

Title (en)

METHOD AND DEVICE FOR LINING A TUNNEL WITH CONCRETE CAST IN SITU

Publication

EP 0300159 B1 19910925 (DE)

Application

EP 88108179 A 19880521

Priority

DE 3723625 A 19870717

Abstract (en)

[origin: US4854776A] A process for lining a tunnel with concrete behind a tunnel excavator having a for front advanced along with an excavator head in which the concrete is forced between the surrounding subterranean geological structure and an inner tunnel-lining form through a form front which rides sealingly on the outer surface of the inner tunnel-lining form and on the inner surface of the shield. Simultaneously, the form front, which is longitudinally movable relative to the shield, moves forward relative to the inner tunnel-lining form. The form front is movable forward simultaneously balancing the friction forces occurring between the form front and the shield and the inner tunnel-lining form. Satisfactory results are obtained when the friction forces between concrete sections of a predetermined length are measured by moving the form front relative to the stationary shield and the inner tunnel-lining form during an interruption in concrete feed. An apparatus for carrying out the process includes a hydraulic spring device attached between the form front and the shield which is a part of a control loop having a control device connected to the concrete pump. The hydraulic cylinder device can comprise a plurality of double-cylinder piston-cylinder devices.

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