

Title (en)

METHOD OF EVALUATING CUTTING EDGE PROFILE OF RE-SHARPENING PINION CUTTER

Title (de)

VERFAHREN ZUR BEURTEILUNG DES SCHNEIDKANTENPROFILS EINES NACHSCHÄRFENDEN SCHNEIDRADS

Title (fr)

PROCEDE D' EVALUATION DU PROFIL DE BORD DE COUPE D'UN COUTEAU A PIGNON DE REAFFUTAGE

Publication

EP 1792690 B1 20120307 (EN)

Application

EP 05780973 A 20050825

Priority

- JP 2005015447 W 20050825
- JP 2004248623 A 20040827
- JP 2004338045 A 20041122

Abstract (en)

[origin: EP1792690A1] A method of evaluating the error of the cutting edge profile of a re-sharpening pinion cutter provided by performing relieving grinding by a screw motion along the outer diameter relieving angle of the pinion cutter by using a relieving grinding wheel. First, based on the cross-sectional profile of the relieving grinding wheel and considering the motion of the relieving grinding by the screw motion along the outer relieving angle of the pinion cutter, the cutting edge profile of the pinion cutter after re-sharpening is determined by coordinate transformation. Next, the tooth profile of a pinion having the same outer diameter as that of the re-sharpening pinion cutter and correctly meshing with the tooth profile of an internal gear to be cut is obtained, and the obtained tooth profile is used as an ideal tooth profile of the resharpener pinion cutter. Then, a normal line is drawn from a point on the tooth profile of the obtained re-sharpening pinion cutter to the ideal tooth profile, the length of the leg thereof is obtained, and the obtained length is used as the error of re-sharpening.

IPC 8 full level

B24B 1/00 (2006.01); **B24B 3/34** (2006.01); **B24B 49/00** (2012.01)

CPC (source: EP)

B24B 1/00 (2013.01); **B24B 3/346** (2013.01); **B24B 49/00** (2013.01)

Cited by

CN113419488A

Designated contracting state (EPC)

CH DE LI

DOCDB simple family (publication)

EP 1792690 A1 20070606; **EP 1792690 A4 20110112**; **EP 1792690 B1 20120307**; JP 4763611 B2 20110831; JP WO2006022336 A1 20080508; WO 2006022336 A1 20060302

DOCDB simple family (application)

EP 05780973 A 20050825; JP 2005015447 W 20050825; JP 2006532587 A 20050825