Title (en)

HYBRID DRIVETRAIN FOR A HYBRID-DRIVEN VEHICLE AND METHOD FOR SAME

Title (de)

HYBRIDANTRIEBSSTRANG FÜR EIN HYBRIDGETRIEBENES FAHRZEUG UND VERFAHREN DAFÜR

Title (fr)

CHAÎNE CINÉMATIQUE HYBRIDE POUR UN VÉHICULE HYBRIDE ET PROCÉDÉ ASSOCIÉ

Publication

EP 3762269 A1 20210113 (DE)

Application

EP 19708405 A 20190214

Priority

- DE 102018203454 A 20180307
- EP 2019053645 W 20190214

Abstract (en)

[origin: WO2019170382A1] The invention relates to a hybrid drivetrain for a hybrid-driven vehicle, having an internal combustion engine (1) which transmits drive to vehicle wheels via a load path, in which a two-mass flywheel (11), which has flywheel masses (9, 13) which are coupled elastically by means of spring assemblies, is connected, and at least one electric machine (5) which can be coupled in a drive-transmitting fashion into the load path via an automatic transmission (3), wherein in the automatic transmission (3) a drive torque (MBKM) from the internal combustion engine and a drive torque (MEM) from the electric machine can be added, with addition of power, to form an overall drive torque (Mges) with which the vehicle wheels can be driven, and wherein on the basis of driving operation parameters and/or a driver's request an electronic control unit (19) actuates an engine control unit (21) of the internal combustion engine (1) and/or power electronics (20) of the electric machine (5) with setpoint torque specifications, and wherein the drivetrain has an evaluation unit (27) which detects the presence of occurrences of two-mass flywheel clamping which causes an increased irregularity of the rotation and in which the spring assemblies of the two-mass flywheel (11) are clamped in the compressed state, and when two-mass flywheel clamping occurs the evaluation unit (27) generates an engine intervention signal (SM) with which the engine control unit (21) actuates the internal combustion engine (1) with a torque surge in order to release the two-mass flywheel clamping. According to the invention, the evaluation unit (27) is assigned a compensation unit (35) which generates, on the basis of the torque surge, a compensation signal (SA) with which the electric machine (5) can be actuated with a compensation torque (MA) which compensates torque surge.

IPC 8 full level

B60W 20/50 (2016.01); **B60W 10/06** (2006.01); **B60W 10/08** (2006.01); **B60W 20/15** (2016.01)

CPC (source: EP US)

B60K 6/22 (2013.01 - US); **B60K 6/48** (2013.01 - US); **B60W 10/06** (2013.01 - EP US); **B60W 10/08** (2013.01 - EP US); **B60W 20/15** (2016.01 - EP); **B60W 20/50** (2013.01 - EP US); **F16F 15/133** (2013.01 - US); B60K 6/48 (2013.01 - EP); B60W 2030/206 (2013.01 - EP); B60W 2710/06 (2013.01 - US); B60W 2710/08 (2013.01 - US); B60Y 2200/92 (2013.01 - US); B60Y 2300/58 (2013.01 - EP US); B60Y 2400/48 (2013.01 - EP US); Y02T 10/62 (2013.01 - EP)

Citation (search report)

See references of WO 2019170382A1

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)

WO 2019170382 A1 20190912; CN 111801256 A 20201020; CN 111801256 B 20230718; DE 102018203454 A1 20190912; EP 3762269 A1 20210113; US 11453386 B2 20220927; US 2021009106 A1 20210114

DOCDB simple family (application)

EP 2019053645 W 20190214; CN 201980016002 A 20190214; DE 102018203454 A 20180307; EP 19708405 A 20190214; US 201916977215 A 20190214