

Title (en)
METHOD FOR FILLING AND EMPTYING A LIQUID TANK OF A SPREADER DEVICE FOR WINTER SERVICE VEHICLES, AND SPREADER DEVICE

Title (de)
VERFAHREN ZUM BEFÜLLEN UND ENTLEEREN EINES FLÜSSIGKEITSTANKS EINES STREUGERÄTS FÜR WINTERDIENSTFAHRZEUGE SOWIE STREUGERÄT

Title (fr)
PROCÉDÉ DE REMPLISSAGE ET DE VIDAGE D'UN RÉSERVOIR À LIQUIDE D'UN APPAREIL D'ÉPANDAGE POUR VÉHICULES DU SERVICE HIVERNAL AINSI QU'APPAREIL D'ÉPANDAGE

Publication
EP 2697435 B1 20150415 (DE)

Application
EP 12734916 A 20120706

Priority
EP 2012063237 W 20120706

Abstract (en)
[origin: WO2014005648A1] In a spreader device (1) for winter service vehicles, brine is filled from a tank bag (40A) into supplementary tanks (10) by purely hydrostatic means substantially without the use of pumps by the tank bag (40A) being filled, for instance by means of overpressure, in such a way that the brine is forced through a liquid line (50, 50A) where it forms a closed liquid column. The outlet end of the liquid line (50) is located below the inlet end of the liquid line (50A) so that upon filling the liquid from the tank bag (40A) automatically flows into the supplementary tanks (10) on account of the hydrostatic forces. When the liquid tank (10) is drained, the liquid also flows correspondingly from the tank bag (40A) into the supplementary tanks (10), thereby draining the tank bag (40A) completely.

IPC 8 full level
E01H 10/00 (2006.01)

CPC (source: EP RU US)
B05B 7/2483 (2013.01 - US); **E01C 19/21** (2013.01 - EP US); **E01H 10/002** (2013.01 - RU); **E01H 10/007** (2013.01 - EP US); **Y10T 137/0318** (2015.04 - EP US)

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

DOCDB simple family (publication)
WO 2014005648 A1 20140109; CA 2859263 A1 20140109; CA 2859263 C 20170425; CN 104136687 A 20141105; CN 104136687 B 20161123; DK 2682527 T3 20160620; DK 2697435 T3 20150720; EP 2682527 A2 20140108; EP 2682527 A3 20141217; EP 2682527 B1 20160309; EP 2697435 A1 20140219; EP 2697435 B1 20150415; ES 2575162 T3 20160624; HR P20160627 T1 20160729; HU E027880 T2 20161028; JP 2015511284 A 20150416; JP 5878248 B2 20160308; KR 20140138236 A 20141203; PL 2682527 T3 20160930; PT 2682527 E 20160608; RU 2014129408 A 20160210; RU 2603765 C2 20161127; US 10577766 B2 20200303; US 2015129689 A1 20150514

DOCDB simple family (application)
EP 2012063237 W 20120706; CA 2859263 A 20120706; CN 201280070889 A 20120706; DK 12734916 T 20120706; DK 13177033 T 20120706; EP 12734916 A 20120706; EP 13177033 A 20120706; ES 13177033 T 20120706; HR P20160627 T 20160607; HU E13177033 A 20120706; JP 2014558019 A 20120706; KR 20147027298 A 20120706; PL 13177033 T 20120706; PT 13177033 T 20120706; RU 2014129408 A 20120706; US 201214367335 A 20120706