

Title (en)
ROBOTIC TECHNOLOGY COMPLEX OF VERTICAL DISPOSAL OF DISPOSAL CANISTERS WITH SPENT NUCLEAR FUEL IN GRADUALLY COMPACTED BENTONITE

Title (de)
ROBOTISCHER TECHNOLOGIEKOMPLEX ZUR VERTIKALEN ENTSORGUNG VON ENTSORGUNGSKANISTERN FÜR VERBRAUCHTEN KERNBRENNSTOFF IN STUFENWEISE VERDICHTETEM BENTONIT

Title (fr)
COMPLEXE DE TECHNOLOGIE ROBOTIQUE D'ÉVACUATION VERTICALE DE RÉCIPIENTS DE DÉCHETS AVEC UN COMBUSTIBLE NUCLÉAIRE USAGÉ DANS DE LA BENTONITE PROGRESSIVEMENT COMPACTÉE

Publication
EP 3660867 A1 20200603 (EN)

Application
EP 19466006 A 20190510

Priority
CZ 2018662 A 20181130

Abstract (en)
The robotic technological complex (1) of vertical storage of disposal canisters with spent nuclear fuel into gradually compacted bentonite consists of the robot (2) for transport, vertical storage of disposal canisters and compacting bentonite transporting the disposal canister (66) with spent nuclear fuel from the tank (62) of disposal canisters to the disposal corridor (9) and by composed movement it inserts it to the axis of the vertical storage borehole (10), further it comprises the vibration annual ring (37) for compacting granulated bentonite (49). Of the robot (3) for transport, dosing and compacting bentonite designated for transport of granulated bentonite (49) from the bentonite and concrete warehouse (7) and for its gradual dosing up to filling free volume of the vertical storage borehole (10) and for its compacting in final phase. Of the robot (4) for transport and application of concrete designated for transport of concrete from bentonite and concrete warehouse (7), for creation of concrete plug (72) of the vertical storage borehole (10) by means of the tank (55) of concrete with outlet hole (56) and vibration head (57).

IPC 8 full level
G21F 9/28 (2006.01); **G21F 9/34** (2006.01); **G21F 9/36** (2006.01)

CPC (source: CZ EP)
B61D 15/00 (2013.01 - CZ); **E21F 13/00** (2013.01 - CZ); **G21F 5/14** (2013.01 - CZ); **G21F 9/28** (2013.01 - EP); **G21F 9/34** (2013.01 - CZ EP); **G21F 9/36** (2013.01 - EP)

Citation (applicant)
EP 2139005 A1 20091230 - HFH HERBST SPEZIALFAHRZEUGBAU [DE]

Citation (search report)
• [A] EP 3154063 A1 20170412 - ROBOTSYSTEM S R O [CZ], et al
• [AD] EP 2139005 A1 20091230 - HFH HERBST SPEZIALFAHRZEUGBAU [DE]
• [A] BEARD J: "NUCLEAR WASTE DISPOSAL IN NEW MEXICO AND NEVADA", IEEE SPECTRUM, IEEE INC. NEW YORK, US, vol. 34, no. 11, 1 November 1997 (1997-11-01), pages 33 - 40, XP000752869, ISSN: 0018-9235, DOI: 10.1109/6.632487
• [A] TSOULFANIDIS N ET AL: "RADIOACTIVE WASTE MANAGEMENT", NUCLEAR TECHNOLOGY, AMERICAN NUCLEAR SOCIETY, CHICAGO, IL, US, vol. 93, no. 3, 1 March 1991 (1991-03-01), pages 263 - 304, XP000209900, ISSN: 0029-5450

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