

Title (en)

PHYTO-PURIFICATION METHOD AND APPARATUS FOR TREATING WASTEWATER

Title (de)

PHYTO-REINIGUNGSVERFAHREN UND VORRICHTUNG ZUM BEHANDELN VON ABWASSER

Title (fr)

PROCÉDÉ ET INSTALLATION DE PHYTO-ÉPURATION POUR LE TRAITEMENT D'UNE EAU USÉE

Publication

**EP 4103521 A1 20221221 (FR)**

Application

**EP 21704515 A 20210210**

Priority

- FR 2001319 A 20200210
- EP 2021053149 W 20210210

Abstract (en)

[origin: WO2021160644A1] Method and apparatus for biologically treating wastewater using a bioreactor (4) comprising a bed (12) of chemically inert aggregate in which emerged macrophytes (13) are rooted, characterised in that it comprises: - a preliminary dilution step consisting in diluting the water to be treated according to a dilution ratio between 8 and 50 and preferably between 10 and 20, - organising the supply to the bio-reactor (4) with, and the emptying of the bio-reactor of, water thus diluted according to tidal cycles lasting less than two hours, preferably less than one hour, during each of which at least one portion of the bed (12) of chemically inert aggregate is dewatered and then submerged by the water so as to provide, in the bed (12) of chemically inert aggregate, successive periods of aeration and non-aeration, - a step of evacuating the treated water, the preliminary dilution step consisting in diluting the water to be treated with water originating at least partially from the method.

IPC 8 full level

**C02F 9/00** (2006.01); **C02F 1/28** (2006.01); **C02F 1/44** (2006.01); **C02F 1/76** (2006.01); **C02F 1/78** (2006.01); **C02F 3/30** (2006.01);  
**C02F 3/32** (2006.01); **C02F 103/00** (2006.01)

CPC (source: EP)

**C02F 9/00** (2013.01); **C02F 1/283** (2013.01); **C02F 1/44** (2013.01); **C02F 1/76** (2013.01); **C02F 1/78** (2013.01); **C02F 3/301** (2013.01);  
**C02F 3/302** (2013.01); **C02F 3/327** (2013.01); **C02F 2103/002** (2013.01); **C02F 2103/005** (2013.01); **C02F 2303/04** (2013.01);  
**C02F 2303/26** (2013.01); **Y02W 10/10** (2015.05)

Citation (search report)

See references of WO 2021160644A1

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)

**FR 3107054 A1 20210813; FR 3107054 B1 20220513;** EP 4103521 A1 20221221; WO 2021160644 A1 20210819

DOCDB simple family (application)

**FR 2001319 A 20200210;** EP 2021053149 W 20210210; EP 21704515 A 20210210