

Title (en)

Method and apparatus for the cooling of vessel parts of a metallurgical furnace, especially an electric-arc furnace.

Title (de)

Verfahren und Vorrichtung zum Kühlen von Gefäßteilen eines metallurgischen Ofens, insbesondere eines Lichtbogenofens.

Title (fr)

Procédé et dispositif pour le refroidissement des parties de la cuve d'un four métallurgique, en particulier d'un four à arc électrique.

Publication

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Application

EP 81105529 A 19810714

Priority

DE 3027465 A 19800719

Abstract (en)

1. A process for cooling parts of the container structure of a metallurgical furnace, which parts are subject to thermal loadings which fluctuate in respect of time and position, comprising a cooling box which is fitted into the wall region to be cooled or which forms the wall region and which includes a heat exchange surface on to which a cooling fluid is sprayed, characterised in that the temperature distribution in respect of space and time, on the heat exchange surface, is detected by a plurality of independent temperature measuring means and cooling fluid is sprayed on to the heat exchange surface region associated with the measurement value, over a large area thereof or in a localised manner, only so long as the respective measurement value is above the boiling point of the cooling fluid, and that the amount of cooling fluid so sprayed is limited to a value in respect of which the cooling fluid is caused to evaporate spontaneously avoiding the formation of a coherent film of fluid.

Abstract (de)

Zum Kühlen von Gefäßteilen eines metallurgischen Ofens wird die Temperaturverteilung auf der Wärmeaustauschfläche (2) erfaßt und auf diese nur so lange Kühlflüssigkeit aufgesprüht, so lange der Meßwert an der betreffenden Stelle oberhalb des Siedepunktes der Kühlflüssigkeit liegt und ferner die aufgespruhete Menge auf einen Wert begrenzt, bei dem es unter Vermeidung eines zusammenhängenden Flüssigkeitsfilms zu einer spontanen Verdampfung der Kühlflüssigkeit kommt.

IPC 1-7

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IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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