

Title (en)

METHOD AND APPARATUS FOR IDENTIFYING AN ICE-COVERED ELECTROACOUSTIC SENSOR

Title (de)

VERFAHREN UND VORRICHTUNG ZUM ERKENNEN EINES EISBELEGTEN ELEKTROAKUSTISCHEN SENSORS

Title (fr)

PROCÉDÉ ET DISPOSITIF DE RECONNAISSANCE DE LA PRÉSENCE DE GLACE SUR UN CAPTEUR ÉLECTROACOUSTIQUE

Publication

EP 3387459 A1 20181017 (DE)

Application

EP 16781418 A 20161012

Priority

- DE 102015224733 A 20151209
- EP 2016074491 W 20161012

Abstract (en)

[origin: WO2017097469A1] A method for identifying a snow- or ice- (40) covered diaphragm (20) of an electroacoustic sensor (1), particularly of an ultrasonic sensor, on a vehicle is proposed. The method comprises the following steps: a.) A time-based temperature profile for an interior (15) of the electroacoustic sensor (1) is ascertained after the beginning of sensor operation by a temperature sensor (80) that is arranged in the interior (15) of a housing (10) of the sensor. The temperature of the sensor interior (15) is below 0 °C at the beginning of sensor operation. b.) A second temporal range of the ascertained temperature profile is identified by a computation unit (95), in which range the temperature increase falls significantly in comparison with a first range at a preceding time. c.) If a temporal range of this kind is identified, then it is inferred that the diaphragm (20) of the electroacoustic sensor (1) is covered with snow or ice (40). d.) If it has been identified that a diaphragm (20) of the electroacoustic sensor (1) is covered with snow or ice (40), then a warning is output to the driver.

IPC 8 full level

G01S 7/52 (2006.01); **G01S 7/521** (2006.01); **G01S 15/931** (2020.01); **G08B 19/02** (2006.01)

CPC (source: EP US)

B60Q 9/00 (2013.01 - US); **G01S 7/52004** (2013.01 - EP US); **G01S 7/521** (2013.01 - EP US); **G01S 15/931** (2013.01 - EP US); **G08B 19/02** (2013.01 - EP US); **G01S 2007/52009** (2013.01 - EP US); **G01S 2015/938** (2013.01 - EP US)

Citation (search report)

See references of WO 2017097469A1

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)

DE 102015224733 B3 20161020; CN 108291964 A 20180717; EP 3387459 A1 20181017; US 2019004163 A1 20190103; WO 2017097469 A1 20170615

DOCDB simple family (application)

DE 102015224733 A 20151209; CN 201680071580 A 20161012; EP 16781418 A 20161012; EP 2016074491 W 20161012; US 201615781880 A 20161012