

Title (en)

METHOD AND APPARATUS FOR FORGING GEARS

Title (de)

VERFAHREN UND VORRICHTUNG ZUM SCHMIEDEN VON ZAHNRÄDERN

Title (fr)

PROCÉDÉ ET APPAREIL POUR FORGER DES ENGRANAGES

Publication

**EP 3450045 A1 20190306 (EN)**

Application

**EP 18185340 A 20180724**

Priority

- JP 2017163117 A 20170828
- JP 2018129968 A 20180709

Abstract (en)

A method for forging a gear according to the present disclosure includes pushing a material into a molding space of a teeth profile die from one side of the teeth profile die for molding external teeth by a punch, and after the pushing, discharging a gear having the external teeth formed thereon from another side of the teeth profile die by the punch. The method further includes providing a material outer diameter constraint die for constraining an outer diameter of a previous material before the material is pushed into the molding space of the teeth profile die on the one side of the teeth profile die, and setting an inner diameter size of the material outer diameter constraint die to be smaller than a large diameter size of the gear set in the teeth profile die.

IPC 8 full level

**B21K 1/30** (2006.01); **B21J 5/12** (2006.01); **B23P 15/14** (2006.01)

CPC (source: CN EP US)

**B21J 5/12** (2013.01 - EP US); **B21K 1/30** (2013.01 - CN EP US); **B21K 1/305** (2013.01 - EP US)

Citation (applicant)

JP 2014217876 A 20141120 - ONDO CORP

Citation (search report)

- [XY] EP 0322770 A2 19890705 - MH CENTER LTD [JP], et al
- [X] DE 3433515 A1 19850411 - HITACHI LTD [JP], et al
- [Y] JP S52115764 A 19770928 - TOYOTA MOTOR CO LTD
- [A] JP 2005161340 A 20050623 - KONDOO SEIKOO KK, et al

Designated contracting state (EPC)

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Designated extension state (EPC)

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