

Title (en)

Rotary hearth furnace for thermic, thermochemical or electrothermic treatment of metals in a diluted atmosphere.

Title (de)

Drehherdofen zur thermischen, thermochemischen oder elektrothermischen Behandlung von Metallen in verdünnter Atmosphäre.

Title (fr)

Four à sole tournante pour le traitement thermique, thermochimique ou électrothermique de métaux sous atmosphère raréfiée.

Publication

EP 0093060 A1 19831102 (FR)

Application

EP 83400814 A 19830425

Priority

FR 8207224 A 19820427

Abstract (en)

1. A rotary hearth furnace for thermic, thermochemical or electrothermic treatment of metal parts in a diluted atmosphere characterized in that it comprises : - a sealed metal enclosure (1), which may include a double wall, with an interposed cooling layer, this enclosure (1) comprising a side wall (2) preferably having a circular horizontal section, a cover (3) and a bottom (4) - means for creating, within the enclosure, an atmosphere for treatment under reduced pressure ; - a circular rolling path provided inside the enclosure on said bottom, in a peripheral region substantially adjacent the cylindrical wall ; - an annular tunnel (12) made of a heat isolating material, situated above the rolling track, this tunnel being open on its lower surface opposite the rolling track, this tunnel including means (13) for thermic, thermochemical or electrothermic treatment ; - a rotary hearth (22) consisting of a ring made of a heat isolating material, this hearth being movable on the rolling track and arranged so as to close the aperture of the lower part of the tunnel and thus provide continuity of the thermic isolation of the tunnel (12) as far as its lower surface is concerned ; - means for rotating the rotary hearth (22) by a motor (24) preferably lodged outside the enclosure ; - elements for supporting the parts (S) evenly distributed on the rotary hearth (22) ; - a hardening cell, comprising, on the one hand, a chamber forming a lock (6), also serving for charging and discharging the parts to be treated, this chamber being mounted against the side wall (2), inside the enclosure and communicating with the inner volume of the tunnel (12) by a first door and, if need be, a movable separating wall, and with the outside by a second door so as to allow the introduction and discharge of the parts to be treated inside the tunnel, and, on the other hand, a hardening vat (9) lodged below said chamber (6), this hardening cell comprising handling means (10) for depositing the parts on or taking them away from the rotary hearth, and for plunging them, at the end of treatment, into the hardening vat (9).

Abstract (fr)

Le four selon l'invention comprend une enceinte métallique étanche 1 des moyens permettant de réaliser à l'intérieur de l'enceinte 1 un vide relatif, un chemin de roulement circulaire 11, un tunnel annulaire 12 thermiquement isolant ouvert dans le bas au-dessus du chemin de roulement, ce tunnel 12 étant équipé de moyens de traitement, une sole tournante mobile sur le chemin de roulement et une cellule de trempe comprenant une chambre formant un SAS 6 communiquant avec le tunnel 12 par au moins une porte et/ou une cloison mobile et un bac de trempe 9. L'invention s'applique au traitement thermique, thermochimique et électrothermique de métaux.

IPC 1-7

F27B 9/16; **C21D 1/76**; **F27B 9/04**

IPC 8 full level

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CPC (source: EP)

C21D 1/773 (2013.01); **F27B 9/042** (2013.01); **F27B 9/16** (2013.01)

Citation (search report)

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