

Title (en)

SUPPORTING DEVICE FOR STABILISING UNDERGROUND CAVITIES, PARTICULARLY TUNNELS, AS WELL AS MINING OPENINGS

Title (de)

STÜTZVORRICHTUNG ZUR STABILISIERUNG VON UNTERIRDISCHEN HOHLRÄUMEN, INSbesondere TUNNELN, SOWIE BERGBAUÖFFNUNGEN

Title (fr)

DISPOSITIF DE SUPPORT POUR LA STABILISATION DE CAVITÉS SOUTERRAINES, EN PARTICULIER DES TUNNELS, AINSI QUE DES OUVERTURES D'EXPLOITATION MINIÈRE

Publication

EP 3540178 A1 20190918 (EN)

Application

EP 18161850 A 20180314

Priority

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Abstract (en)

The invention relates to a supporting device (1) for stabilizing underground cavities (4), especially tunnels, having at least a first supporting beam (1) and at least one compression body (7). The compression body (7) is arranged such that the supporting beam (2) is able to move under load wherein the compression body (7) is made of a material with high strength and great permanent deformation ability.

IPC 8 full level

E21D 11/05 (2006.01); **E21D 11/18** (2006.01); **E21D 11/30** (2006.01)

CPC (source: EP)

E21D 11/05 (2013.01); **E21D 11/18** (2013.01); **E21D 11/30** (2013.01)

Citation (applicant)

HOEK, E.; GUEVARA, R., OVERCOMING SQUEEZING IN THE YACAMBU-QUIBOR TUNNEL, ROCK MECHANICS AND ROCK ENGINEERING, vol. 42, no. 2, pages 389 - 418

Citation (search report)

- [XI] CH 451233 A 19680515 - LOMBARDI GIOVANNI DR ING [CH]
- [X] EP 2918772 A2 20150916 - BOCHUMER EISENHÜTTE HEINTZMANN GMBH & CO KG [DE]
- [X] US 5332334 A 19940726 - WAGNER HARALD [AT], et al
- [X] DE 1018370 B 19571031 - HEINRICH AICHINGER HINTERHOFER, et al
- [A] US 2005191138 A1 20050901 - KOVARI KALMAN [CH]

Cited by

CN113073993A

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

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