

Title (en)
MODULAR UNDERWATER PUMPED-STORAGE POWER PLANT RESERVOIR

Title (de)
MODULARES UNTERWASSER-PUMPSPEICHERKRAFTWERK-RESERVOIR

Title (fr)
RÉSERVOIR DE CENTRALE D'ACCUMULATION PAR POMPAGE SUBAQUATIQUE MODULAIRE

Publication
EP 4143429 A1 20230308 (DE)

Application
EP 21724213 A 20210430

Priority
• DE 102020111844 A 20200430
• EP 2021061424 W 20210430

Abstract (en)
[origin: WO2021219854A1] The invention relates to an underwater pumped-storage power plant reservoir in a dry but floodable ground depression, in particular in an open-cast mine that is disused or still in operation, the reservoir comprising: a modular arrangement of a plurality of individual pressure vessel modules for the intermediate storage of electrical energy from other power plants, in particular wind power stations and/or photovoltaic installations, wherein the pressure vessel modules each have an outer wall comprising at least one through-flow opening for the inlet and/or outlet of water such that the pressure vessel modules can each be independently filled with water and/or pumped dry if the dry ground depression is flooded with water, and wherein the modular arrangement of the pressure vessel modules is designed such that the pressure vessel modules are arranged in the dry but floodable ground depression so as to be adjacent, in particular without any gaps, relative to one another, with their outer walls flat against one another.

IPC 8 full level
F03B 13/06 (2006.01)

CPC (source: EP US)
F03B 13/06 (2013.01 - EP US); **F05B 2240/40** (2013.01 - EP US); **F05B 2250/283** (2013.01 - EP US); **F05B 2250/312** (2013.01 - EP US); **F05B 2260/42** (2013.01 - EP); **F05B 2260/422** (2020.08 - EP US); **Y02E 10/20** (2013.01 - EP); **Y02E 60/16** (2013.01 - EP)

Citation (search report)
See references of WO 2021219854A1

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)
DE 102020111844 A1 20211104; EP 4143429 A1 20230308; US 2023175469 A1 20230608; WO 2021219854 A1 20211104

DOCDB simple family (application)
DE 102020111844 A 20200430; EP 2021061424 W 20210430; EP 21724213 A 20210430; US 202117921815 A 20210430