

## ECLA EUROPEAN CLASSIFICATION

### C21C PROCESSING OF PIG-IRON, e.g. REFINING, MANUFACTURE OF WROUGHT-IRON OR STEEL; TREATMENT IN MOLTEN STATE OF FERROUS ALLOYS (refining metals in general [C22B9/00](#))

#### C21C1/00 Refining of pig-iron; Cast iron

- C21C1/02 . Dephosphorising or desulfurising
- C21C1/02B . . [N: Agents used for dephosphorising or desulfurising]
- C21C1/04 . Removing impurities other than carbon, phosphorus or sulfur
- C21C1/06 . Constructional features of mixers for pig-iron
- C21C1/08 . Manufacture of cast-iron
- C21C1/10 . Making spheroidal graphite cast-iron
- C21C1/10B . . [N: Nodularising additive agents]

#### C21C3/00 Manufacture of wrought-iron or wrought-steel

#### C21C5/00 Manufacture of carbon-steel, e.g. plain mild steel, medium carbon steel or cast steel [N: or stainless steel]

- C21C5/00B . [N: Manufacture of stainless steel]
- C21C5/02 . Crucible furnace process [N: ([C21C5/00B](#) takes precedence)]
- C21C5/04 . Manufacture of hearth-furnace steel, e.g. Siemens-Martin steel [N: ([C21C5/00B](#) takes precedence)]
- C21C5/06 . . Processes yielding slags of special composition
- C21C5/28 . Manufacture of steel in the converter [N: ([C21C5/00B](#) takes precedence)]
- C21C5/28A . . [N: Plants therefor] [N9609]
- C21C5/30 . . Regulating or controlling the blowing
- C21C5/30A . . . [N: Afterburning] [N9705]
- C21C5/32 . . . Blowing from above ([C21C5/35](#) takes precedence)
- C21C5/34 . . . Blowing through the bath ([C21C5/35](#) takes precedence)
- C21C5/35 . . . Blowing from above and through the bath
- C21C5/36 . . Processes yielding slags of special composition
- C21C5/38 . . Removal of waste gases or dust
- C21C5/40 . . . Offtakes or separating apparatus for converter waste gases or dust
- C21C5/42 . . Constructional features of converters
- C21C5/44 . . . Refractory linings

- C21C5/44B . . . . [N: Equipment used for making or repairing linings]
- C21C5/44B2 . . . . . [N: Hot fettling; Flame gunning]
- C21C5/44D . . . . [N: Lining or repairing the taphole]
- C21C5/46 . . . . Details or accessories
- C21C5/46B . . . . . [N: Lances or injectors]
- C21C5/46B2 . . . . . [N: Refractory coated lances; Immersion lances]
- C21C5/46B4 . . . . . [N: Means for handling, e.g. adjusting, changing, coupling]
- C21C5/46D . . . . . [N: Supporting means]
- C21C5/46D2 . . . . . [N: Trunnion bearings]
- C21C5/46E . . . . . [N: Cooling arrangements]
- C21C5/46G . . . . . [N: Tapholes; Opening or plugging thereof]
- C21C5/46H . . . . . [N: Charging device for converters]
- C21C5/46K . . . . . [N: Measuring and sampling devices]
- C21C5/46L . . . . . [N: Vehicles for supporting and transporting a converter vessel]
- C21C5/46M . . . . . [N: Skull removal; Cleaning of the converter mouth]
- C21C5/48 . . . . . Bottoms or tuyères of converters
- C21C5/50 . . . . . Tilting mechanisms for converters
  
- C21C5/52 . . . . . Manufacture of steel in electric furnaces ([N: [C21C5/00B](#) takes precedence]; electric heating per se [H05B](#))
- C21C5/52A . . . . [N: in a plasma heated furnace] [N9606]
- C21C5/52B . . . . [N: in an alternating current (AC) electric arc furnace]
- C21C5/52B2 . . . . . [N: equipped with burners or devices for injecting gas, i.e. oxygen, or pulverulent materials into the furnace]
- C21C5/52C . . . . [N: in a direct current (DC) electric arc furnace]
- C21C5/52D . . . . [N: in an inductively heated furnace]
- C21C5/52D2 . . . . . [N: processing a moving metal stream while exposed to an electromagnetic field, e.g. in an electromagnetic counter current channel]
- C21C5/52E . . . . [N: in an electrically heated multi-chamber furnace, a combination of electric furnaces or an electric furnace arranged for associated working with a non electric furnace]
- C21C5/52G . . . . [N: Manufacture of alloyed steels including ferro-alloys]
- C21C5/52H . . . . [N: Charging of the electric furnace]
- C21C5/52P . . . . [N: General arrangement or layout of the electric melt shop]
- C21C5/54 . . . . Processes yielding slags of special composition
  
- C21C5/56 . . . . . Manufacture of steel by other methods (making liquid steel by direct processes [C21B13/00](#) [N: ([C21C5/00B](#) takes precedence)])
- C21C5/56B . . . . [N: starting from scrap]
- C21C5/56B2 . . . . . [N: Preheating of scrap (apparatus for preheating scrap in general [F27D13/00A](#))]
- C21C5/56D . . . . [N: operating in a continuous way]
  
- C21C7/00** . . . . . **Treating molten ferrous alloys, e.g. steel, not covered by groups [C21C1/00](#) to [C21C5/00](#) (treating molten metals during moulding [B22D1/00](#), [B22D27/00](#); remelting ferrous metals [C22B](#))**

- C21C7/00A . [N: Adding metallic additives] [C9505]
- C21C7/00C . [N: Adding carbon material]
- C21C7/00D . [N: by injecting powdered material]
- C21C7/00D2 . . [N: into the falling stream of molten metal]
- C21C7/00E . [N: using exothermic reaction compositions]
- C21C7/00F . [N: using cored wires]
- C21C7/00G . [N: by introducing material into a current of streaming metal]
- C21C7/00L . [N: Treating in a ladle furnace, e.g. up-/reheating of molten steel within the ladle]
- C21C7/00P . [N: Treating and handling under pressure]
- C21C7/00S . [N: Treatment of slags covering the steel bath, e.g. for separating slag from the molten metal]
- C21C7/04 . Removing impurities by adding a treating agent
- C21C7/06 . . Deoxidising, e.g. killing
- C21C7/064 . . Dephosphorising; Desulfurising
- C21C7/064B . . . [N: Agents used for dephosphorising or desulfurising]
- C21C7/068 . . Decarburising
- C21C7/068B . . . [N: of stainless steel]
- C21C7/072 . . Treatment with gases ([C21C7/06](#), [C21C7/064](#), [C21C7/068](#) take precedence)
- C21C7/076 . . Use of slags or fluxes as treating agents ([C21C7/06](#), [C21C7/064](#), [C21C7/068](#) take precedence)
- C21C7/10 . Handling in a vacuum