Claims

1) A three phased balanced asymmetric reluctance motor comprising:

a rotor rotatably arranged on a shaft, wherein an exterior surface of the rotor has a number of rotor teeth, hereafter denoted nTeeth, equal to n*6 wherein n is a positive integer equal to or larger than three; and

a stator in the form of an annulus provided with first through sixth slots for coils and provided with a plurality of coils, wherein a plurality of big stator teeth is provided on an interior surface of the stator, and wherein each of the plurality of big stator teeth contain an equal number of small stator teeth,

wherein the first slot of the stator receives a first coil and a second coil, the second slot of the stator receives the first coil and a third coil, the third slot of the stator receives the second coil and the third coil, and the fourth slot of the stator receives the first coil and the second coil;

wherein the equal number of the small stator teeth provided on each of the plurality of big stator teeth is equal to (nTeeth/6)-1,

wherein an angle (*a*), as measured from a center of the rotor, and formed between a center of a first rotor tooth and a center of a second rotor tooth is equal to *360°/nTeeth*, wherein the first rotor tooth and the second rotor tooth are consecutively positioned,

wherein an angle (*b*), measured from the center of the rotor, and formed between a center of the first slot opening of the stator and a center of a first small stator tooth is equal to *360°/nTeeth*,

wherein an angle (*d*), as measured from the center of the rotor, and formed between the center of the first slot opening of the stator and a center of a last small stator tooth is equal to *(4/3)*360°/nTeeth*,

wherein an angle (*b*+*d*), as measured from the center of the rotor, and formed between the first small stator tooth and the last small stator tooth is equal to *(7/3)*360°/nTeeth*,

wherein a width of the first slot opening of the stator is equal to a width of the second slot opening of the stator,

wherein an angle (*c*), as measured from the center of the rotor, and formed between a center of a third slot opening for the stator and a center of a small stator tooth adjacent to the third slot opening of the stator is equal to *(2/3)*360°/nTeeth*,

wherein a pattern from the center of the first slot opening to the center of the fourth slot opening is repeated around a complete circumference of the stator, the fourth slot opening being the first slot opening in the next sequence.

2) The three phased reluctance motor according to claim 1, wherein a variant in the three phased balanced asymmetric reluctance motor is mirrored through a center axis and through the center of the slots for the coils.

3) The three phased reluctance motor according to claim 1 or 2, wherein at least one of the stator teeth is positioned to achieve a skewing effect.

4) The three phased reluctance motor according to claim 1 or 2, wherein there is an additional tooth in the slots which are big enough for the additional tooth.