

Title (en)

METHOD OF AND APPARATUS FOR HEATING NON-MAGNETIC METAL WORK PIECES

Publication

EP 0158946 A3 19870513 (DE)

Application

EP 85104184 A 19850405

Priority

US 60254284 A 19840420

Abstract (en)

[origin: US4577081A] Method and apparatus for heating a billet of nonmagnetic metal material to forging temperature by first preheating the billet in a high efficiency slot-type electric radiant heat furnace to a preheat temperature a substantial level below the forging temperature, and then conveying the preheated billet from the furnace immediately into an inductive heating coil and energizing the coil to inductively post-heat the billet to the forging temperature.

IPC 1-7

B21J 1/06; C21D 1/34

IPC 8 full level

B21J 1/06 (2006.01); **B21J 17/02** (2006.01); **C21D 1/34** (2006.01); **H05B 6/02** (2006.01)

CPC (source: EP US)

B21J 1/06 (2013.01 - EP US); **B21J 17/02** (2013.01 - EP US); **C21D 1/34** (2013.01 - EP US)

Citation (search report)

- [Y] GB 1040931 A 19660901 - WEST MIDLANDS GAS BOARD, et al
- [Y] DE 2149352 A1 19720406 - PARK OHIO INDUSTRIES INC
- [AD] FR 2377857 A1 19780818 - KLEIN TOOLS INC [US]
- [A] DE 1248081 B 19670824 - ACEC [BE]
- [A] DE 1113763 B 19610914 - PHILIPS PATENTVERWALTUNG
- [A] DE 749576 C 19441128
- [A] US 2858405 A 19581028 - KIMBROUGH LAURENCE B, et al
- [A] FR 2356108 A1 19780120 - JUNKER GMBH O [DE]

Cited by

EP0518815A1; CH683267A5; US5282910A; WO9108089A1; EP3072356B1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

EP 0158946 A2 19851023; EP 0158946 A3 19870513; ES 542422 A0 19861116; ES 544578 A0 19860616; ES 8608052 A1 19860616;
ES 8700586 A1 19861116; US 4577081 A 19860318

DOCDB simple family (application)

EP 85104184 A 19850405; ES 542422 A 19850419; ES 544578 A 19850626; US 60254284 A 19840420