

Title (en)

FURNACE, METHOD AND MONITORING SYSTEM FOR MONITORING ITS CONDITION

Title (de)

OFEN SOWIE VERFAHREN UND SYSTEM ZUR ÜBERWACHUNG VON DESSEN BETRIEBSBEDINGUNGEN

Title (fr)

FOUR, PROCEDE ET SYSTEME DE SURVEILLANCE DESTINES A SURVEILLER L'ETAT DE CE FOUR

Publication

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Application

EP 03784190 A 20030806

Priority

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- DE 10327094 A 20030613
- EP 0308705 W 20030806

Abstract (en)

[origin: WO2004015349A2] A furnace, the furnace comprising: (a) a heat source (80); (b) a container containing said heat source, said container comprising a refractory lining (30) comprising a first refractory lining layer (AO) adjacent to said heat source, and a container wall (40) comprising at least one intermediate layer (W2, W3) and an outer wall (W1) having an outer surface (41) distal from said heat source, said heat source providing a temperature profile in said refractory lining and in said container wall; and (c) at least one optical waveguide adapted for monitoring said temperature profile by optical back scattering measurement; said at least one optical waveguide being located between said first refractory lining layer and said outer surface of said outer wall; preferably an induction furnace with induction coil (60); a system of such furnaces; a mat comprising at least one optical waveguide adapted to be located between said first refractory lining layer and said outer surface of said outer wall in such a furnace; a method of thermally monitoring the condition of a furnace; a monitoring system for monitoring the condition of a refractory lining of a melting furnace; a monitoring system for monitoring the temperature of induction coils, and use thereof for monitoring an inductively heated crucible, and use thereof for monitoring the condition of the refractory lining of an induction furnace.

IPC 8 full level

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Cited by

FR3123975A1; WO2022258699A1; TWI612303B; TWI731812B

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