

Title (en)
ROLLING BEARING ARRANGEMENT WITH A STRAIN SENSOR DEVICE

Title (de)
WÄLZLAGERANORDNUNG MIT EINER DEHNUNGSSENSOREINRICHTUNG

Title (fr)
ARRANGEMENT DE ROULEMENT AVEC DISPOSITIF DE JAUGE DE CONTRAINTE

Publication
EP 3356691 A1 20180808 (DE)

Application
EP 16781665 A 20160920

Priority
• DE 102015218993 A 20151001
• DE 2016200438 W 20160920

Abstract (en)
[origin: WO2017054813A1] The present invention relates to a rolling bearing arrangement comprising a rolling bearing (02) having an outer ring (03) and an inner ring (04) and a strain sensor device (09), which is integrated in the outer ring (03) or fastened to the outer ring (03), for measuring axial loads acting on the rolling bearing (02). The strain sensor device (09) has an annular main body. The invention is characterized in that the strain sensor device (09) has, on its inner end face, at least one force introduction element (12) extending in the circumferential direction in the shape of a circle segment. The force introduction element (12) is connected to the annular main body (10) via at least one web-shaped coupling element (13). The strain sensor element (09) has, on its outer end face facing away from the rolling bearing (02), at least one recess (14) for accommodating a strain sensor (15). The recess (14) extends over the force introduction element (12) at least in the circumferential direction, the coupling element (13) having a smaller extent in the radial direction than the recess (14). The annular main body (10) is secured to the frame.

IPC 8 full level
F16C 19/52 (2006.01); **F16C 33/58** (2006.01); **F16C 35/067** (2006.01); **F16C 35/077** (2006.01)

CPC (source: EP US)
F16C 19/522 (2013.01 - EP US); **F16C 33/581** (2013.01 - EP US); **F16C 33/586** (2013.01 - EP US); **F16C 35/067** (2013.01 - EP US); **F16C 35/077** (2013.01 - EP US); **G01L 1/22** (2013.01 - US); **G01L 5/0019** (2013.01 - EP US); **F16C 19/184** (2013.01 - EP US)

Citation (search report)
See references of WO 2017054813A1

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 102015218993 B3 20161222; CN 108138841 A 20180608; CN 108138841 B 20200121; EP 3356691 A1 20180808; JP 2018529897 A 20181011; JP 6865735 B2 20210428; US 10151342 B2 20181211; US 2018283447 A1 20181004; WO 2017054813 A1 20170406

DOCDB simple family (application)
DE 102015218993 A 20151001; CN 201680057114 A 20160920; DE 2016200438 W 20160920; EP 16781665 A 20160920; JP 2018505016 A 20160920; US 201615763332 A 20160920