

Title (en)
CONTROL SYSTEM FOR A TUNNEL BORING MACHINE

Publication
EP 0534338 A3 19930609 (DE)

Application
EP 92116084 A 19920921

Priority
DE 4131673 A 19910924

Abstract (en)
[origin: EP0534338A2] The control system contains a sensor unit (18) with a dynamically synchronised gyroscope which contains two linear accelerometers allocated to orthogonal measuring axes and responds to azimuthal and pitching movements. The sensor unit is located in a housing (28) which is reproducibly guided in a running tube (16). In its working position, the sensor unit is releasably connected to the driving head (4) of the tunnel boring machine. By means of a cable (20) which can be wound up and unwound on a drum (22), the housing can be moved in the running tube and out of the running tube into a reference position. Re-adjustment of the sensor unit is effected in the reference position at certain moments of the tunnel boring. The output signals from the sensor unit and a path-length measuring device on the drum are analysed in a control unit (26) for determining the position of the driving head, deviations from a desired axis (6) being determined and serving to regulate the driving. <IMAGE>

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E21B 47/022; **E21B 7/06**; **E21B 7/20**

IPC 8 full level
E21B 7/06 (2006.01); **E21B 7/20** (2006.01); **E21B 47/022** (2012.01); **E21D 9/093** (2006.01)

CPC (source: EP)
E21B 7/06 (2013.01); **E21B 7/201** (2013.01); **E21B 47/022** (2013.01)

Citation (search report)
• [YD] DE 2922415 A1 19801204 - BODENSEEWERK GERAETETECH
• [Y] WO 8805114 A1 19880714 - SUNDSTRAND DATA CONTROL [US]
• [X] PATENT ABSTRACTS OF JAPAN vol. 11, no. 100 (P-561)28. März 1987 & JP-A-61 251 710 (ISHIKAWAJIMA HARIMA HEAVY IND CO LTD) 8. November 1986
• [A] PATENT ABSTRACTS OF JAPAN vol. 9, no. 281 (P-403)9. Dezember 1983 & JP-A-60 123 715 (NIPPON KOKAN KK) 2. Juli 1985

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