

Title (en)  
MODULAR EXTRUSION DIE

Title (de)  
MODULARE EXTRUSIONS DÜSE

Title (fr)  
MATRICE D'EXTRUSION MODULAIRE

Publication  
**EP 2533917 A1 20121219 (EN)**

Application  
**EP 11742530 A 20110209**

Priority  
• NO 20100218 A 20100212  
• NO 2011000050 W 20110209

Abstract (en)  
[origin: WO2011099868A1] Extrusion tool or die for the extrusion of metallic material, in particular a material of aluminium or alloys thereof, or other non-ferrous metals such as Cu and alloys thereof. The die is a modular type comprising die plate/s (2, 3) with cavities (4, 5) provided with insert/s (6, 7). The area of the die with strong thermo-mechanical solicitation comprising the die plate/s (2, 3), is made of a nickel, iron or cobalt-based super alloy, whereas the die in the area with strong tribological solicitation comprising the insert/s, i.e. the mandrel (6) and/or the bearing (7) of the die, is manufactured of a wear resistant material which may be a high speed tool steel, a precipitation hardened steel or a high alloy hot-worked steel, or any of suitable steel types provided with a coating such as nano particle or CVD.

IPC 8 full level  
**B21C 25/02** (2006.01); **B21C 25/00** (2006.01); **B21C 25/04** (2006.01); **C23C 4/18** (2006.01)

CPC (source: EP KR US)  
**B21C 25/025** (2013.01 - EP KR US); **B21C 25/04** (2013.01 - EP KR US); **C22C 19/03** (2013.01 - KR); **C22C 19/07** (2013.01 - KR); **C22C 38/44** (2013.01 - KR); **C22C 38/48** (2013.01 - KR); **C22C 38/52** (2013.01 - KR); **C23C 28/00** (2013.01 - KR)

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 2011099868 A1 20110818**; **WO 2011099868 A8 20120712**; CA 2788660 A1 20110818; CA 2788660 C 20150512; CN 102712021 A 20121003; EP 2533917 A1 20121219; JP 2013519527 A 20130530; KR 20120135214 A 20121212; US 2013047692 A1 20130228

DOCDB simple family (application)  
**NO 2011000050 W 20110209**; CA 2788660 A 20110209; CN 201180005847 A 20110209; EP 11742530 A 20110209; JP 2012552830 A 20110209; KR 20127019743 A 20110209; US 201113516028 A 20110209