

TITLE OF INVENTION: A 48-SLOT 8-POLE FLAT-WIRE WINDING STATOR AND FLAT-WIRE MOTOR

ABSTRACT

The present invention discloses a 48-slot 8-pole flat-wire winding stator, comprising three-phase windings, wherein each of the phase windings comprises a plurality of groups of parallel winding branches, each group of winding branches comprises at least two branches, each of the branches comprises single coils and coils with a span of y , each of the branches takes a single coil positioned in an innermost layer of a slot opening of the core slot as a winding start, the single coil in the innermost layer of the slot opening serves as a neutral point lead-out wire, a stacked coil with a span of y is wound from the slot opening to slot bottom, the stacked coil with a span of y is wound from the slot bottom to slot opening, and a stacked coil with a span of $y-1$ is commutated in the innermost layer of the slot opening; or A concentric coil with a span of y is commutated in the outermost layer of the slot bottom in the same layer, and then the stacked coil with a span of y is wound from the slot bottom to the slot opening. This invention offers the advantages of a compact structure, balanced potential across all branches, and the absence of circulating currents, thereby eliminating a series of issues arising from branch asymmetry.

FIG. 7