

Title (en)

TUNNEL LINING COMPOSED OF AT LEAST TWO CONCRETE ELEMENTS

Title (de)

TUNNELAUSBAU ZUSAMMENGESETZT AUS WENIGSTENS ZWEI BETONELEMENTEN

Title (fr)

SOUTÈNEMENT DE TUNNEL COMPOSÉ D'AU MOINS DEUX ÉLÉMENTS EN BÉTON

Publication

**EP 3591166 B1 20210602 (DE)**

Application

**EP 18181230 A 20180702**

Priority

EP 18181230 A 20180702

Abstract (en)

[origin: CA3105498A1] The invention relates to a tunnel lining composed of at least two concrete elements (10), having at least one protective element (20) connected to each concrete element, the protective element (20) having a protective portion, which has a first side facing the concrete element (10), on which first side at least one connecting element (17) for establishing a retaining connection of the protective portion to the concrete element (10) is provided, the protective portion consisting of at least one plastic, and the protective element (20) having at least one protective element seal (30), which is connected to the protective portion (20), the connection to the protective portion (20) being gas-tight and liquid-tight. There is a gap (40) between the at least two concrete elements (10) arranged to form the tunnel lining (300). The gap (40) is sealed gas-tight and liquid-tight with respect to the tunnel interior (100) by at least one protective element seal (30) with a sealing effect (first sealing effect). Drainage (C) of the tunnel lining (300) into the tunnel interior (100) is provided.

IPC 8 full level

**E21D 11/08** (2006.01); **E21D 11/38** (2006.01)

CPC (source: EP US)

**E21D 11/08** (2013.01 - EP US); **E21D 11/385** (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**EP 3591166 A1 20200108; EP 3591166 B1 20210602**; CA 3105498 A1 20200109; CA 3105498 C 20230822; CN 112368462 A 20210212; CN 112368462 B 20221223; DK 3591166 T3 20210816; ES 2880101 T3 20211123; US 11834950 B2 20231205; US 2021355827 A1 20211118; WO 202007631 A1 20200109

DOCDB simple family (application)

**EP 18181230 A 20180702**; CA 3105498 A 20190624; CN 201980044529 A 20190624; DK 18181230 T 20180702; EP 2019066630 W 20190624; ES 18181230 T 20180702; US 201917255766 A 20190624