

Title (en)  
METHOD AND ARRANGEMENT FOR CONCRETING VERTICAL SHAFTS

Title (de)  
VERFAHREN UND ANORDNUNG ZUM BETONIEREN VON VERTIKALEN SCHÄCHTEN

Title (fr)  
PROCEDE ET DISPOSITIF DE BETONNAGE DE PUIITS VERTICAUX

Publication  
**EP 1235961 B1 20031001 (DE)**

Application  
**EP 00989859 A 20001116**

Priority  
• DE 19959217 A 19991208  
• EP 0011329 W 20001116

Abstract (en)  
[origin: US6776558B1] A method and an arrangement for concretizing vertical shafts having a depth of e.g. 500 m or more. The concrete is conveyed to a low-lying application site (20) in the shaft by a concrete column that is situated in a downpipe (30). Delivery of concrete is guaranteed without separation (demixing) or clogging of concrete. The concrete is removed in portions of from the succeeding concrete column at the output end of the downpipe (30), is separated from the concrete column, is depressurized and it subsequently conveyed to the application site.

IPC 1-7  
**E02D 15/04**; B65G 11/20; F04B 15/02

IPC 8 full level  
**B65G 11/20** (2006.01); **E02D 15/04** (2006.01); **F04B 15/02** (2006.01)

CPC (source: EP US)  
**E02D 15/04** (2013.01 - EP US); **F04B 15/02** (2013.01 - EP US); **Y10S 417/90** (2013.01 - EP US)

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**WO 0142570 A1 20010614**; AT E251258 T1 20031015; DE 19959217 A1 20010613; DE 50003946 D1 20031106; EP 1235961 A1 20020904; EP 1235961 B1 20031001; ES 2206347 T3 20040516; US 6776558 B1 20040817

DOCDB simple family (application)  
**EP 0011329 W 20001116**; AT 00989859 T 20001116; DE 19959217 A 19991208; DE 50003946 T 20001116; EP 00989859 A 20001116; ES 00989859 T 20001116; US 14918202 A 20020909