

Title (en)

Spray unit for quenching metal workpieces in inductive hardening

Title (de)

Brause zum Abschrecken von metallischen Werkstücken bei induktiver Härtung

Title (fr)

Système de trempe par pulvérisation pour des pièces métalliques en cas de durcissement inductif

Publication

EP 2653570 A1 20131023 (DE)

Application

EP 13001922 A 20130412

Priority

DE 102012007729 A 20120418

Abstract (en)

The shower comprises a ring-like hollow tubular cylinder (1) comprising a water inlet (4) and radially and inwardly directed water overflow apertures distributed on its inner cylinder (5) around a circumference of the shower. The hollow cylinder is formed into two parts having a cylinder-like base body (2) and an annular lid (3). The base body and the lid are loosely joined to one another and held together in an adjacent position by a releasable fixing unit. The inner cylinder of the hollow cylinder is arranged at the lid and the base body. The shower comprises a ring-like hollow tubular cylinder (1) comprising a water inlet (4) and radially and inwardly directed water overflow apertures distributed on its inner cylinder (5) around a circumference of the shower. The hollow cylinder is formed into two parts having a cylinder-like base body (2) and an annular lid (3). The base body and the lid are loosely joined to one another and held together in an adjacent position by a releasable fixing unit. The inner cylinder of the hollow cylinder is arranged at the lid and the base body. The base body and the lid comprise radial projections that are in a joined-together state corresponding to the base body and the lid. The fixing unit fixes the projections against each other. The radial projections are formed by radially protruding circumferential rings. The fixing unit is provided as a clamping ring engaging around the projections. The clamping ring comprises a U or V-profile. The clamping ring is formed by two half rings. Free ends of the half rings are mounted pivotably. A tensioning lever is provided between an over-center position and a clamping position of the free ends of the half rings. The lid is linked to the base body over a hinge. The fixing unit is arranged in an opposed side of the hollow cylinder at the hinge.

Abstract (de)

Eine Brause zum Abschrecken von metallischen Werkstücken bei induktiver Härtung weist einen ringschlauchartigen Hohlzylinder 1 auf. Dieser besteht aus einem zylinderartigen Grundkörper 2 und einem Deckel 3. Diese sind lose aneinanderfügbar und in dieser aneinandergefügte Position durch eine lösbare Fixiereinrichtung zusammengehalten.

IPC 8 full level

C21D 9/00 (2006.01); **C21D 1/18** (2006.01); **C21D 1/667** (2006.01); **C21D 9/08** (2006.01); **C21D 9/28** (2006.01); **C21D 9/52** (2006.01)

CPC (source: EP)

C21D 1/18 (2013.01); **C21D 1/667** (2013.01); **C21D 9/0075** (2013.01); **C21D 9/085** (2013.01); **C21D 9/28** (2013.01); **C21D 9/525** (2013.01)

Citation (search report)

- [X] JP 2001098319 A 20010410 - HIGH FREQUENCY HEATTREAT
- [X] US 3986710 A 19761019 - DAY PAUL L, et al
- [E] EP 2592161 A1 20130515 - HONDA MOTOR CO LTD [JP]
- [A] JP 2003013135 A 20030115 - FUJI ELECT IND CO LTD
- [A] EP 1985716 A2 20081029 - PARK CHUN YOUNG [KR]
- [A] CN 201990710 U 20110928 - LIANYUNGANG DONGMUJIANG RIVER POWDER METALLURG CO LTD

Cited by

EP3901290A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2653570 A1 20131023; **EP 2653570 B1 20180905**; DE 102012007729 B3 20130926

DOCDB simple family (application)

EP 13001922 A 20130412; DE 102012007729 A 20120418