

Title (en)
Crucible for an induction furnace.

Title (de)
Schmelztiegel für einen Induktionsofen.

Title (fr)
Creuset de four à induction.

Publication
EP 0311506 A1 19890412 (FR)

Application
EP 88402505 A 19881004

Priority
FR 8713778 A 19871006

Abstract (en)
[origin: JPH01118089A] PURPOSE: To enable a cooling circuit to pass through several elements by a method wherein some vertical elements integrally assembled at a side surface through an electrical insulating coupler are passed by the same duct as that of the elements and the coupler is not leaked out against cooling liquid flowing through the duct. CONSTITUTION: A vertical element 12 of ring-fan shape curved over an angle C of about 1 deg. or about 2 deg. is more thick than a width of a side surface 13, resulting in that an electrical current induced by an inductor 1 can not be developed and then an electro-magnetic loss as well as a heated state generated by the induced current as a result of Joule effect is remarkably reduced. Accordingly, an electrical insulating coupler 14 is inserted between adjoining vertical elements 12. After a peripheral duct 15 traverses across the elements 12 and is outputted to the side surface 13 of each of the elements 12, it is connected to the corresponding duct 15 of each of the adjoining elements 12 in such a way that it may form an entire flowing water cooling circuit network. The coupler 14 is formed with a hole facing against the duct 15 and concurrently a leakage between the cooling circuit network and an external surrounding area must be prevented, i.e., a desired sealing state must be assured.

Abstract (fr)
Les courants induits par l'inducteur (1) dans le creuset sont réduits par une structure fine d'éléments longitudinaux (12) séparés par des joints isolants (14), grâce à des canaux de refroidissement (15) circonférentiels et traversant les joints (14). Application à la fusion de corps réfractaires.

IPC 1-7
H05B 6/24; **F27B 14/10**; **F27D 9/00**; **H05B 6/22**

IPC 8 full level
F27B 14/08 (2006.01); **F27B 14/06** (2006.01); **F27D 1/12** (2006.01); **H05B 6/22** (2006.01); **H05B 6/24** (2006.01)

CPC (source: EP US)
H05B 6/22 (2013.01 - EP US); **H05B 6/24** (2013.01 - EP US)

Citation (search report)
• [A] EP 0056915 A1 19820804 - SAPHYMO STEL [FR]
• [A] DE 2100378 A1 19710722 - HUKIN D
• [A] EP 0079266 A1 19830518 - SAPHYMO STEL [FR]
• [A] DE 886353 C 19530813 - VACUUMSCHMELZE AG

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EP0539051A1; FR2665249A1; EP0480845A1; EP0467230A1; EP0439900A3; EP0512466A1; US5247539A; US5257281A

Designated contracting state (EPC)
CH DE GB IT LI

DOCDB simple family (publication)
EP 0311506 A1 19890412; **EP 0311506 B1 19930421**; DE 3880416 D1 19930527; DE 3880416 T2 19931014; FR 2621387 A1 19890407; FR 2621387 B1 19900105; JP 2660018 B2 19971008; JP H01118089 A 19890510; US 4873698 A 19891010

DOCDB simple family (application)
EP 88402505 A 19881004; DE 3880416 T 19881004; FR 8713778 A 19871006; JP 25170588 A 19881005; US 24912288 A 19880926