

Publication

**EP 0902130 A3 19990428 (FR)**

Application

**EP 98116729 A 19980903**

Priority

DE 19740489 A 19970915

Abstract (en)

[origin: EP0902130A2] Base frame (2) having shape corresponding to that of the manhole frame has a cutting ring (12) with cutting edge (13) underneath, which can be raised by an arrangement of a lifting beams (6) and hydraulic cylinder (5). Flexible connecting links (11) are provided on a lifting device (7) with several horizontal expanding arms (8). The cylinder and the expanding arms are supplied by a central hydraulic unit (19) and valves (20, 21) allow them to be shut off individually.

IPC 1-7

**E02D 29/14**

IPC 8 full level

**E02D 29/14** (2006.01)

CPC (source: EP)

**E02D 29/1445** (2013.01)

Citation (search report)

- [A] DE 29608097 U1 19960613 - JOCH HANS [DE]
- [A] DE 19542771 A1 19960704 - VESTER KNUD ERIK [DK]

Cited by

ITVI20080285A1; DE19912188A1; CN114801966A; CN116873837A

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**EP 0902130 A2 19990317; EP 0902130 A3 19990428**; DE 19740489 A1 19990325; DE 19740489 C2 19990715

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