Title (en)

APPARATUS FOR DETECTING SYMPTOMS OF THERMAL AND/OR MECHANICAL ANOMALIES THAT CAN LEAD TO THE IGNITION OF A FIRE

Title (de)

GERÄT ZUR ERKENNUNG VON SYMPTOMEN FÜR THERMISCHE UND/ODER MECHANISCHE ANOMALIEN, DIE ZUR ENTZÜNDUNG EINES BRANDES FÜHREN KÖNNEN

Title (fr)

APPAREIL DE DÉTECTION DE SYMPTÔMES D'ANOMALIES THERMIQUES ET/OU MÉCANIQUES POUVANT CONDUIRE À L'ALLUMAGE D'UN INCENDIE

Publication

EP 3912146 A1 20211124 (EN)

Application

EP 20704351 A 20200113

Priority

- IT 201900000629 A 20190115
- IB 2020050222 W 20200113

Abstract (en)

[origin: WO2020148625A1] Apparatus for the detection of symptoms of thermal and/or mechanical anomalies that can lead to the ignition of fire, comprising: - a plurality of point sensors (2), for remote temperature measurement, to be installed near the area (4) to be monitored, said sensors being suitable for superimposing the field of view of the visible image and the thermal and/or near infrared (NIR) image and combining the information obtained pixel by pixel, in order to identify and locate the possible sources of the beginnings of the fires; - an automatic analysis system (6) equipped with self-learning capability according to the real situation to which it is exposed and able to selectively acquire and manage the different thermal and visual flows generated by the sensors (2), said system being able to interact on the different areas to be monitored following any anomaly, characterized by the fact that the system (6) is equipped with suitable means: to separately examine different areas of interest (4), that is, separate portions of the image, corresponding to parts of plant with different functions, different critical issues, different distributions of thermal and mechanical stress and different times of activity/rest, applying different criteria and parameters of analysis to each area of interest; to calculate the statistics and temperature distributions for each area of interest and compare them with the statistics and distributions recorded in all normal operating regimes; to detect for each pixel of the image the possible exceeding of alert and alarm thresholds in temperature specific for that part of the system; to detect for each pixel of the image any temperature anomaly of even a few tenths of °C in relation to the trend and the typical temperature distribution of that part of the system; to automatically report events related to general situations of the most common interest, to carry out measurements relating to particular requirements, such as the dimensional calculation of areas on alert or in alarm or to report a particular type of evolution or thermal trend considered dangerous or interest in one or more parts of the plant.

IPC 8 full level

G08B 17/12 (2006.01); **G08B 29/18** (2006.01)

CPC (source: EP)

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Citation (search report)

See references of WO 2020148625A1

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