

Title (en)
METHOD FOR MANUFACTURING A PART MADE OF HARD MATERIAL WITH A POLYMER INSERT

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES HARTMATERIALS MIT EINEM POLYMEREINSATZ

Title (fr)
PROCEDE DE FABRICATION D'UNE PIECE EN MATERIAU DUR AVEC UN INSERT EN POLYMERE

Publication
EP 4208758 A1 20230712 (FR)

Application
EP 21769111 A 20210826

Priority
• EP 20194714 A 20200904
• EP 2021073582 W 20210826

Abstract (en)
[origin: WO2022048983A1] The invention relates to a method for manufacturing an ornamental part, for example a timepiece, jewellery or telephone part, in particular a watch crown, the part at least partially comprising a hard material having a Vickers hardness greater than 1000 HV, characterised in that the method comprises the following main steps: - a step of producing a precursor from a mixture of at least one powdered material with a binder, - a step of producing an insert (11) made of polymer material, the insert (11) at least partially having a shape that is the negative of that desired for at least one portion of the part, - a step of overmoulding the precursor on the insert (11) made of polymer material by injection into a mould in order to form a green body (10), and a step of sintering the green body (10) in order to form a body of the future part in this hard material.

IPC 8 full level
G04B 3/04 (2006.01); **A44C 27/00** (2006.01); **B44C 5/00** (2006.01); **G04B 37/06** (2006.01); **G04B 37/22** (2006.01)

CPC (source: EP US)
A44C 27/00 (2013.01 - EP); **B22F 5/06** (2013.01 - EP); **B22F 7/06** (2013.01 - EP); **B28B 1/24** (2013.01 - EP); **B28B 7/303** (2013.01 - EP); **B28B 7/342** (2013.01 - EP); **B29C 45/0001** (2013.01 - US); **B29C 45/0055** (2013.01 - US); **B29C 45/14** (2013.01 - US); **B29C 71/02** (2013.01 - US); **C04B 35/111** (2013.01 - EP); **C04B 35/486** (2013.01 - EP); **C04B 35/584** (2013.01 - EP); **G04B 3/041** (2013.01 - EP US); **G04B 37/06** (2013.01 - EP US); **G04B 37/22** (2013.01 - EP US); **G04B 37/225** (2013.01 - EP US); **B22F 2003/1042** (2013.01 - EP); **B29K 2995/007** (2013.01 - US); **B29L 2031/739** (2013.01 - US); **C04B 2235/6022** (2013.01 - EP); **C04B 2235/6028** (2013.01 - EP); **C04B 2235/96** (2013.01 - EP)

Citation (search report)
See references of WO 2022048983A1

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 3964895 A1 20220309; CN 116097179 A 20230509; EP 4208758 A1 20230712; JP 2023534522 A 20230809; TW 202212293 A 20220401; TW I810626 B 20230801; US 2023264396 A1 20230824; WO 2022048983 A1 20220310

DOCDB simple family (application)
EP 20194714 A 20200904; CN 202180054352 A 20210826; EP 2021073582 W 20210826; EP 21769111 A 20210826; JP 2023503436 A 20210826; TW 110129600 A 20210811; US 202118006604 A 20210826