

Title (en)
METHOD AND DEVICE FOR FINISH MACHINING OF PERIPHERAL SURFACES OF ROTATIONALLY SYMMETRICAL WORKPIECE SECTIONS

Title (de)
VERFAHREN UND VORRICHTUNG ZUR FINISH-BEARBEITUNG VON UMFANGSFLÄCHEN ROTATIONSSYMMETRISCHER WERKSTÜCKABSCHNITTE

Title (fr)
PROCÉDÉ ET DISPOSITIF SERVANT À EFFECTUER DES FINITIONS SUR LES SURFACES PÉRIPHÉRIQUES DE PARTIES DE PIÈCES À USINER SYMÉTRIQUES EN ROTATION

Publication
EP 3157708 B1 20190227 (DE)

Application
EP 15729485 A 20150617

Priority
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• EP 2015063608 W 20150617

Abstract (en)
[origin: WO2015197448A1] In a method for finish machining of peripheral surfaces of rotationally symmetrical workpiece sections on workpieces, a finishing tool (100) comprising a pressing force in a pressing direction (AR) is pressed on the peripheral surface to be machined when a peripheral surface is machined. In order to produce material removal, the workpiece is rotated about a workpiece axis (192) and an oscillating relative movement is produced between the finishing tool and the workpiece. In order to produce the oscillating relative movement, the finishing tool is moved back and forth along an oscillation direction with a predeterminable oscillation stroke length and oscillation frequency. A linear movement of the finishing tool running parallel to the workpiece axis is superimposed on the oscillation movement over a linear stroke length. A pivoting movement of the finishing tool about a pivot axis running perpendicular to the workpiece axis and to the pressing direction is superimposed on the linear movement and oscillation movement. A pivot position of the finishing tool is controlled in relation to the axial position of the linear movement. In this way, different axial surface line profiles can be produced in a targeted manner by means of finishing in order, for instance, to obtain a convex shape of the workpiece sections.

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Citation (opposition)
Opponent : Supfina Grieshaber GmbH & Co. KG
• JP 4812489 B2 20111109
• EP 2871445 A1 20150513 - SUPFINA GRIESHABER GMBH & CO [DE]
• DE 102011087252 B3 20130117 - SUPFINA GRIESHABER GMBH & CO [DE]
• EP 2060363 A2 20090520 - THIELENHAUS TECHNOLOGIES GMBH [DE]
• DE 3225977 A1 19840112 - SUPFINA MASCHF HENTZEN [DE]
• WO 9529791 A1 19951109 - IND METAL PROD CORP [US]
• EP 1447170 A1 20040818 - NISSAN MOTOR [JP]
• EP 1181132 B1 20030611 - JUNKER ERWIN MASCHF GMBH [DE]
• EP 1514642 A2 20050316 - THIELENHAUS TECHNOLOGIES GMBH [DE]
• US 6185818 B1 20010213 - ITO MASARU [JP], et al
• K.-H. GROTE, J. FELDHOUSEN: "Dubbel Taschenbuch für den Maschinenbau, 22. Auflage", 2007, SPRINGER BERLIN, HEIDELBERG, NEW YORK, article G. POLL: "4. Wälzlager", pages: 2pp, XXI, G74 - G75, XP055653953

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