

Title (en)
Fire sensor and method of detecting fire

Title (de)
Brandsensor und Verfahren zur Erkennung von Bränden

Title (fr)
Capteur d'incendie et procédé de détection de feu

Publication
EP 2320398 A1 20110511 (EN)

Application
EP 09174292 A 20091028

Priority
EP 09174292 A 20091028

Abstract (en)
A fire sensor is provided for detecting fire in a monitored region. The fire sensor comprises: a detection chamber in fluid communication with the monitored region via an inlet path; a sensor assembly adapted to detect fire products within the detection chamber, and to output a corresponding detection signal; and a cyclone chamber disposed upstream of the detection chamber in the inlet path between the detection chamber and the monitored region, the cyclone chamber comprising a fan impeller arranged to be rotationally driven by a motor so as to draw air from the monitored region into the detection chamber, and a peripheral wall enclosing the periphery of the fan impeller such that a vortex is established within the cyclone chamber when the fan impeller is driven. Due to centrifugal force, large droplets of liquid in the airflow through the cyclone chamber are removed by the vortex relative to small droplets of liquid, such that the average size of liquid droplets in the air drawn into the detection chamber is less than that of the air entering the fire sensor. A corresponding method of detecting fire is also provided. The performance of the fire sensor is improved as water droplets are removed from the sampled air, thereby reducing the false alarms triggered by steam rather than smoke.

IPC 8 full level
G08B 17/10 (2006.01); **G08B 29/18** (2006.01)

CPC (source: EP)
G08B 17/10 (2013.01); **G08B 17/113** (2013.01); **G08B 29/24** (2013.01)

Citation (applicant)
WO 2009015178 A1 20090129 - HONEYWELL INT INC [US], et al

Citation (search report)
• [X] WO 2009015178 A1 20090129 - HONEYWELL INT INC [US], et al
• [A] US 7301641 B1 20071127 - OVERBY JOHN K [US], et al
• [A] EP 1547662 A1 20050629 - ELOTEC AS [NO]
• [A] US 6166648 A 20001226 - WIEMEYER JIM [US], et al
• [A] GB 2456154 A 20090708 - BISHOP PAUL DAVID [GB]

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WO2018024984A1; CN109819220A; JP2019211800A; JP2017021783A; EP2500883A3; FR3054915A1; FR3054916A1; DE102017209490A1; EP3843057A1; US11430313B2; US11244551B2; US8624745B2

Designated contracting state (EPC)
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 SE SI SK SM TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
EP 2320398 A1 20110511; EP 2320398 B1 20121114; CN 102054324 A 20110511; CN 102054324 B 20150624

DOCDB simple family (application)
EP 09174292 A 20091028; CN 201010525859 A 20101027