

Title (en)  
APPARATUS FOR BLOWING PREHEATED AIR INTO A SHAFT FURNACE

Publication  
**EP 0363576 B1 19930825 (FR)**

Application  
**EP 89112514 A 19890708**

Priority  
• LU 87283 A 19880719  
• LU 87505 A 19890421

Abstract (en)  
[origin: GB2221023A] Central tubular element (126) is connected, on one side, by means of a first ball-and-socket joint (138) and a first compensator (144) to a first connector (128) supplying pre-heated air and on the opposite side, by means of a second ball-and-socket joint (140) and a second compensator (146) to a second connector (130). In order to reduce the length of the device, the second joint (140) is oriented in the opposite direction to the said first joint (138), its centre of curvature (Y) being located on the axis of the said second connector (130) on the inside of the latter.  
<IMAGE>

IPC 1-7  
**C21B 7/16**

IPC 8 full level  
**C21B 7/00** (2006.01); **C21B 7/16** (2006.01); **F27B 1/16** (2006.01)

CPC (source: EP KR US)  
**C21B 7/00** (2013.01 - KR); **C21B 7/163** (2013.01 - EP US)

Cited by  
EP0484720A1; TR25339A

Designated contracting state (EPC)  
AT BE ES IT NL

DOCDB simple family (publication)  
**FR 2634543 A1 19900126; FR 2634543 B1 19920207**; AU 3659289 A 19900125; AU 608987 B2 19910418; BR 8903613 A 19900313; CA 1335328 C 19950425; CN 1019818 B 19921230; CN 1039445 A 19900207; CZ 279945 B6 19950913; CZ 441189 A3 19950412; DE 3920221 A1 19900125; DE 3920221 C2 19980514; EP 0363576 A1 19900418; EP 0363576 B1 19930825; ES 2043975 T3 19940101; GB 2221023 A 19900124; GB 2221023 B 19911204; GB 8914973 D0 19890823; JP 2840763 B2 19981224; JP H0273909 A 19900313; KR 0133671 B1 19980701; KR 900001864 A 19900227; PL 162875 B1 19940131; PL 280660 A1 19900205; SK 278767 B6 19980204; SK 441189 A3 19980204; TR 24989 A 19920817; US 4987838 A 19910129

DOCDB simple family (application)  
**FR 8908249 A 19890621**; AU 3659289 A 19890620; BR 8903613 A 19890717; CA 605202 A 19890710; CN 89104884 A 19890718; CS 441189 A 19890719; DE 3920221 A 19890621; EP 89112514 A 19890708; ES 89112514 T 19890708; GB 8914973 A 19890629; JP 18234589 A 19890714; KR 890010066 A 19890714; PL 28066089 A 19890719; SK 441189 A 19890719; TR 63389 A 19890706; US 38012989 A 19890714