

Title (en)

GEAR PAIR FOR A GEARBOX AND METHOD FOR DIMENSIONING TOOTH THICKNESSES ON GEARS OF A GEAR PAIR

Title (de)

ZAHNRADPAAR FÜR EIN GETRIEBE UND VERFAHREN ZUM AUSLEGEN VON ZAHNDICKEN AN ZAHNRÄDERN EINES ZAHNRADPAARS

Title (fr)

PAIRE DE ROUES DENTÉES CONÇUE POUR UN ENGRENAGE ET PROCÉDÉ POUR DIMENSIONNER DES ÉPAISSEURS DE DENT SUR DES ROUES DENTÉES D'UNE PAIRE DE ROUES DENTÉES

Publication

EP 4182580 A1 20230524 (DE)

Application

EP 21740022 A 20210705

Priority

- DE 102020208810 A 20200715
- EP 2021068473 W 20210705

Abstract (en)

[origin: WO2022012987A1] The invention relates to a gear pair (10) for a gearbox, comprising a first gear (12) and a second gear (14), wherein: - the gears (12, 14) are designed and intended for meshing with each other; - the gears (12, 14) each have toothing (16, 18), in which a tooth (20, 22) and a tooth space (24, 26) follow each other in alternation; - a tooth root fillet (28, 30) is provided in the region of each tooth space (24, 26). According to the invention, the tooth (20, 22) has, on each of its two tooth flanks, a contact point (32, 34) at which the tooth contacts a 30° tangent (36, 38), the 30° tangent (36, 38) being oriented at an angle of 30° to a tooth center axis (40, 42) and contacting the tooth root fillet (28, 30) at the contact point (32, 34). The length of a chord (44, 46) which connects the contact points (32, 34) to one another at the tooth flanks of the tooth (20, 22) defines a tooth thickness at the contact point of the 30° tangent. The ratio of the tooth thickness at the contact point of the 30° tangent of the first gear (12) to the tooth thickness at the contact point of the 30° tangent of the second gear (14) lies in the range of 2.3 : 1.7 to 1.7 : 2.3.

IPC 8 full level

F16H 55/08 (2006.01); **F16H 55/14** (2006.01); **F16H 55/16** (2006.01); **F16H 55/18** (2006.01)

CPC (source: EP)

F16H 55/08 (2013.01); **F16H 55/16** (2013.01); **F16H 55/18** (2013.01); **F16H 1/06** (2013.01); **F16H 2055/086** (2013.01); **F16H 2055/0893** (2013.01)

Citation (search report)

See references of WO 2022012987A1

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)

DE 102020208810 A1 20220120; EP 4182580 A1 20230524; WO 2022012987 A1 20220120

DOCDB simple family (application)

DE 102020208810 A 20200715; EP 2021068473 W 20210705; EP 21740022 A 20210705