

Title (en)

MULTIPLEX EXCHANGEABLE CUTTING PLATE FOR A DRILLING TOOL

Title (de)

MEHRFACHWECHSEL SCHNEIDPLATTE FÜR EIN BOHRWERKZEUG

Title (fr)

PLAQUETTE DE COUPE À POSITIONS DE COUPE MULTIPLES POUR UN OUTIL DE PERÇAGE

Publication

EP 2493646 A1 20120905 (DE)

Application

EP 10784436 A 20101012

Priority

- DE 102009051073 A 20091028
- EP 2010006223 W 20101012

Abstract (en)

[origin: WO2011050903A1] The invention relates to a multiplex exchangeable cutting plate (1) designed and suitable for use in a drilling tool, for an especially wide range of applications. The invention further relates to a drilling tool (12), which, when equipped with said exchangeable cutting plate, can be operated particularly effectively. The multiplex exchangeable cutting plate (1) comprises two end faces (3), which are plane-parallel to each other and perpendicular to a plate axis (2), and which have a substantially triangular outer contour. At each edge of the two end faces (3), a primary cutting edge (6) is formed, extending substantially over the entire length of the edge. Furthermore, the multiplex exchangeable cutting plate (1) has a design that is rotationally symmetrical with respect to a 120° rotation about the plate axis (2) and rotationally symmetrical with respect to a 180° rotation transversely to the plate axis (2). The drilling tool (12) comprises a first receptacle (18a) for the cutting plate (1). Said first receptacle (18a) is provided with a substantially triangular main contact surface (19) for contact with one of the end faces (3) of the cutting plate (1). Additionally, the main contact surface (19) is oriented at an angle between 90° and approximately 60° with respect to a tool axis (14) and extends in the region of one of the three edges directly up to the outer tool circumference (24).

IPC 8 full level

B23B 27/14 (2006.01); **B23B 51/04** (2006.01)

CPC (source: CN EP KR US)

B23B 27/14 (2013.01 - KR); **B23B 27/145** (2013.01 - CN EP US); **B23B 51/00** (2013.01 - CN EP US); **B23B 51/04** (2013.01 - KR);
B23B 2200/049 (2013.01 - CN EP US); **B23B 2200/086** (2013.01 - CN EP US); **B23B 2200/3681** (2013.01 - CN EP US);
B23B 2200/369 (2013.01 - CN EP US); **Y10T 407/23** (2015.01 - EP US); **Y10T 407/235** (2015.01 - EP US); **Y10T 408/892** (2015.01 - EP US)

Citation (search report)

See references of WO 2011050903A1

Citation (examination)

JP 2000288815 A 20001017 - TOSHIBA TUNGALOY CO LTD

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
DOCDB simple family (publication)

WO 2011050903 A1 20110505; BR 112012009283 A2 20160531; CN 102574211 A 20120711; CN 102574211 B 20150218;
CN 104588740 A 20150506; DE 102009051073 A1 20110512; EP 2493646 A1 20120905; JP 2013509308 A 20130314;
KR 20120089694 A 20120813; US 2012282054 A1 20121108

DOCDB simple family (application)

EP 2010006223 W 20101012; BR 112012009283 A 20101012; CN 201080047997 A 20101012; CN 201510017124 A 20101012;
DE 102009051073 A 20091028; EP 10784436 A 20101012; JP 2012535652 A 20101012; KR 20127010960 A 20101012;
US 201013504612 A 20101012