processes in a fluidised-bed reactor	<a href="#">B01J 8/24</a>
Combustion apparatus in which combustion takes place in a fluidised bed of fuel or other particles	<a href="#">F23C 10/00</a>
Heat-exchange apparatus using fluidised bed	<a href="#">F28D 13/00</a>

**F27B 15/06****Arrangements of linings****References****Informative references**

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

Linings for furnaces in details	<a href="#">F27D 1/0003</a>
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**F27B 15/08****Arrangements of devices for charging****References****Informative references**

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

Devices for charging of furnaces in details	<a href="#">F27D 3/00</a>
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**F27B 15/09****Arrangements of devices for discharging****References****Informative references**

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

Devices for discharging of furnaces in details	<a href="#">F27D 3/00</a>
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**F27B 15/18****Arrangements of controlling devices****References****Informative references**

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

Controlling devices for furnaces in details	<a href="#">F27D 19/00</a>
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**F27B 15/20****Arrangements of monitoring devices, of indicators, of alarm devices****References****Informative references**

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

Monitoring devices for furnaces in details	<a href="#">F27D 21/00</a>
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## F27B 17/00

**Furnaces of a kind not covered by any of groups [F27B 1/00](#) - [F27B 15/00](#)  
(structural combinations of furnaces [F27B 19/02](#))**

### Definition statement

*This place covers:*

Types of furnaces not covered by any preceding group:

- open field furnaces for burning bricks;
- chamber type furnaces, e.g. specially adapted for treating semiconductor wafers or specially adapted for burning bricks or pottery;
- chamber type furnaces, where the floor consists of a support carrying the charge, e.g. car type furnaces;
- furnaces specially designed for laboratory use.

### References

#### Limiting references

*This place does not cover:*

Structural combinations of furnaces	<a href="#">F27B 19/02</a>
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#### 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:*

Furnace coilers; Hot coilers	<a href="#">C21D 9/68</a>
Furnace for ingots	<a href="#">C21D 9/70</a>

#### Informative references

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

Furnaces through which the charge is moved mechanically	<a href="#">F27B 9/02</a>
Apparatuses for treating semiconductors or wafers	<a href="#">H10P 72/00</a>

## F27B 17/02

**specially designed for laboratory use**

### Definition statement

*This place covers:*

Furnaces especially designed for laboratory use.

Furnaces for dental work-pieces

### References

#### Informative references

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

Devices for soldering, casting, moulding or melting dental prostheses	<a href="#">A61C 13/20</a>
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