

of like magnetic polarity, wherein said armature winding comprises at least one coil whose width portion in the direction of said relative motion is substantially as great as the width of a surface of one of said poles, said coil width portion being operative as a connecting path which undergoes transition from the superconducting to the normally conducting state as it is passed through the path of movement of said magnetic poles, said poles being spaced such that at least one longitudinal side of an armature coil is always subject to said operating magnetic field.

3. A commutating arrangement for a direct current machine as defined in claim 2, wherein said armature winding comprises a pair of coils connected in parallel, at least one of said coils always being within the magnetic field of an operating pole, a longitudinal side of said one coil being free of said operating magnetic field movement path.

4. A commutating arrangement for a direct current machine as defined in claim 2, wherein said armature winding comprises at least two parallel connected coils which are displaced in phase relative to said operating magnetic field.

5. A commutating arrangement for a direct current machine as defined in claim 2 wherein said armature winding comprises a parallel arrangement of series connected coils constituting strands and wherein equal coil sections within a strand are disposed in a like position relative to an operating magnetic pole.

6. A commutating arrangement for a direct current machine as defined in claim 2, wherein each of said coils is constructed as a double coil, each of said double coils comprising two parallel connected switching paths which are passed through said operating magnetic field, said paths being spaced from each other a distance substantially equal to an operating magnetic pole width.

7. A commutating arrangement for a direct current machine as defined in claim 2, wherein each of said coils comprises longitudinal sides comprising respective superconducting and switching sides in alternate disposition and wherein on each side of the armature winding there are disposed respective rows of operating magnetic poles of opposite magnetic polarity.

8. A commutating arrangement for a direct current machine as defined in claim 1, wherein portions of some of said paths are operative to be switched from the superconducting to the normally conducting state, said commutating poles being so disposed whereby in the path of said relative motion they pass over said sections but outside of said portions.

9. A commutating arrangement for a direct current machine as defined in claim 6, wherein a double coil comprises two sections, each comprising portions which are capable of being switched from the superconducting to the normally conducting state and non-switching portions, and further including a stationary commutating magnetic pole disposed between said non-switching portions whereby upon the entering of one of said switching portions into an operating magnetic field said commutating pole is excited to cause a commutation to the other of said switching portions.

References Cited

Electrical Review, Jan. 3, 1964, p. 22.

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