

Title (en)

Method for cross rolling of products in the shape of balls, in particular out of scrap railway rail heads

Title (de)

Verfahren zum Querwalzen von kugelförmigen Teilen, insbesondere aus Eisenbahnschrott wie Schienenköpfen

Title (fr)

Procédé de laminage transversal de produits sphériques, en particulier sur la base des champignons de rail de chemin de fer rebutés

Publication

EP 2537605 A1 20121226 (EN)

Application

EP 12461525 A 20120619

Priority

PL 39534911 A 20110620

Abstract (en)

A method for cross rolling of products such as balls, in particular the ones obtained from heads of scrap railway rails, whereby billet (1) in the form of a head cut off a scrap railway rail is placed between two flat tools (2) and (3) which have initial wedges (4) and (5), behind which there are wedges (6) and (7) which have longitudinal grooves (8) and (9) of a semicircular profile, next the flat tools (2) and (3) begin to move in the opposite directions with the same velocity (V), and during this time the moving initial wedges (4) and (5) cut into the billet (1) and make it rotate, thereby forming a semi-finished product (10) which has the form of a rod whose diameter (D1) is bigger than or equal to the diameter (D2) of a ball (11), next the wedges (6) and (7) with the grooves (8) and (9) cut into the semi-finished product (10) and form the balls (11), which are in the final stage of the rolling process separated from one another by cutters (12) and (13) located at the end of the flat tools (2) and (3). The process is done in a configuration wherein only one of the flat tools (2) or (3) moves in a sliding motion with the velocity (V), while the other tool (2) or (3) does not move.

IPC 8 full level

B21H 1/14 (2006.01)

CPC (source: EP)

B21H 1/14 (2013.01)

Citation (search report)

- [A] US 3206828 A 19650921 - TAKEFUSA KIKUCHI
- [A] DE 541623 C 19320115 - HOESCH KOELN NEUESSEN AG
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PL423888A1; CN111438190A; PL423889A1

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)

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DOCDB simple family (publication)

EP 2537605 A1 20121226; EP 2537605 B1 20140813; PL 215439 B1 20131231; PL 395349 A1 20130107

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