

Title (en)
ELECTROMECHANICAL SYSTEM AND SUPERIMPOSED GEARING FOR TRANSFERRING ROTATIONAL ENERGY

Title (de)
ELEKTROMECHANISCHES SYSTEM SOWIE ÜBERLAGERUNGSGETRIEBE ZUR ÜBERTRAGUNG VON ROTATIONSENERGIE

Title (fr)
SYSTÈME ÉLECTROMÉCANIQUE AINSI QUE RÉDUCTEUR DIFFÉRENTIEL POUR LA TRANSMISSION D'UNE ÉNERGIE DE ROTATION

Publication
EP 3729617 A1 20201028 (DE)

Application
EP 18826686 A 20181220

Priority
• DE 102017130880 A 20171221
• EP 2018086360 W 20181220

Abstract (en)
[origin: WO201912224A1] The invention describes an electromechanical system for transferring rotational energy, torque and power in a powertrain, to which a first, a second and a third machine for energy conversion (2, 3, 4) are coupled, and a superimposed gearing (1) for a system of this kind having a planetary gearbox (7). The sun gear (8) of the planetary gearbox (7) is coupled by means of a first shaft (5) for transferring a torque to the first machine (2) and at least one planetary gear (9) is coupled by means of a second shaft (6) for transferring a torque to the second machine (3). The third machine (4) is designed as a three-phase synchronous machine. An internal gear (10) of the planetary gearbox (7) forms a rotor of the three-phase synchronous machine (4). The described technical solution is characterised in that the internal gear (10) is connected to a housing (15) of the planetary gearbox (7), and that permanent magnets (11) for exciting the three-phase synchronous machine are arranged, more particularly are fastened, on the internal gear (10) and/or on the housing (15) of the planetary gearbox (7).

IPC 8 full level
H02K 21/12 (2006.01); **F16H 3/72** (2006.01); **H02K 7/116** (2006.01); **H02P 3/00** (2006.01); **H02P 9/00** (2006.01)

CPC (source: EP US)
F16H 1/28 (2013.01 - US); **F16H 3/724** (2013.01 - EP); **F16H 37/041** (2013.01 - US); **F16H 57/02** (2013.01 - US); **F16H 57/0486** (2013.01 - US); **H02K 7/006** (2013.01 - EP); **H02K 7/116** (2013.01 - EP US); **H02K 11/33** (2016.01 - US); **H02K 21/12** (2013.01 - EP); **H02K 21/14** (2013.01 - US); **H02P 3/00** (2013.01 - EP); **H02P 9/007** (2013.01 - EP); **F16H 2057/02034** (2013.01 - US); **F16H 2057/02069** (2013.01 - US); **F16H 2057/02078** (2013.01 - US); **Y02E 10/72** (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

DOCDB simple family (publication)
DE 102017130880 A1 20190627; EP 3729617 A1 20201028; JP 2021508231 A 20210225; JP 7341158 B2 20230908; US 2020403481 A1 20201224; WO 201912224 A1 20190627

DOCDB simple family (application)
DE 102017130880 A 20171221; EP 18826686 A 20181220; EP 2018086360 W 20181220; JP 2020554587 A 20181220; US 201816954900 A 20181220