

Title (en)
AGGLOMERATED STONE FOR USING IN SHAFT FURNACES, COREX FURNACES OR BLAST FURNACES, METHOD FOR PRODUCING AGGLOMERATED STONES, AND USE OF FINE AND SUPERFINE IRON ORE DUST

Title (de)
AGGLOMERATSTEIN ZUM EINSATZ IN SCHACHT-, COREX- ODER HOCHÖFEN, VERFAHREN ZUR HERSTELLUNG VON AGGLOMERATSTEINEN UND VERWENDUNG VON EISENERZ-FEIN- UND -FEINSTÄUBEN

Title (fr)
PIERRE AGGLOMEREE POUR FOURS A CUVE, FOURS COREX ET HAUTS FOURNEAUX, PROCEDE POUR FABRIQUER CETTE PIERRE AGGLOMEREE ET UTILISATION DE POUSSIERES DE MINERAI DE FER FINES ET HYPERFINES

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Application
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Abstract (en)
[origin: WO2005118892A1] The aim of the invention is to be able to economically use ore dust which is created by the extraction and preparation of iron ore and has not been usable until now. To this end, the invention relates to an agglomerated stone comprising (in wt. %) between 6 and 15 % of a cement binding agent, up to 20 % of a carbon carrier, up to 20 % of residual and recyclable substances, and optionally up to 10 % of an accelerator, the remainder consisting of iron ore in a stone format in the form of particles having a particle size of less than 3 mm. After three days, the iron ore has an initial strength of at least 5 N/mm<2>, and after 28 days, a cold compression strength of at least 20 N/mm<2>. As a result of the particular hardness St and form stability thereof even at high temperatures T, inventive agglomerated stones are especially suitable for using in shaft furnaces, corex furnaces, or blast furnaces. The invention also relates to a method for producing inventive agglomerated stones.
[origin: WO2005118892A1] Agglomerated stone comprising (wt.%):cement binding agent (6-15), carbon carrier (up to 20), residual and recyclable substances (up to 20), and optionally accelerator (up to 10), remainder iron ore stone in the form of particles of grain size below 3 mm. After 3 days the iron ore has an initial strength of at least 5 N/mm2> and after 28 days a cold compression strength of at least 20 N/mm2>. An independent claim is included for a method of preparing the stone as described above by transfer of the composition to a mold and compacting.

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Citation (search report)
See references of WO 2005118892A1

Citation (examination)

- US 2004025633 A1 20040212 - KANOSHIMA HIDEO [JP], et al
- GB 1445792 A 19760811 - NIPPON STEEL CORP
- US 3490895 A 19700120 - SVENSSON KARL JONAS V
- DE 3139375 A1 19830414 - MUEHLBERGER HORST DIPL PHYS DR

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