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A bearing-shaft assembled structure

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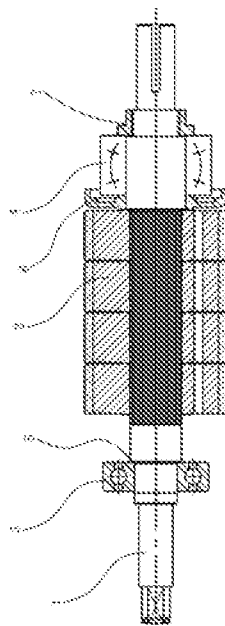
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Title: A BEARING-SHAFT ASSEMBLED STRUCTURE

Abstract

The invention relates to a bearing-shaft assembled structure, belonging to the technical field of bearing-shaft assembled structures. The structure comprises a rotor shaft and a yoke assembly fixed on the rotor shaft, and the parts of the rotor shaft corresponding to both ends of the yoke assembly are respectively provided with a left bearing and a right bearing. The structure is characterized in that the right bearing is a double row conical roller bearing, the rotor shaft between the yoke assembly and the inner end of the right bearing is provided with a bearing cap, and the part of the rotor shaft corresponding to the outer end of the right bearing is fitted with a screw nut by screw threads. The bearing-shaft assembled structure has simple structure and no axial movement between the rotor shaft and the bearing, solving the problems of the prior art that axial movement possibly causes axial displacement between a bearing used for supporting a rotor shaft and a stator and a rotor shaft and results in unreliable fit between the bearing and the rotor shaft and thus affects the running performance of a motor.



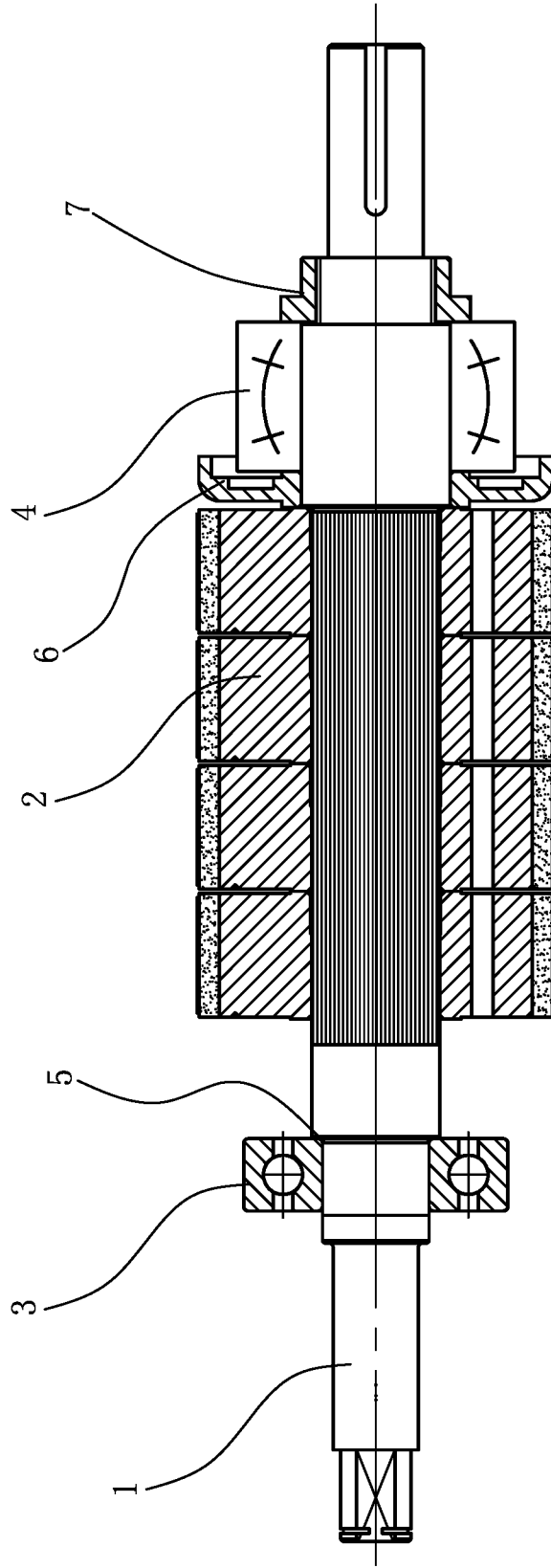


FIG. 1

Description

A BEARING-SHAFT ASSEMBLED STRUCTURE

Technical field

The invention relates to a bearing-shaft assembled structure, belonging to the technical field of bearing-shaft assembled structures.

Background art

When a motor rotor is subject to an axial load, a certain degree of axial movement occurs between a rotor shaft and a stator, and such axial movement possibly causes axial displacement between a bearing used for rotating and supporting the rotor shaft and the stator and the rotor shaft, resulting in unreliable fit between the bearing and the rotor shaft and affecting the running performance of the motor.

Summary of the invention

The object of the invention is to provide a bearing-shaft assembled structure, which has simple structure and no axial movement between a rotor shaft and a bearing, solving the problems of the prior art that axial movement possibly causes axial displacement between a bearing used for supporting a rotor shaft and a stator and a rotor shaft and results in unreliable fit between the bearing and the rotor shaft and thus affects the running performance of a motor.

The above technical object of the invention is realized by the following technical scheme: the structure comprises a rotor shaft and a yoke assembly fixed on the rotor shaft, and the parts of the rotor shaft corresponding to both ends of the yoke assembly are respectively provided with a left bearing and a right bearing. The

structure is characterized in that the right bearing is a double row conical roller bearing, the rotor shaft between the yoke assembly and the inner end of the right bearing is provided with a bearing cap, and the part of the rotor shaft corresponding to the outer end of the right bearing is fitted with a screw nut by screw threads. The outer end of the right bearing is fitted with the screw nut, and the inner end of the right bearing is limited by the bearing cap, so that the movement of the right bearing relative to the rotor shaft is effectively prevented in the condition of axial load, the axial movement of the rotor shaft is prevented, the axial movement between the rotor shaft and the left bearing is realized simultaneously, and the running performance of a motor is ensured. The outside diameter of the part of the rotor shaft fitting with the screw nut is smaller than the outside diameter of the part of the rotor shaft fitting with the right bearing.

Preferably, the part of the rotor shaft corresponding to the inner end of the right bearing is provided with a left step which contacts with the inner end of the inner ring of the left bearing.

Therefore, the invention has the advantages of simple structure and no axial movement between the rotor shaft and the bearing, etc.

Brief description of the drawing

Figure 1 is a structural diagram of the invention.

Detailed description of the embodiment

The technical scheme of the invention is further described by combining the following embodiment and drawing.

Embodiment 1: referring to figure 1, a yoke assembly 2 is fixed on a rotor shaft 1, the part of the rotor shaft 1 corresponding to both ends of the yoke assembly 2 are

respectively provided with a left bearing 3 and a right bearing 4, and the part of the rotor shaft 1 corresponding to the inner end of the left bearing 3 is provided with a left step 5 which contacts with the inner end of the inner ring of the left bearing 3. The right bearing 4 is a double row conical roller bearing, the rotor shaft 1 between the yoke assembly 2 and the inner end of the right bearing 4 is provided with a bearing cap 6, the part of the rotor shaft 1 corresponding to the outer end of the right bearing 4 is fitted with a screw nut 7 by screw threads, and the outside diameter of the part of the rotor shaft 1 fitting with the screw nut 7 is smaller than the outside diameter of the part of the rotor shaft fitting with the right bearing.

Claims

1. A bearing-shaft assembled structure comprising a rotor shaft and a yoke assembly fixed on the rotor shaft, wherein the parts of the rotor shaft corresponding to both ends of the yoke assembly are respectively provided with a left bearing and a right bearing, characterized in that the right bearing is a double row conical roller bearing, the rotor shaft between the yoke assembly and the inner end of the right bearing is provided with a bearing cap, and the part of the rotor shaft corresponding to the outer end of the right bearing is fitted with a screw nut by screw threads, the outside diameter of the part of the rotor shaft fitting with the screw nut is smaller than the outside diameter of the part of the rotor shaft fitting with the right bearing.
2. The bearing-shaft assembled structure according to claim 1, characterized in that the part of the rotor shaft corresponding to the inner end of the right bearing is provided with a left step which contacts with the inner end of the inner ring of the left bearing.

