

Title (en)

PISTON PUMP FOR VISCOUS MATERIAL WITH WATER TANK

Title (de)

KOLBENPUMPE FÜR DICKSTOFFE MIT WASSERKASTEN

Title (fr)

POMPE À PISTON POUR MATIÈRES ÉPAISSES POURVUE DE BOÎTE À EAU

Publication

**EP 3613983 B1 20221005 (DE)**

Application

**EP 19192650 A 20190820**

Priority

DE 102018120582 A 20180823

IPC 8 full level

**F04B 15/02** (2006.01)

CPC (source: EP)

**F04B 15/02** (2013.01); **F04B 15/023** (2013.01)

Citation (opposition)

Opponent : Putzmeister Engineering GmbH

- DE 3834678 A1 19900419 - PUTZMEISTER MASCHF [DE]
- DE 102010019207 A1 20120119 - WERNE WALTER [DE]
- US 3146721 A 19640901 - WILHELM SCHWING FRIEDRICH
- DE 102008007069 A1 20090806 - PUTZMEISTER CONCRETE PUMPS [DE]
- DE 102005039238 B4 20160525 - SCHWING GMBH F [DE]
- DE 102007050279 B3 20090212 - SCHWING GMBH F [DE]
- DE 8705353 U1 19870619
- EP 0265748 A2 19880504 - TRINITY IND CORP [JP], et al
- WO 9800640 A1 19980108 - TEXACO DEVELOPMENT CORP [US], et al
- DE 102004013142 A1 20051006 - SONPLAS GMBH [DE]
- US 5332366 A 19940726 - ANDERSON THOMAS M [US]
- WO 9740969 A1 19971106 - CIFA SPA [IT], et al
- DE 1780902 U 19590108 - SCHWING FRIEDRICH WILH [DE]
- DE 609281 C 19350211 - WILLY SIEBERT
- DE 1296002 B 19690522 - GARTNER & CO J

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)

**EP 3613983 A1 20200226; EP 3613983 B1 20221005**; DE 102018120582 A1 20200227; DE 102018120582 A8 20200409

DOCDB simple family (application)

**EP 19192650 A 20190820**; DE 102018120582 A 20180823