Title (en)

Process for consolidating coal and/or rock in mines.

Title (de)

Verfahren zum Verfestigen von Kohle und/oder Gestein im Bergbau.

Title (fr)

Procédé pour la solidification de charbon et/ou de roches dans les mines.

Publication

EP 0008127 A1 19800220 (DE)

Application

EP 79102934 A 19790813

Priority

DE 2835451 A 19780812

Abstract (en)

1. A process for consolidating coal and/or rock in mining by the injection of a dispersion which hardens after its entry and which comprises a magnesium chloride solution, calcined magnesite, highly-active magnesium oxide, bentonite and water, characterized in that an amount of more than 2.5 % by weight of hyghly-active magnesium oxide is admixed and that, additionally, a chemical substance which retards setting is added.

Abstract (de)

Bei einem Verfahren zum Verfestigen von Kohle und/oder Gestein durch Injizieren einer nach ihrem Eindringen erhärtenden Dispersion werden zur Stabilisierung oder Klebfestigkeit und zur Verringerung der Abbindezeit einer Mischung aus konzentrierter Magnesiumchloridlösung, gebranntem Magnesit und Bentonitmehl zusätzlich Anteile von hochaktivem Magnesiumoxid und von einem Abbindeverzögerer, beispielsweise Borax, zugesetzt.

IPC 1-7

E21F 17/00

IPC 8 full level

E21D 9/00 (2006.01)

CPC (source: EP)

E21D 9/002 (2013.01)

Citation (search report)

- US 2543959 A 19510306 - EASTIN WILLIAM C
- GB 1480161 A 19770720 - OIL BASE
- DE 2204281 B2 19750731
- FR 416683 A 19101026 - SAGAX WOOD COMPANY [US]
- FR 1037566 A 19530921 - POUR LA FABRICATION DE MATERIA
- H. KUHL, "Zement-Chemie", 3. Auflage, Band III, 1961, VEB-Verlag Technik, Berlin Seiten 299 bis 304.
- THE OIL AND GAS JOURNAL, 14. Marz 1977, P.N. PARKER et al. "Additives tailor cement to individual wells" Seiten 54 bis 58.

Cited by

CN102650126A; CN102102360A; US6777090B2; WO2014016019A1; US9644111B2; DE102015000812A1; EP3444289A1; WO2019034586A1; WO2021037791A1; US7855266B2; WO2012113829A1; US9371469B2; WO2016116259A1; WO2019110808A1; WO2021136800A1; WO2005047401A2; WO2011029502A1; DE102009041380A1; US9266995B2; WO2018069018A1; WO2021018945A1; US11274228B2; DE102008060454A1; WO2012065942A1; US8486539B2; US9090732B2; US9328257B2; WO2016120160A1; WO2016166470A1; DE102007061855A1; US11479633B2; US6555612B1; WO2013076208A1; US9267054B2; DE102015000813A1; EP3115381A1; WO2019214841A1; EP3677612A1; WO2020144139A1; WO2021037606A1; DE102007015261A1; DE102009016195A1; WO2010112106A1; WO2014016026A1; US8865851B2; US9080002B2; WO2016150823A1; US9631112B2; WO2017076754A1; WO2017182429A1; US10815330B2; EP1897894A1; WO2011131461A1; DE102010015675A1; US9404011B2; WO2018046335A1; WO2018069644A1; DE102008015104A1; WO2009115294A1; DE102008030304A1; DE102009056187A1; US8658752B2; DE102014006519A1; WO2015169545A1; US9266993B2; US10059789B2; US7879407B2; WO2012140131A1; US9340638B2; WO2019072553A1; US10487233B2; WO2021073987A1; EP4303246A1; WO2024008544A1; WO2012123161A1; WO2015116351A1; US9139751B2; WO2015169550A1; WO2018050509A2; EP3628697A1; WO2020064839A1; US10689541B2; WO2012168014A1; US8569438B2; WO2014106552A1; US9353287B2; WO2017085268A1; US9683125B2; US9909029B2; DE102016012746A1; WO2018077468A1; WO2020225310A1; WO2021175661A1; DE102009030481A1; WO2010149236A1; WO2012123198A1; WO2013110712A1; US9017818B2; US9340703B2; WO2017182120A1; WO2018046334A1; US9970411B2; US10023764B2; EP3444290A1; WO2019034662A1; US10960096B2; WO2021191237A1; DE102009024103A1; WO2010139375A1; WO2013156509A2; US8679589B2; US9631048B2; EP3501837A1; WO2019122248A1; WO2019122249A1; EP3943534A1; WO2022018209A1; US11384167B2; DE102007061856A1; US6685985B2; DE102010015683A1; WO2012065828A1; WO2012098014A1; WO2012126796A1; US9133283B2; US9206330B2; US9546285B2; US9777190B2; WO2017202692A1; EP3670556A1; WO2020127258A1; US11597794B2; US6652915B1; US6555613B1; DE102009054071A1; WO2011060858A1; WO2012168079A1; US8808805B2; US9376586B2; DE102016013737A1; WO2018091133A2; DE102007061854A1; WO2022229304A1; WO2011131463A1; US8790752B2; DE102015000814A1; US9574089B2; DE102015013981A1; DE102018000418A1; WO2019141504A1; WO2021037792A1; US11807724B2; EP4293072A2

Designated contracting state (EPC)

BE FR GB

DOCDB simple family (publication)

EP 0008127 A1 19800220; **EP 0008127 B1 19820414**; DE 2835451 A1 19800228; DE 2835451 C2 19851024

DOCDB simple family (application)

EP 79102934 A 19790813; DE 2835451 A 19780812