

Title (en)
DIE CASTING DEVICE AND METHOD FOR AMORPHOUS ALLOY

Title (de)
DRUCKGIESSVORRICHTUNG UND VERFAHREN FÜR AMORPHE LEGIERUNG

Title (fr)
DISPOSITIF ET PROCÉDÉ DE MOULAGE EN COQUILLE POUR ALLIAGE AMORPHE

Publication
EP 2790853 A1 20141022 (EN)

Application
EP 12858511 A 20121213

Priority
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• CN 2012086494 W 20121213

Abstract (en)
[origin: WO2013086990A1] A die casting apparatus (100) for amorphous alloy comprises a stationary die (1) and a movable die (2); a sealed cabin (4) defining a sealing chamber (40); a protecting gas supplying device connected with the sealed cabin (4) for supplying the protecting gas into the sealing chamber (40); a melting device (5) for receiving and melting amorphous alloy; a feed sleeve (6) having a molten material inlet (60), with a plunger (7) positioned therein for injecting the molted amorphous alloy from the melting device (5) into a die chamber via the molten material inlet (60); a driving device (8) connected with the plunger (7) for driving the plunger (7) in the feed sleeve (6); and a gas purifying device (10) communicated with the sealed cabin (4) for purifying the gas from the sealed cabin (4). A method of die casting an amorphous alloy comprises the steps of purifying a sealing chamber (40) defined in a sealed cabin (4); supplying protecting gas into the sealing chamber (40) to maintain the protecting gas in the sealing chamber (40) to a positive pressure; feeding amorphous alloy into a melting device (5) to obtain the molten amorphous alloy; feeding the molten amorphous alloy into a die chamber (3); and opening the mated stationary and movable dies to extract at least a component. The apparatus and method use positive pressure protecting gas without the need to form high degree vacuum, thus reducing manufacturing and maintenance costs.

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