

Title (en)  
Launcher

Title (de)  
Startvorrichtung

Title (fr)  
Lanceur

Publication  
**EP 2112455 A3 20130605 (DE)**

Application  
**EP 09005704 A 20090423**

Priority  
DE 102008021041 A 20080426

Abstract (en)  
[origin: EP2112454A2] The device has a storage container (2) that is closed from outside from an outlet closure, for storing an immersed body (4), and an extruding unit for extruding the immersed body from the container even during opening of the closure. A piston (14) or a cylinder (12) is movable against the closure by a piston-cylinder arrangement (10), where the piston is movably coupled with the immersed body. A cover (22) is hinged at the storage container. The cover is elastically prestressed in a closing direction. The piston is coupled with a cutting tool.

IPC 8 full level  
**F41F 3/10** (2006.01); **F42B 39/20** (2006.01)

CPC (source: EP KR)  
**B63G 8/32** (2013.01 - KR); **F41F 3/10** (2013.01 - EP KR)

Citation (search report)

- [XAI] DE 10031409 C1 20010906 - HOWALDTSWERKE DEUTSCHE WERFT [DE]
- [XAI] DE 10335524 B3 20041111 - HOWALDTSWERKE DEUTSCHE WERFT [DE]

Designated contracting state (EPC)  
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 SE SI SK TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**EP 2112454 A2 20091028; EP 2112454 A3 20130605; EP 2112454 B1 20140723**; DE 102008021041 B3 20091119; EP 2112455 A2 20091028; EP 2112455 A3 20130605; EP 2112455 B1 20140604; ES 2488671 T3 20140828; ES 2519472 T3 20141107; KR 101214080 B1 20121224; KR 20090113185 A 20091029; PL 2112454 T3 20150227; PL 2112455 T3 20141128

DOCDB simple family (application)  
**EP 09003996 A 20090320**; DE 102008021041 A 20080426; EP 09005704 A 20090423; ES 09003996 T 20090320; ES 09005704 T 20090423; KR 20090028448 A 20090402; PL 09003996 T 20090320; PL 09005704 T 20090423