

Title (en)

Process for preparing a welded workpiece, in particular a tube, from dispersion-hardened platinum material

Title (de)

Verfahren zur Herstellung eines aus dispersionsverfestigtem Platinwerkstoff bestehenden, geschweissten Formkörpers, insbesondere eines Rohres

Title (fr)

Procédé de préparation d'un article soudé, en particulier un tube, en matériau à base de platine renforcé par dispersion

Publication

**EP 0947595 B1 20050511 (DE)**

Application

**EP 99104851 A 19990311**

Priority

DE 19813988 A 19980328

Abstract (en)

[origin: EP0947595A2] A welded hollow article of oxide dispersion strengthened platinum is produced by shaping and welding a base metal-containing platinum alloy prior to internal oxidation. Production of a welded hollow article, especially a tube, of platinum material dispersion strengthened by base metal oxide particles of yttrium, zirconium and/or cerium oxide comprises shaping and welding one or more base metal-containing platinum alloy parts to a preform body, thermally oxidizing to achieve  $\geq 75$  wt.% oxidation and then shaping the preform body. An Independent claim is also included for an article, especially a tube, produced by the above process. Preferred Features: The platinum-base metal alloy is a Pt-Rh, Pt-Ir or Pt-Au alloy doped with 0.1-0.2 wt.% Zr and 0.01-0.05 wt.% Y and/or 0.05-0.2 wt.% Ce.

IPC 1-7

**C22C 32/00**

IPC 8 full level

**B23K 9/23** (2006.01); **B21C 37/08** (2006.01); **B23K 28/00** (2006.01); **B23K 31/00** (2006.01); **B23P 11/00** (2006.01); **C22C 1/10** (2006.01); **C22C 5/04** (2006.01); **C22C 32/00** (2006.01); **C22F 1/00** (2006.01); **C22F 1/14** (2006.01); **B23K 103/08** (2006.01); **B23K 103/16** (2006.01)

CPC (source: EP US)

**C22C 32/0021** (2013.01 - EP US); **B22F 2998/10** (2013.01 - EP US); **Y10T 428/12875** (2015.01 - EP US)

Cited by

DE102013225187B4; EP1964938A1; US8226855B2; WO2015082630A1; EP3121297A1; EP3971311A1; US11781208B2; EP3978884A1; US12024763B2

Designated contracting state (EPC)

DE ES FI FR GB IT NL

DOCDB simple family (publication)

**EP 0947595 A2 19991006**; **EP 0947595 A3 20020911**; **EP 0947595 B1 20050511**; CZ 104899 A3 20000412; CZ 298305 B6 20070822; DE 19813988 C1 19991028; DE 59912028 D1 20050616; JP 3302654 B2 20020715; JP H11335754 A 19991207; US 6129997 A 20001010

DOCDB simple family (application)

**EP 99104851 A 19990311**; CZ 104899 A 19990324; DE 19813988 A 19980328; DE 59912028 T 19990311; JP 8631399 A 19990329; US 26614299 A 19990310