

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property

Organization

International Bureau

(43) International Publication Date

29 September 2022 (29.09.2022)



(10) International Publication Number

WO MISSING A2

(51) International Patent Classification:

Not classified

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(21) International Application Number:

PCT/IB2021/052472

Published:

— without international search report and to be republished upon receipt of that report (Rule 48.2(g))

— in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE

(22) International Filing Date:

25 March 2021 (25.03.2021)

(25) Filing Language:

English

(26) Publication Language:

English

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,

(54) Title: PLUG OF CREATING AIR COLUMN WITH VARIABLE LENGTH FOR APPLYING IN AIRDECK BLASTING AND STEMMING PLUG

(57) Abstract: The present application relates generally to a "plug of creating air column with variable length for applying in airdeck blasting and stemming plug" demands in mines. The basis of the proposed patent is the design and manufacture of plug used in mine blasting with the use of airdek and stemming plug. The proposed patent will reduce the costs of drilling and blasting and increase the microcracks caused by the blasting and thus reduce the costs of comminution (milling and crushing). This product reduces the amount of subdrilling, explosives used in holes and the amount of energy consumed in the comminution process. Due to the increase in blast quality using the proposed plug, loading and hauling operations will be more convenient, which will reduce the depreciation of loading and hauling machines. Reducing the cost of mining operations, the cost of the product decreases and as a result the profit of the mine increases. Due to the reduction of electricity consumption in the process of mechanical crushing, the amount of electricity consumption of a country with many large-scale mines is also reduced. Another important point of using the proposed patent is to reduce the ground vibration and airblast in the process of blasting, which causes the mining activity in the vicinity of urban and rural areas that face environmental problems. Another advantage of using this product is the creation and development of software used in blasting operations, which gives more control over the blasting process in mines. Also, using the results of the proposed patent and reducing mining costs, the strategic mine planning software can be optimized.



WO MISSING A2