

Title (en)
Tunnel excavating process and tunnel excavator

Title (de)
Verfahren zum Herstellen eines Tunnels und Tunnelvortriebsmaschine

Title (fr)
Procédé d'excavation de tunnels et machine de creusement

Publication
EP 0979926 A2 20000216 (EN)

Application
EP 99115503 A 19990805

Priority
JP 22896798 A 19980813

Abstract (en)
Provided are a tunnel excavating process which can reduce pressure required in excavation and excavate under lower pressure than the prior art even if compressive strength of base rocks is high, and a tunnel excavator capable of suitably executing the process. A plurality of roller cutter groups are arranged at given intervals in an excavating direction and in a direction vertical thereto, and points of roller cutters belonging to each roller cutter group in contact with base rocks are located in the vicinity of a difference in level portion formed in the base rocks to excavate the base rocks. There is constituted a tunnel excavator 1 in which a plurality of roller cutter groups 3x are arranged at given intervals in an excavating direction and in a direction vertical thereto on a cutter head 2 having a substantially conical shape. A boring head 4 can be disposed coaxial with the cutter head 2 to bore a pilot tunnel 7. <IMAGE>

IPC 1-7

E21D 9/10

IPC 8 full level

E21D 9/10 (2006.01); **E02D 29/045** (2006.01); **E21D 9/08** (2006.01)

CPC (source: EP)

E21D 9/1026 (2013.01); **E21D 9/104** (2013.01)

Cited by

CN105422001A; CN109356600A; US2022259973A1; WO2004094772A1

Designated contracting state (EPC)

AT CH DE FR GB IT LI

DOCDB simple family (publication)

EP 0979926 A2 20000216; **EP 0979926 A3 20000823**; CA 2280113 A1 20000213; JP 2000064788 A 20000229; JP 3489092 B2 20040119

DOCDB simple family (application)

EP 99115503 A 19990805; CA 2280113 A 19990812; JP 22896798 A 19980813