

Abstract

An angle θ_0 between an edge section of the flux barrier on magnetic pole center side and an edge section on a side for coming in contact with the rib of adjacent flux barrier, with respect to the rotor center, is determined to satisfy the relation of

$$\theta_0 = 180^\circ \cdot m / (P_n \cdot f / f_0) \quad (\text{provided } 2\theta_0 + \theta_r < 90^\circ)$$

wherein, a frequency of vibration which is to be reduced is represented with f , a pole pair number is represented with P_n , an electrical frequency is represented with $f_0 = P_n \cdot N$, a motor revolution is represented with N , $m = 1, 3, 5, \dots$, an angle of the rib with respect to the rotor center is represented with θ_r , therefore making of motor highly effective and decreasing of the motor acoustic noise are coped with.