

[Abstract]

ADHESIVELY-LAMINATED CORE FOR STATOR AND ELECTRIC MOTOR

In an adhesively-laminated core for a stator, a chemical component of each of electrical steel sheets includes 2.5% to 3.9% by mass of Si, an average tensile modulus of elasticity of each of adhesion parts is 2500 MPa to 5000 MPa, and when an average sheet thickness of the each of electrical steel sheets is t_1 in units of mm, an average thickness of the each of adhesion parts is t_2 in units of μm , and an average value of yield strengths of the each of electrical steel sheets is Y_P in units of MPa, a condition A of satisfying the following expressions 1, 2, and 3 or a condition B of satisfying the following expressions 3, 4, and 5 or combination thereof is satisfied.

$$50 \times t_1 - 12 \leq t_2 \leq 50 \times t_1 - 6 \cdots (\text{expression 1})$$

$$0.15 \leq t_1 \leq 0.27 \cdots (\text{expression 2})$$

$$0.5 \leq t_2 \leq 2.5 \cdots (\text{expression 3})$$

$$0.025 \times Y_P - 12 \leq t_2 \leq 0.025 \times Y_P - 8 \cdots (\text{expression 4})$$

$$380 \leq Y_P \leq 540 \cdots (\text{expression 5})$$

FIG. 5