

Title (en)
A SMELTING PROCESS OF FERRONICKEL WITH NICKEL OXIDE ORE FREE OF CRYSTAL WATER IN A BLAST FURNACE

Title (de)
VERHÜTTUNGSVERFAHREN FÜR FERRONICKEL MIT KRISTALLWASSERFREIEM NICKELOXIDERZ IN EINEM HOCHOFEN

Title (fr)
PROCEDE DE PREPARATION DE FERRONICKEL PAR FUSION EN HAUT FOURNEAU DE MINERAI D OXYDE DE NICKEL DEPOURVU D EAU CRISTALLINE

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Application
EP 05803616 A 20051102

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Abstract (en)
The present invention provides a metallurgical method of ferronickel by blast-furnace smelting nickel oxide ore containing no crystal water which mainly comprises the step of crushing and sieving the raw ore, manufacturing the ore powder into sintered ore and blast furnace smelting mixture of sintered ore blocks, coke, limestone/calcium lime, dolomite as well as fluorite to obtain the ferronickel, wherein the weight ratio of the additives to sintered ore is: 0.3 ~ 8% fluorite, 0 ~ 8% dolomite, 4~35% limestone/calcium lime. Compared with the prior art, the proportion of fluorite and sintered ore in the metallurgical technology of ferronickel provided by the present invention can lower the effect of chrome on the furnace temperature, meanwhile can also avoid occurring of accidents, such as burnout of crucible caused by too high content of Fluorine; Magnesium contained in dolomite may solve the problem on bad fluidity of iron water caused by chrome in nickel and chrome ores; limestone can not only provide alkalinity but balance both of the above mentioned additives. The metallurgical method of blast furnace smelting provided by the present invention has advantages such as low cost and high recovery rate of the raw materials.

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