

Title (en)

METHOD FOR MANUFACTURING A BALANCE FOR A TIMEPIECE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER UNRUH FÜR UHREN

Title (fr)

PROCEDE DE FABRICATION D'UN BALANCIER POUR PIECE D'HORLOGERIE

Publication

EP 3796102 A1 20210324 (FR)

Application

EP 20201790 A 20171222

Priority

- EP 20201790 A 20171222
- EP 17210299 A 20171222

Abstract (en)

[origin: US2019196408A1] A process for producing a metal alloy balance wheel by molding, the process including the following steps: a) making a mold in the negative shape of the balance wheel, b) getting hold of a metal alloy that has a thermal expansion coefficient of less than 25 ppm/° C. and is able to be in an at least partly amorphous state when it is heated to a temperature between its glass transition temperature and its crystallization temperature, c) putting the metal alloy into the mold, the metal alloy being heated to a temperature between its glass transition temperature and its crystallization temperature so as to be hot-molded and to form a balance wheel, d) cooling the metal alloy to obtain a balance wheel made of the metal alloy, e) releasing the balance wheel obtained in step d) from its mold.

IPC 8 full level

G04B 17/22 (2006.01); **G04B 18/00** (2006.01)

CPC (source: CN EP US)

G04B 17/063 (2013.01 - CN US); **G04B 17/066** (2013.01 - CN US); **G04B 17/222** (2013.01 - CN EP US); **G04B 17/227** (2013.01 - CN EP US); **G04B 18/006** (2013.01 - CN EP US); **G04D 3/0038** (2013.01 - CN); **B22C 9/00** (2013.01 - CN EP US); **B22D 15/00** (2013.01 - CN EP US); **B22D 25/026** (2013.01 - CN EP US); **B22D 27/04** (2013.01 - CN EP US); **C22C 14/00** (2013.01 - CN EP US); **C22C 16/00** (2013.01 - CN EP US); **C22C 21/00** (2013.01 - CN EP US); **C22C 38/08** (2013.01 - CN EP US); **G04C 3/04** (2013.01 - CN US)

Citation (applicant)

EP 3170579 A1 20170524 - SWATCH GROUP RES & DEV LTD [CH]

Citation (search report)

- [A] EP 3170579 A1 20170524 - SWATCH GROUP RES & DEV LTD [CH]
- [A] EP 2395402 A1 20111214 - MONTRES BREGUET SA [CH]
- [A] EP 2703909 A1 20140305 - SWATCH GROUP RES & DEV LTD [CH]
- [T] AGILENT: "Material Expansion Coefficients", LASER AND OPTICS USER'S MANUAL, 31 December 2002 (2002-12-31), USA, XP055485562, Retrieved from the Internet <URL:https://psec.uchicago.edu/thermal_coefficients/cte_metals_05517-90143.pdf> [retrieved on 20180619]

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

EP 17210299 A 20171222; CN 201811455309 A 20181130; CN 202110265760 A 20181130; EP 20201790 A 20171222; JP 2018216249 A 20181119; US 201816150524 A 20181003; US 202217669476 A 20220211