

Title (en)

STATOR OF AN ELECTRIC PRIME MOVER, AND ELECTRIC PRIME MOVER

Title (de)

STATOR EINER ELEKTRISCHEN ANTRIEBSMASCHINE UND ELEKTRISCHE ANTRIEBSMASCHINE

Title (fr)

STATOR DE MOTEUR D'ENTRAÎNEMENT ÉLECTRIQUE ET MOTEUR D'ENTRAÎNEMENT ÉLECTRIQUE

Publication

EP 4320716 A1 20240214 (DE)

Application

EP 22718056 A 20220408

Priority

- DE 102021108955 A 20210410
- DE 2022100266 W 20220408

Abstract (en)

[origin: WO2022214144A1] The invention relates to a stator of an electric prime mover and to an electric prime mover having the stator. The stator (10) comprises a stator core (30) and windings (43) of at least one electrical conductor that are arranged annularly on the stator core (30), and at least one wet chamber (60) through which a coolant flows, so that heat from at least one winding (43) can be absorbed by the coolant. The stator also comprises a separation element (70) which separates the wet chamber (60), at least on an axial side of the stator (10), substantially liquid-tightly from a dry chamber (50) of the electric prime mover, wherein the separation element (70) is sealed with respect to the stator core (30) along a first periphery (72) and along a second periphery (74), wherein the first periphery (72) has a smaller radial extent than the radial outer side of the stator core (90) and a larger radial extent than the radial outer side of the annular winding arrangement (100), and the second periphery (74) has a larger radial extent than the radial inner side of the stator core (91) and a smaller radial extent than the radial inner side of the annular winding arrangement (101). The stator and the electric prime mover constitute units which implement long-lasting and efficient cooling of the stator while using a small axial installation space.

IPC 8 full level

H02K 9/197 (2006.01); **H02K 5/02** (2006.01); **H02K 21/24** (2006.01)

CPC (source: EP US)

H02K 1/20 (2013.01 - US); **H02K 9/197** (2013.01 - EP); **H02K 21/24** (2013.01 - EP); **H02K 5/02** (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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

DE 102021108955 A1 20221013; CN 117121350 A 20231124; EP 4320716 A1 20240214; US 2024204590 A1 20240620; WO 2022214144 A1 20221013

DOCDB simple family (application)

DE 102021108955 A 20210410; CN 202280027481 A 20220408; DE 2022100266 W 20220408; EP 22718056 A 20220408; US 202218554483 A 20220408