

Title (en)

TANK DEVICE FOR STORING A GASEOUS MEDIUM

Title (de)

TANKVORRICHTUNG ZUR SPEICHERUNG EINES GASFÖRMIGEN MEDIUMS

Title (fr)

DISPOSITIF DE RÉSERVOIR PERMETTANT DE STOCKER UN MILIEU GAZEUX

Publication

EP 4244526 A1 20230920 (DE)

Application

EP 21798633 A 20211021

Priority

- DE 102020214214 A 20201112
- EP 2021079160 W 20211021

Abstract (en)

[origin: WO2022100974A1] The invention relates to a tank device (1) for storing a gaseous medium, in particular hydrogen, comprising a valve device (2) and a tank (10) and having a longitudinal axis (11). The valve device (2) has a valve housing (20) which is equipped with a pilot valve element (18) that can be moved along the longitudinal axis (11), said pilot valve element (18) interacting with a first valve seat (27) in order to open and close a first outlet opening (56) and thus forming a pilot valve (44). The valve device (2) can be actuated by means of a solenoid coil (14), and a main valve element (19) is arranged in the valve housing (20), said main valve element (19) interacting with a second valve seat (40) in order to open and close a second outlet opening (31) and thus forming a main valve (191). The tank device (1) comprises a screw-in housing element (24), wherein the valve device (2) is integrated into a neck region (6) of the tank (10) in a fixed manner by means of the screw-in housing element (24), and the valve device (2) is arranged in the tank (10) by means of a tank pressure and is in a closed position by means of a spring (26) when the solenoid coil (14) is deactivated.

IPC 8 full level

F17C 13/04 (2006.01)

CPC (source: EP KR US)

F16K 31/408 (2013.01 - US); **F17C 13/04** (2013.01 - EP KR US); **H01M 8/04201** (2013.01 - US); **F17C 2201/056** (2013.01 - EP KR US); **F17C 2205/0305** (2013.01 - EP KR US); **F17C 2205/0326** (2013.01 - EP KR US); **F17C 2205/0382** (2013.01 - EP KR); **F17C 2205/0391** (2013.01 - EP KR US); **F17C 2221/012** (2013.01 - EP KR US); **F17C 2223/0123** (2013.01 - EP KR US); **F17C 2223/036** (2013.01 - EP KR US); **F17C 2260/042** (2013.01 - EP KR); **F17C 2270/0168** (2013.01 - EP KR US); **F17C 2270/0184** (2013.01 - EP KR US); **H01M 2250/20** (2013.01 - US); **Y02E 60/32** (2013.01 - EP KR); **Y02T 90/40** (2013.01 - EP KR); **Y10T 137/86332** (2015.04 - US); **Y10T 137/87209** (2015.04 - US); **Y10T 137/87917** (2015.04 - US); **Y10T 137/88046** (2015.04 - 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

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2022100974 A1 20220519; CN 116547470 A 20230804; DE 102020214214 A1 20220512; EP 4244526 A1 20230920; JP 2023547420 A 20231110; KR 20230100742 A 20230705; US 2023417370 A1 20231228

DOCDB simple family (application)

EP 2021079160 W 20211021; CN 202180076441 A 20211021; DE 102020214214 A 20201112; EP 21798633 A 20211021; JP 2023524887 A 20211021; KR 20237019078 A 20211021; US 202118251753 A 20211021