US 20220360150A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2022/0360150 A1**

WITWER (43) **Pub. Date: Nov. 10, 2022**

(54) **METHOD FOR PRODUCING A COIL WINDING FOR INSERTION INTO RADIALLY OPEN SLOTS OF STATORS OR ROTORS OF ELECTRICAL MACHINES**

(71) Applicant: **Schaeffler ELMOTEC STATOMAT GmbH**, Karben (DE)

(72) Inventor: **Keith A. WITWER**, Fort Wayne, IN (US)

(73) Assignee: **Schaeffler ELMOTEC STATOMAT GmbH**, Karben (DE)

(21) Appl. No.: **17/624,359**

(22) PCT Filed: **Jul. 2, 2020**

(86) PCT No.: **PCT/EP2020/068683**

§ 371 (c)(1),
(2) Date: **Jan. 3, 2022**

(30) **Foreign Application Priority Data**

Jul. 3, 2019 (DE) 10 2019 117 966.1

Publication Classification

(51) **Int. Cl.**

H02K 15/06	(2006.01)
H02K 15/00	(2006.01)
H02K 15/04	(2006.01)

(52) **U.S. Cl.**

CPC ***H02K 15/066*** (2013.01); ***H02K 15/0081*** (2013.01); ***H02K 15/0478*** (2013.01)

(57) **ABSTRACT**

The invention relates to a method for producing a coil winding (**70**) for insertion into radially open slots (**82**) in a rotor or stator (**80**) of an electrical machine, wherein the coil winding (**70**) has a wire pack (**60**) consisting of a number of wires (**32**), wherein the wires (**32**) of the wire pack (**60**) run parallel to one another and are connected to one another in pairs at one end of the wire pack (**60**), and wherein the coil winding (**70**) is formed by a flat winding former which can be rotated about an axis of rotation (**26**). According to the method, the wire pack (**60**) is fixed on a winding former (**26**) and winding heads (**42**) are produced by displacing fixations of the wire pack (**60**). The winding shaft (**26**) can be rotated so that, after carrying out the method, a coil winding (**70**) is present in the form of a wave winding having wires (**32**) of the wire pack (**60**) preconnected in pairs at one end. Such a method allows a particularly space-saving coil winding (**70**) to be produced, which has a particularly high mechanical stability and requires the least amount of installation space in a rotor or stator (**80**).