Title (en)
GRANULAR METAL PRODUCTION METHOD

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES FEINKÖRNIGEN METALLS

Title (fr)
PROCÉDÉ DE PRODUCTION D'UN MÉTAL GRANULAIRE

Publication
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Application
EP 11792374 A 20110603

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Abstract (en)
The present invention is to provide a technique that further improves the process for producing granular metal by heating agglomerates containing a metal oxide and a carbonaceous reducing agent, and reducing and melting the metal oxide included in the agglomerates. The process for producing granular metal comprising the steps of: feeding agglomerates containing a metal oxide and a carbonaceous reducing agent onto a hearth of a moving hearth-type reduction melting furnace; heating the agglomerates to reduce and to melt the metal oxide; cooling the granular metal obtained by said heating step; and discharging the cooled granular metal out of the furnace to recover the same, wherein the agglomerates having an average diameter of not smaller than 17.5 mm are fed onto the hearth when the agglomerates are heated at a spread density of not lower than 0.5 on the hearth.

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Cited by
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AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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