

Title (en)

METHOD FOR DETECTING ANOMALIES IN A WATER TREATMENT PLANT

Title (de)

VERFAHREN ZUR ERKENNUNG VON ANOMALIEN IN EINER WASSERAUFBEREITUNGSANLAGE

Title (fr)

MÉTHODE DE DÉTECTION D'ANOMALIES DANS UNE INSTALLATION DE TRAITEMENT DES EAUX

Publication

**EP 3942374 A1 20220126 (FR)**

Application

**EP 20703280 A 20200212**

Priority

- EP 19305357 A 20190322
- EP 2020053650 W 20200212

Abstract (en)

[origin: CA3132906A1] A method for operating a water treatment plant, which comprises a phase of detecting anomalies in the operation of the plant, characterized in that the anomaly-detecting phase comprises the implementation of the following measures: - data representative of the operating state of the plant are provided, these data being provided by sensors installed at selected locations in the plant itself or on input or output pipes of the plant; - where appropriate, additional data are also provided, these data being comprised in the group formed by: i) data on the dates/periods during which the operation of the plant was being tracked; j) data representative of the state of the upstream machine producing the effluents to be treated in the plant; k) weather data characterizing the climatic conditions under which the operation of the plant was being tracked; - a system for acquiring and processing these data is provided, this system being equipped with an algorithm for processing these data capable of carrying out the following: a) carrying out a training phase during which the system computes the parameters of a probability law for all of the sensors and, where appropriate, said additional data; b) carrying out a phase of using the algorithm in which the system inserts values that are read in real time by the sensors into the algorithm, in order to compute a probability density for all of the sensors and, depending on the result of this density, if this probability is low, to conclude that the sensors are delivering very different values from those that they delivered during the training phase, and to then flag an anomaly.

IPC 8 full level

**G05B 23/02** (2006.01); **C02F 1/00** (2006.01); **F04D 15/02** (2006.01); **G06Q 50/06** (2012.01)

CPC (source: EP US)

**C02F 3/006** (2013.01 - EP US); **G05B 23/0221** (2013.01 - EP); **G05B 23/0229** (2013.01 - US); **G05B 23/0235** (2013.01 - EP);  
**G06Q 50/06** (2013.01 - EP); **C02F 2209/001** (2013.01 - EP US); **C02F 2209/006** (2013.01 - EP US); **C02F 2209/008** (2013.01 - EP US);  
**C02F 2303/14** (2013.01 - EP US); **G05B 2219/25428** (2013.01 - EP); **G05B 2219/2605** (2013.01 - EP)

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

DOCDB simple family (publication)

**EP 3712735 A1 20200923**; AU 2020246873 A1 20211014; CA 3132906 A1 20201001; CN 113574485 A 20211029; EP 3942374 A1 20220126;  
JP 2022526143 A 20220523; US 2022153618 A1 20220519; WO 2020193000 A1 20201001

DOCDB simple family (application)

**EP 19305357 A 20190322**; AU 2020246873 A 20200212; CA 3132906 A 20200212; CN 202080021809 A 20200212;  
EP 2020053650 W 20200212; EP 20703280 A 20200212; JP 2021556796 A 20200212; US 202017441633 A 20200212