Title (en)

TUYERE FOR BOTTOM AND SIDE BLOWING AND METHOD FOR COOLING THE SAME

Title (de)

DÜSE ZUM SEITEN- UND BODENBLASEN SOWIE VERFAHREN ZUR KÜHLUNG DER DÜSE

Title (fr)

TUYÈRE DE VENT CHAUD POUR INJECTION LATERALE ET INFÉRIEURE ET PROCÉDÉ POUR SON REFROIDISSEMENT

Publication

EP 3456849 B1 20200617 (EN)

Application

EP 18182891 A 20180711

Priority

RU 2017132288 A 20170915

Abstract (en)

[origin: EP3456849A1] The group of inventions relates to metallurgy, and more particularly to devices for blowing oxidizing blast through molten copper sulfide or polymetallic raw material and methods for cooling these devices, and can be used in nonferrous and ferrous metallurgy. The group of inventions offers higher performance characteristics of a tuyere for bottom and side blowing, including, inter alia, enhanced reliability and longer service of the tuyere, improved efficiency of cooling the tuyere under high heat strains. A tuyere for bottom and side blowing comprises a tuyere body having a passage, a main blast pipe, a protective blast pipe, a tuyere nose, a cooled element and a ceramometal headpiece. The main blast pipe and the protective blast pipe are arranged coaxially with respect to each other. The ceramometal headpiece is disposed on the tuyere nose and is made of a material having an average thermal conductivity of at least 30 W/m°C and a phase transition latent heat of at least 1000 kJ/kg. Method for cooling a tuyere comprises cooling the tuyere nose at a coolant flow rate of at least 25·10 -3 m 3 /s per 1 m 2 of the surface area of the nose, and maintaining negative pressure within the cooled elements.

IPC 8 full level

C21B 7/16 (2006.01)

CPC (source: EA EP RU)

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