Title (en)

A METHOD AND ARRANGEMENT FOR PRODUCING METALS, IN PARTICULAR MOLTEN PIG IRON, STEEL PRE-MATERIAL OR FERROALLOYS

Publication

EP 0115756 B1 19860917 (DE)

Application

EP 83890215 A 19831124

Priority

AT 444582 A 19821207

Abstract (en)

[origin: US4533385A] With a method for producing metals, the raw material is melted in a metallurgical vessel by at least one plasma burner directed from top to bottom. In order to be able to protect the furnace brickwork from too strong a thermal load exerted by the plasma jet, and to make available the energy supplied by the plasma burner to melting and reducing the fine ore to as large an extent as possible as well as to prevent an agglomeration of the raw material to be used, the raw material is topcharged into the metallurgical vessel in the form of fine particles directed parallel to the plasma jet so as to peripherally surround the same. Oxygen-containing gases and carbon are bottom-blown into the vessel through the melt. A foamed slag is formed in the vessel, surrounding the plasma jet over its total height and the flow of supplied raw material particles peripherally. In an arrangement for carrying out the method the plasma burner is peripherally surrounded by a jacket so as to form a supply space for the fine raw material particles which surrounds the plasma burner peripherally. Nozzles are provided in the bottom of the metallurgical vessel to supply oxygen-containing gas and carbon.

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C22B 4/00; C21B 13/12

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CPC (source: EP US)

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Cited by

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US 4533385 A 19850806; AT 375960 B 19840925; AT A444582 A 19840215; AU 2210283 A 19840614; DD 215583 A5 19841114; DE 3366331 D1 19861023; EP 0115756 A1 19840815; EP 0115756 B1 19860917; ES 527834 A0 19850601; ES 8506101 A1 19850601; FI 834416 A0 19831202; FI 834416 A 19840608; JP H0256407 B2 19901130; JP S59113111 A 19840629; NO 834484 L 19840608; PT 77770 A 19840101; PT 77770 B 19860319; US 4617671 A 19861014; ZA 839054 B 19840829

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