

Title (en)
TUNNEL LININGS

Publication
EP 0317220 B1 19920108 (EN)

Application
EP 88310688 A 19881111

Priority
GB 8726575 A 19871113

Abstract (en)
[origin: EP0317220A1] A method of assembling a tunnel lining formed of concrete segments (1, 2) joined together at their side edges to form annularly together with interengaging joining means (3, 8-17) which are interengaged by sliding one segment relatively to the other. The joining means includes a recess (5) in an edge of one segment, the recess containing a channel member (8) with intumed flanges (9) defining a slot in which a screw threaded bolt (15) can be slid. The bolt is screwable into the adjacent segment and once the segments are located in the desired position, the bolt is tightened to clamp the segments together, the bolt having a head (16) which abuts the inner surfaces (10) of the flanges (9). The method also includes joining segments by inserting dowels in sockets of adjacent segments, the dowels having radially extending fins (24) of resiliently deformable material of greater width than the sockets (21) so that the deformed fins are caused to engage the inner surfaces of both opposed sockets to hold the adjacent annuli together.

IPC 1-7
E04B 1/04; **E04B 1/41**; **E21D 11/08**

IPC 8 full level
E04B 1/04 (2006.01); **E04B 1/41** (2006.01); **E21D 11/08** (2006.01)

CPC (source: EP)
E04B 1/41 (2013.01); **E21D 11/083** (2013.01)

Cited by
US6616377B1; EP0651135A3; FR2737535A1; EP0765991A1; FR2739119A1; GB2333819A; CN109736837A; FR2715189A1; EP0665363A1; CZ305588B6; CN108086484A; CN111794768A; EP0979927A1; US6076995A; IT201900024823A1; CN109958457A; EP0931908A1; FR2754839A1; CN104878854A; CN110761414A; CN114198118A; US6379077B1; WO9803773A1; WO9939081A1

Designated contracting state (EPC)
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)
EP 0317220 A1 19890524; **EP 0317220 B1 19920108**; AT E71430 T1 19920115; DE 3867605 D1 19920220; GB 8726575 D0 19871216

DOCDB simple family (application)
EP 88310688 A 19881111; AT 88310688 T 19881111; DE 3867605 T 19881111; GB 8726575 A 19871113