

Title (en)

METHOD FOR DESIGNING AND MACHINING A GEAR, AND CORRESPONDING PROCESSING MACHINE AND SOFTWARE

Title (de)

VERFAHREN ZUM AUSLEGEN UND BEARBEITEN EINES ZAHNRADS, SOWIE ENTSPRECHENDE BEARBEITUNGSMASCHINE UND SOFTWARE

Title (fr)

PROCÉDÉ DE CONCEPTION ET D'USINAGE D'UNE ROUE DENTÉE, ET MACHINE D'USINAGE ET LOGICIEL CORRESPONDANTS

Publication

**EP 3583476 A1 20191225 (DE)**

Application

**EP 18700653 A 20180111**

Priority

- DE 102017103115 A 20170216
- EP 2018050617 W 20180111

Abstract (en)

[origin: WO2018149565A1] The invention relates to a method (200) for designing and machining a gear, having the following steps: a) designing (S1) a gear to be produced in a software-based computer-aided manner in order to obtain a function-oriented geometry (fG) of the gear, b) using a software-based computer-aided method (S2) for ascertaining a theoretically producible gear geometry which corresponds to the function-oriented geometry (fG) or which is used as an approximation of the function-oriented geometry (fG), c) providing production data (PD) which represents the theoretically producible geometry, d) machining (S3) a gear using the production data (PD) in a CNC-controlled processing machine (50), e) measuring (S4) the gear in order to obtain an actual data set (ID), f) carrying out a comparison (S5) of the actual data set (ID) with the production data (PD) in order to ascertain at least one correction variable ( $\Delta PD$ ), g) using (S6) the correction variable ( $\Delta PD$ ) in order to ascertain corrected production data from the production data (PD) or in order to carry out a machining correction in the processing machine (50), and h) post-machining the gear using the machining correction or using the corrected production data in order to machine at least one additional gear in the processing machine (50).

IPC 8 full level

**G05B 19/4069** (2006.01); **G05B 19/18** (2006.01); **G05B 19/4093** (2006.01)

CPC (source: CN EP US)

**B23F 23/04** (2013.01 - CN); **B25J 11/0055** (2013.01 - US); **B25J 15/0028** (2013.01 - US); **B25J 15/0033** (2013.01 - US); **G05B 19/186** (2013.01 - EP US); **G05B 19/4069** (2013.01 - EP US); **G05B 19/4093** (2013.01 - EP US); **B23F 23/06** (2013.01 - EP US); **G05B 2219/35028** (2013.01 - EP US); **G05B 2219/35036** (2013.01 - EP); **G05B 2219/35157** (2013.01 - EP); **G05B 2219/35193** (2013.01 - EP US); **Y02P 90/02** (2015.11 - EP); **Y10S 901/39** (2013.01 - EP US)

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

DOCDB simple family (publication)

**DE 102017103115 A1 20180816**; CN 110300936 A 20191001; CN 110300936 B 20230110; EP 3583476 A1 20191225; JP 2020507485 A 20200312; US 11999053 B2 20240604; US 2019391555 A1 20191226; WO 2018149565 A1 20180823

DOCDB simple family (application)

**DE 102017103115 A 20170216**; CN 201880012388 A 20180111; EP 18700653 A 20180111; EP 2018050617 W 20180111; JP 2019543886 A 20180111; US 201816483794 A 20180111