

Title (en)

PROCESS FOR PRODUCING LIQUID PIG IRON OR SEMIFINISHED STEEL PRODUCTS FROM ORE

Title (de)

VERFAHREN ZUR HERSTELLUNG VON FLÜSSIGEM ROHEISEN ODER STAHLVORPRODUKTEN AUS ERZ

Title (fr)

PROCEDE DE TRANSFORMATION DE MINERAIS DE FER EN FONTE BRUTE LIQUIDE OU EN PRODUITS BRUTS EN ACIER

Publication

EP 0877822 B1 20010307 (DE)

Application

EP 97911044 A 19971105

Priority

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- AT 196296 A 19961108
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Abstract (en)

[origin: US6179896B1] In a method of producing molten pig iron (9) or steel pre-products from lump ore which in at least one reduction zone is reduced to partially and/or completely reduced sponge iron (4) in a shaft furnace, the sponge iron (4) is melted down in a melt-down gasifying zone (8) of a melter gasifier (1) under supply of carbon-containing material (2) and oxygen and while simultaneously forming a reducing gas. To ensure that there will be a specific gap volume in the bed (13) of solid carbon carriers (2) even when charging fine-particle sponge iron (14) and hence that the bed (13) of solid carbon carriers (2) will be thoroughly flown through by gas, at least the sponge iron (4) is charged to the melt-down gasifying zone (8) discontinuously, under formation of areas (14) of piled-up sponge iron which are embedded in the bed (13) of carbon carriers (2) and which are superposed and which are separated by solid carbon carriers (2), wherein each of the areas (14) of piled-up sponge iron while sparing a cross section zone (15) of the melt-down gasifying zone (8) extends over the cross section of the same and wherein the reducing gas forming the melt-down gasifying zone (8) flows past the areas (14) of piled-up sponge iron under melting of the same and upwards through the cross section zones (15) that are free from sponge iron and formed from carbon carriers (2), and flows through these zones.

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