

Title (en)  
CLOSED TUNNEL LINER, ESPECIALLY FOR UNDERGROUND GALLERIES

Publication  
**EP 0047897 B1 19840613 (DE)**

Application  
**EP 81106719 A 19810828**

Priority  
DE 3032521 A 19800829

Abstract (en)  
[origin: US4439065A] Thin, sheet metal elements with longitudinally arranged corrugations are used for a gallery construction. The cross-sectional form of the thin, metal sheets is wavy. The construction elements are easy to handle, and can be quickly assembled to provide a provisional gallery. Final assembly with anchoring stays or with supporting arches can subsequently take place under the protection of the provisional construction.

IPC 1-7  
**E21D 11/20**

IPC 8 full level  
**E21D 11/00** (2006.01); **E21D 11/20** (2006.01)

CPC (source: EP US)  
**E21D 11/006** (2013.01 - EP US); **E21D 11/20** (2013.01 - EP US)

Cited by  
CN112392504A

Designated contracting state (EPC)  
BE GB LU SE

DOCDB simple family (publication)  
**EP 0047897 A1 19820324**; **EP 0047897 B1 19840613**; DE 3032521 A1 19820311; DE 3032521 C2 19840927; US 4439065 A 19840327; ZA 816000 B 19820825

DOCDB simple family (application)  
**EP 81106719 A 19810828**; DE 3032521 A 19800829; US 29760281 A 19810831; ZA 816000 A 19810828