

Title (en)  
Excavation apparatus

Title (de)  
Aushubvorrichtung

Title (fr)  
Appareil d'excavation

Publication  
**EP 2226427 A3 20120418 (EN)**

Application  
**EP 10155427 A 20100304**

Priority  
IT UD20090053 A 20090305

Abstract (en)  
[origin: EP2226427A2] Excavation apparatus (10) comprising excavation means (15), first support means (21) able to support and move the excavation means (15) in a substantially vertical direction, a mobile arm (14) extending upward and having a lower end (14a) connected to a cab or turret (12) and an upper end (14b) on which said first support means (21) are disposed, flexible pipes (26) comprising means to suck up and/or remove detritus and/or means to drive said excavation means (15), winding/unwinding means (25) for said flexible pipes (26), second support means (24) provided to support and move said winding/unwinding means (25) in said vertical direction. The excavation apparatus (10) comprises at least an extension element (22), oblong in shape, extending upward and provided with a lower end (22a) connected to the upper end (14b) of said mobile arm (14) and with an upper end (22b) in substantial correspondence with which said second support means (24) are disposed and supported, said extension element (22) being normally positioned in a substantially vertical direction. The distance between the upper end (14b) of the mobile arm (14) and the upper end (22b) of the extension element (22) that supports said second support means (24) defines a supplementary vertical travel of said winding/unwinding means (25) such that said flexible pipes (26) are able to extend in height to a greater extent than the extension in height of said mobile arm (14), so as to increase the depth of excavation that said excavation means (15) can achieve. Articulation means (30) are provided to connect rotatably said extension element (22) to said mobile arm (14) so that said extension element (22) is selectively mobile in order to displace said second support means (24) in a manner coordinated with the displacement of the mobile arm (14), so as to keep said excavation means (15) vertical substantially in every operating condition, even when the depth of the excavation is increased.

IPC 8 full level  
**E02D 17/13** (2006.01); **E02F 3/20** (2006.01); **E02F 3/58** (2006.01)

CPC (source: EP)  
**E02D 17/13** (2013.01); **E02F 3/205** (2013.01); **E02F 3/58** (2013.01)

Citation (search report)

- [IA] EP 1580398 A1 20050928 - BAUER MASCHINEN GMBH [DE]
- [A] JP H0635391 U 19940510
- [A] EP 0533558 A1 19930324 - SOL COMP DU [FR]
- [A] EP 0843050 A1 19980520 - SOL COMP DU [FR]
- [A] JP H0457583 U 19920518

Cited by  
NO20180946A1

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 SM TR

Designated extension state (EPC)  
AL BA ME RS

DOCDB simple family (publication)  
**EP 2226427 A2 20100908; EP 2226427 A3 20120418; EP 2226427 B1 20130703;** IT 1393221 B1 20120411; IT UD20090053 A1 20100906

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**EP 10155427 A 20100304;** IT UD20090053 A 20090305