

Title (en)

DRY DOUBLE CLUTCH FOR AN ELECTRIC AXLE, AND ELECTRIC AXLE COMPRISING THE DRY DOUBLE CLUTCH

Title (de)

TROCKENDOPPELKUPPLUNG FÜR EINE ELEKTRISCHE ACHSE SOWIE ELEKTRISCHE ACHSE MIT DER TROCKENDOPPELKUPPLUNG

Title (fr)

DOUBLE EMBRAYAGE À SEC POUR UN ESSIEU ÉLECTRIQUE ET ESSIEU ÉLECTRIQUE AVEC LE DOUBLE EMBRAYAGE À SEC

Publication

**EP 3911867 A1 20211124 (DE)**

Application

**EP 19828213 A 20191210**

Priority

- DE 102019100969 A 20190116
- DE 2019101061 W 20191210

Abstract (en)

[origin: WO2020147873A1] Clutches are commonly integrated into electric drive axles in order to interrupt or bypass the torque flow for shifting processes. In the process, the electric axle can be designed as a multi-gear axle using a double clutch in order to achieve a higher final speed and to operate an electric motor in a more efficient power range. For this purpose, a dry double clutch (5) is proposed for an electric axle (1), comprising a clutch unit (6), which has a first clutch device (7) for connecting a drive shaft (4) to a first output shaft (9a) and a second clutch device (8) for connecting the drive shaft (4) to a second output shaft (9b); and an actuation unit (13), which has a first actuation device (14) for actuating the first clutch device (7) and a second actuation device (15) for actuating the second clutch device (8), wherein the first clutch device (7) is closed when the first actuation device (14) is not actuated, and the second clutch device (8) is open when the second actuation device (15) is not actuated. A first pressure force (F1) can be applied to the first clutch device (7) by means of the first actuation device (14) in order to open the first clutch device, and a second pressure force (F2) can be applied to the second clutch device (8) by means of the second actuation device (15) in order to close the second clutch device.

IPC 8 full level

**F16D 21/06** (2006.01)

CPC (source: EP KR US)

**F16D 21/06** (2013.01 - EP KR US); **F16D 25/082** (2013.01 - EP KR US); **F16D 25/10** (2013.01 - EP KR US);  
**F16D 2021/0669** (2013.01 - EP KR US)

Citation (search report)

See references of WO 2020147873A1

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 102019100969 A1 20200716**; **DE 102019100969 B4 20210617**; CN 113302416 A 20210824; EP 3911867 A1 20211124;  
KR 20210113166 A 20210915; US 2022056964 A1 20220224; WO 2020147873 A1 20200723

DOCDB simple family (application)

**DE 102019100969 A 20190116**; CN 201980089195 A 20191210; DE 2019101061 W 20191210; EP 19828213 A 20191210;  
KR 20217015948 A 20191210; US 201917417222 A 20191210