

ABSTRACT

According to one embodiment, a rotor includes a shaft and a rotor core. A plurality of flux barriers are formed at the rotor core. The flux barrier has a plurality of bridges, and one or more barrier regions. When a width of the bridge of a first flux barrier is defined as w_a , a width of the bridge of a second flux barrier is defined as w_b , a value obtained by dividing a radius of a smallest circle that is tangent to a central line of the first flux barrier by an outer radius of the rotor core is defined as a , and a value obtained by dividing a radius of a smallest circle that is tangent to a central line of the second flux barrier by the outer radius of the rotor core is defined as b , and when

5 $f(x)=(1-x^2)^{3/2}$ and $g(x)=(1-x^3)$, a relationship of $f(b)/f(a) \leq w_b/w_a \leq g(b)/g(a)$ is

10 satisfied.