SECTION C — CHEMISTRY; METALLURGY

C21 METALLURGY OF IRON

C21B MANUFACTURE OF IRON OR STEEL (preliminary treatment of ferrous ores or scrap C22B 1/00)

Note(s)

This subclass covers :
- the production of iron or steel from source materials, e.g. the production of pig-iron;
- apparatus specially adapted therefor, e.g. blast furnaces, air heaters (furnaces in general F27).

Subclass index

MAKING PIG-IRON
In blast furnaces.....5/00, 7/00, 9/00
Other processes.....11/00
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MAKING IRON.....13/00, 15/00
MAKING LIQUID STEEL BY DIRECT PROCESSES.....13/00

3/00 General features in the manufacture of pig-iron (mixers for pig-iron C21C 1/06) **[1, 2006.01]**

3/02 • by applying additives, e.g. fluxing agents **[1, 2006.01]**

3/04 • Recovery of by-products, e.g. slag **[1, 2006.01]**

3/06 • • Treatment of liquid slag **[1, 2006.01]**

3/08 • • • Cooling slag **[1, 2006.01]**

3/10 • • • Slag pots; Slag cars **[1, 2006.01]**

5/00 Making pig-iron in the blast furnace [1, 2006.01]

5/02 • Making special pig-iron, e.g. by applying additives, e.g. oxides of other metals **[1, 2006.01]**

5/04 • Making slag of special composition **[1, 2006.01]**

5/06 • using top gas in the blast furnace process **[1, 2006.01]**

7/00 Blast furnaces [1, 2006.01]

7/02 • Internal forms **[1, 2006.01]**

7/04 • with special refractories **[1, 2006.01]**

7/06 • • Linings for furnaces **[1, 2006.01]**

7/08 • Top armourings **[1, 2006.01]**

7/10 • Cooling; Devices therefor **[1, 2006.01]**

7/12 • Opening or sealing the tap holes **[1, 2006.01]**

7/14 • Discharging devices, e.g. for slag **[1, 2006.01]**

7/16 • Tuyères **[1, 2006.01]**

7/18 • Bell-and-hopper arrangements **[1, 2006.01]**

7/20 • • with appliances for distributing the burden **[1, 2006.01]**

7/22 • Dust arresters **[1, 2006.01]**

7/24 • Test rods or other checking devices **[1, 2006.01]**

9/00 Stoves for heating the blast in blast furnaces [1, 2006.01]

9/02 • Brick hot-blast stoves **[1, 2006.01]**

9/04 • • with combustion shaft **[1, 2006.01]**

9/06 • • Linings **[1, 2006.01]**

9/08 • Iron hot-blast stoves **[1, 2006.01]**

9/10 • Other details, e.g. blast mains **[1, 2006.01]**

9/12 • • Hot-blast valves or slides for blast furnaces **[1, 2006.01]**

9/14 • Preheating the combustion air **[1, 2006.01]**

9/16 • Cooling or drying the hot-blast **[1, 2006.01]**

11/00 Making pig-iron other than in blast furnaces [1, 2006.01]

11/02 • in low shaft furnaces **[1, 2006.01]**

11/06 • in rotary kilns **[1, 2006.01]**

11/08 • in hearth-type furnaces **[1, 2006.01]**

11/10 • in electric furnaces **[1, 2006.01]**

13/00 Making spongy iron or liquid steel, by direct processes [1, 2006.01]

13/02 • in shaft furnaces **[1, 2006.01]**

13/04 • in retorts **[1, 2006.01]**

13/06 • in multi-storied furnaces **[1, 2006.01]**

13/08 • in rotary furnaces **[1, 2006.01]**

13/10 • in hearth-type furnaces **[1, 2006.01]**

13/12 • in electric furnaces **[1, 2006.01]**

13/14 • Multi-stage processes **[1, 2006.01]**

15/00 Other processes for the manufacture of iron from iron compounds (by electrolysis C25C 1/06) **[1, 2006.01]**

15/02 • Metallothermic processes, e.g. thermit reduction **[1, 2006.01]**

15/04 • from iron carbonyl **[1, 2006.01]**