

FULLY ENCLOSED SELF-VENTILATED ELECTRIC MOTOR

ABSTRACT

A fully enclosed self-ventilated electric motor comprises a stator, a rotor, a front end cover and a rear end cover. The rotor is arranged inside the stator, and the rotor comprises a rotor core, a rotor press ring, a rotating shaft, a front-end rotor interlayer and a rear-end rotor interlayer. The stator comprises a stator core, a stator winding and a stator press ring. The front end cover and the rear end cover are respectively arranged at the front end and the rear end of a power structure composed of the stator and the rotor. A through axial stator air duct is provided in the stator core, and a through inner rotor air duct is provided in the rotor. An air outlet and a front end cover ventilation duct are provided in the front end cover, and an air inlet and a rear end cover ventilation duct are provided in the rear end cover. The air inlet of the rear end cover, the rear end cover ventilation duct, the axial stator air duct and the front end cover ventilation duct form a first cooling air circuit, and the air inlet of the rear end cover, the inner rotor air duct and the air outlet of the front end cover form a second cooling air circuit. Neither the first cooling air circuit nor the second cooling air circuit is in communication with the stator winding. The fully enclosed self-ventilated electric motor of the present application has an excellent cooling effect.

(FIG. 1)