

Title (en)  
SHELTER.

Title (de)  
SCHUTZRAUM.

Title (fr)  
ABRI.

Publication  
**EP 0408577 A1 19910123 (DE)**

Application  
**EP 89902644 A 19890221**

Priority  
DE 3806126 A 19880226

Abstract (en)  
[origin: WO8908181A1] A reinforced concrete construction for road tunnels has an inner shell composed of sheet segments (3, 9) which are forepoled with resilience gaps then filled up with concrete, a cavity being left empty in the resilience area for purposes of deformation. After the horizontal section of the construction is complete, the resilience area is stiffened and sealed.

Abstract (fr)  
Une nouvelle construction flexible d'abris en béton armé se compose de segments (4) en tôle d'acier pourvus à l'extérieur de segments en béton (1, 2) et reliés les uns aux autres par des éléments d'élasticité (7).

IPC 1-7  
**E04H 9/12; E21D 11/05**

IPC 8 full level  
**E21D 11/18** (2006.01); **E04H 9/12** (2006.01); **E21D 11/00** (2006.01); **E21D 11/05** (2006.01); **E21D 11/14** (2006.01); **E21D 11/22** (2006.01)

CPC (source: EP KR US)  
**E04H 9/12** (2013.01 - EP KR US); **E21D 11/00** (2013.01 - EP US); **E21D 11/05** (2013.01 - EP KR US); **E21D 11/22** (2013.01 - EP US)

Citation (search report)  
See references of WO 8908179A1

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

DOCDB simple family (publication)  
**WO 8908181 A1 19890908**; BR 8900857 A 19891017; CN 1017465 B 19920715; CN 1038330 A 19891227; DE 3806126 A1 19890907; DE 3806126 C2 19900816; DE 58902974 D1 19930121; EP 0408577 A1 19910123; EP 0413693 A1 19910227; EP 0413693 B1 19921209; FR 2627802 A1 19890901; GB 2216157 A 19891004; GB 2216157 B 19920102; GB 8904255 D0 19890412; JP H02503339 A 19901011; JP H02503584 A 19901025; KR 890013307 A 19890922; KR 900700712 A 19900816; KR 900700719 A 19900816; PL 159357 B1 19921231; PL 277924 A1 19890918; RU 1833474 C 19930807; US 4997317 A 19910305; WO 8908179 A1 19890908; ZA 891490 B 19891129

DOCDB simple family (application)  
**EP 8900159 W 19890221**; BR 8900857 A 19890224; CN 89101857 A 19890225; DE 3806126 A 19880226; DE 58902974 T 19890221; EP 8900158 W 19890221; EP 89902644 A 19890221; EP 89902764 A 19890221; FR 8902413 A 19890224; GB 8904255 A 19890224; JP 50244689 A 19890221; JP 50255489 A 19890221; KR 890002329 A 19890227; KR 890701975 A 19891026; KR 890701976 A 19891026; PL 27792489 A 19890224; SU 4613677 A 19890224; US 31588489 A 19890224; ZA 891490 A 19890227