

Title (en)  
LF REFINING LADLE MICROPOROUS CERAMIC ROD AIR-PERMEABLE UPPER NOZZLE WELL BLOCK, AND ARGON BLOWING CONTROL METHOD THEREFOR

Title (de)  
LUFTDURCHLÄSSIGER OBERER DÜSENBOHRLOCHBLOCK FÜR EINE LF-RAFFINATIONS PFANNE UND ARGONBLASSTEUERUNGSVERFAHREN DAFÜR

Title (fr)  
BLOC DE Puits de buse supérieure perméable à l'air à tiges en céramique microporeuses pour poche d'affinage LF, ET PROCÉDÉ DE COMMANDE DE SOUFFLAGE D'ARGON ASSOCIÉ

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Application  
**EP 21849887 A 20210713**

Priority  
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• CN 2021106078 W 20210713

Abstract (en)  
[origin: EP4134186A1] Provided are a ladle furnace (LF) refined ladle gas-permeable upper nozzle pocket block with microporous ceramic rods, and an argon blowing control method thereof. The gas-permeable upper nozzle pocket block of the present invention includes an iron ring and microporous ceramic rods; a diameter d of each microporous ceramic rod is 35-45 mm, and a height h of each ceramic rod is 140-180 mm; 60-120 ventilation holes are formed in the microporous ceramic rods along an axial directions of the microporous ceramic rods; the ventilation holes are uniformly distributed on cross sections of the microporous ceramic rods; an inner diameter of each ventilation hole is 0.075-0.1 mm; and the ventilation holes longitudinally run through upper end faces and lower end faces of the microporous rods. The present invention further provides an argon blowing control device and an argon blowing control method. In the present invention, before an automatic soft blowing mode is selected, a manual bypass in an argon pipeline system is first used to blow through the gas-permeable upper nozzle pocket block; the argon blowing flow rate is accurately controlled; and the oxygen burning-free blowing rate and the service life of the ladle gas-permeable upper nozzle pocket block are improved.

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Citation (search report)  
• [AD] CN 104028739 A 20140910 - LAIWU IRON&STEEL GROUP CO LTD  
• [A] CN 206047077 U 20170329 - SHANDONG IRON & STEEL CO LTD  
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• [A] EP 0737535 A1 19961016 - DIDIER WERKE AG [DE]  
• See also references of WO 2022022277A1

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