

Title (en)
ELECTRIC POWER TOOL

Title (de)
ELEKTRISCH BETRIEBENES WERKZEUG

Title (fr)
OUTIL ÉLECTRIQUE

Publication
EP 3730247 A1 20201028 (EN)

Application
EP 20166759 A 20200330

Priority
JP 2019074387 A 20190409

Abstract (en)
Provided is an electric power tool for controlling a motor such that when the user lets the motor turn at a low velocity, the motor turns slowly and smoothly at the low velocity and that when the user attempts to run the motor at a high velocity, the motor quickly increases its velocity to the high rotational velocity. An electric power tool (10) according to an embodiment includes a motor (1), an operating unit (8), and a control unit (9). The motor (1) is a brushless motor to drive a tip tool (7). The operating unit (8) accepts a command for controlling a manipulated variable (LI, L3) defining the rotational velocity of the motor (1). The control unit (9) applies a voltage with a startup voltage pattern to the motor (1) at a startup time (t1) when the motor (1) has just started up. The control unit (9) controls the rotational velocity of the motor (1) to bring the rotational velocity of the motor (1) into conformity with a target rotational velocity (ω_2 , ω_4) of the motor (1) after the motor (1) has started running (from t3 and on). The control unit (9) adjusts, according to the manipulated variable (LI, L3) entered through the operating unit (8) at the startup time (t1) of the motor (1), the startup voltage pattern of the voltage applied to the motor (1) at the startup time (t1) of the motor (1).

IPC 8 full level
B25B 21/00 (2006.01); **B25F 5/00** (2006.01)

CPC (source: EP)
B25B 21/00 (2013.01); **B25F 5/00** (2013.01)

Citation (applicant)
JP 2015122823 A 20150702 - HITACHI KOKI KK

Citation (search report)

- [X] US 2011284256 A1 20111124 - IWATA KAZUTAKA [JP]
- [X] EP 2500144 A1 20120919 - MAKITA CORP [JP]
- [X] EP 0896760 A1 19990217 - SIEMENS CANADA LTD [CA]
- [X] US 2015333666 A1 20151119 - MILLER STUART [US], et al
- [X] JP 2008278633 A 20081113 - HITACHI KOKI KK

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)
EP 3730247 A1 20201028; EP 3730247 B1 20230503; JP 2020171980 A 20201022; JP 7531171 B2 20240809

DOCDB simple family (application)
EP 20166759 A 20200330; JP 2019074387 A 20190409