

Title (en)

A submerged tunnel and a method of, and means for, constructing a submerged tunnel.

Title (de)

Unterwassertunnel und Verfahren und Vorrichtung zur Herstellung eines Unterwassertunnels.

Title (fr)

Tunnel sous-marin et dispositif et moyens pour sa production.

Publication

EP 0034907 A1 19810902 (EN)

Application

EP 81300640 A 19810217

Priority

GB 8006114 A 19800222

Abstract (en)

A method of, and apparatus for, constructing a submerged tunnel in situ and a submerged tunnel formed thereby has an inverted arch formation to resist upward buoyancy thrust and a sealed chamber unit mounted on the tunnel and longitudinally displaceable along it for servicing the exterior of the tunnel. The tunnel is constructed in situ by progressively lengthening towards each other two tunnel sections (3, 3 min), which extend in cantilevered manner from opposed base foundations (1 and 2). Each tunnel section has mounted on the free end thereof an outer chamber unit (13, 13 min) and an inner chamber unit (6, 6 min) within the latter of which the free end of the tunnel section is progressively formed and extended. As the tunnel sections (3, 3 min) are lengthened their associated chamber units (6, 6 min , 13, 13 min) are displaced longitudinally and sequentially to provide clearance for further lengthening, such displacement may be effected by hydraulic rams (20) or mechanical rack and pinion devices (19). When the tunnel sections 3, 3 min are sufficiently lengthened the outer chamber units (13, 13 min) dock and are sealed together at 28, 28 min and a passage opened between those chamber units (13, 13 min). The inner chamber units (6, 6 min) are removed from within the combined outer chamber units (13, 13 min) and a passage is opened between these latter units through which the tunnel sections are extended and connected together to form the continuous tubular tunnel. The submerged depth of the tunnel sections may be controlled during construction by winches and anchorages devices (25, 26 and 27).

IPC 1-7

E21D 10/08

IPC 8 full level

E02D 29/067 (2006.01)

CPC (source: EP)

E02D 29/067 (2013.01)

Citation (search report)

- DE 306127 C
- DE 369557 C 19230220 - GUSTAV PETER HELFRICH
- DE 1784974 C2 19720504 - HOLZMANN PHILIPP AG
- DE 2423854 A1 19751204 - BOESSNER JOSEF
- GB 2016065 A 19790919 - PRECONTRAINTE STRUCTURES SOC F
- [A] US 3952524 A 19760427 - RAND BURGESS F, et al

Cited by

WO2023209744A1; IT202200008171A1

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EP 0034907 A1 19810902; EP 0034907 B1 19840606; AT E7809 T1 19840615; DE 3162634 D1 19840712; GB 2070111 A 19810903; GB 2070111 B 19831214; GR 78276 B 19840926

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