

Title (en)

Beam with parallel belt, in particular for the extension of underground galleries and tunnels

Title (de)

Parallelgurträger für insbesondere Streckenausbau und Tunnelausbau

Title (fr)

Faisceau avec ceinture parallèle, en particulier pour la prolongation des galeries et des tunnels souterrains

Publication

**EP 1505253 B1 20120111 (DE)**

Application

**EP 04011896 A 20040519**

Priority

DE 10336154 A 20030807

Abstract (en)

[origin: EP1505253A2] In a process to add structural strength to a tunnel lining, the lining is strengthened by twin rods (2) held in tension by anchorage clamps (4) secured in the surrounding rock by pins inserted through apertures (7). The wire rods (2) terminate in threads and locknuts (9).

IPC 8 full level

**E21D 11/00** (2006.01); **E21D 11/10** (2006.01)

CPC (source: EP US)

**E21D 11/006** (2013.01 - EP US); **E21D 11/107** (2013.01 - EP US)

Cited by

CN102182483A; CN111576881A; WO2016097882A1; WO2014091323A3

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**EP 1505253 A2 20050209; EP 1505253 A3 20050420; EP 1505253 B1 20120111**; AT E541111 T1 20120115; AU 2004203023 A1 20050224; AU 2004203023 B2 20090723; CA 2473260 A1 20050207; CA 2473260 C 20080226; DE 10336154 A1 20050303; DE 10336154 B4 20060921; PL 202381 B1 20090630; PL 369058 A1 20050221; US 2005031420 A1 20050210; US 6921232 B2 20050726; ZA 200405125 B 20050525

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