

Title (en)  
Tunnel boring machine

Title (de)  
Tunnelbohrmaschine

Title (fr)  
Machine de forage de tunnels

Publication  
**EP 0764761 B1 20010404 (DE)**

Application  
**EP 96114882 A 19960917**

Priority  
DE 19534814 A 19950920

Abstract (en)  
[origin: EP0764761A1] The boring head (10) of this tunnelling machine (100) cuts the entire tunnel cross section, turning on axis (A) of the machine body (20), coincident with the tunnel axis M. The boring head is forced to advance against the face (3). Behind the head lies a bulkhead (21) and rotary seal (22) pressurised with compressed air, holding back groundwater penetrating the face. Through the pressure bulkhead penetrates a conveyor carrying cuttings (B) rearward from the boring head, enclosed by a pressure tight casing (60). At the far delivery end (42) of the conveyor, a unit (50) locks-out the cuttings into the non-pressurised area behind the bulkhead. In this novel machine, in a siphonic section (40, 42), compressed air matches the pressure of penetrating groundwater. Also claimed is the method of operation, in which the air pressure is controlled to maintain the water level (Sp) within this end section.

IPC 1-7  
**E21D 9/12**; **E21D 9/08**

IPC 8 full level  
**E21D 9/12** (2006.01); **E21D 9/08** (2006.01); **E21D 9/087** (2006.01); **E21D 9/13** (2006.01)

CPC (source: EP)  
**E21D 9/0879** (2016.01); **E21D 9/13** (2013.01)

Cited by  
CN103967498A; EP1195498A1

Designated contracting state (EPC)  
AT BE CH DE DK FR GR IT LI NL

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**EP 0764761 A1 19970326**; **EP 0764761 B1 20010404**; AT E200337 T1 20010415; DE 19534814 A1 19970327; DE 59606695 D1 20010510; DK 0764761 T3 20010507; JP H09217589 A 19970819

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