

Title (en)

Method and apparatus for winding wedge-shaped segments for an electrical coil of an electrical transformer.

Title (de)

Verfahren und Vorrichtung zum Wickeln von keilförmigen Segmenten für eine elektrische Spule eines elektrischen Transformators.

Title (fr)

Procédé et dispositif de bobinage de segments cunéiformes pour un enroulement électrique d'un transformateur électrique.

Publication

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Application

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Priority

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Abstract (en)

In a method for fabricating the windings of a toroidal transformer of the type in which the core is formed by winding a strip of flat magnetic material into a toroidal chamber within already formed windings, one of the windings is defined by a coil formed from a plurality of wedge-shaped segments. Each segment is constructed by winding continuous pre-insulated wire around a mandrel between a pair of relatively angled windings forms, successive segments being constructed with the same continuous wire so that the coil is formed with a substantially continuous conductor. Preferably one of the forms is axially moved along the mandrel after winding a respective segment so as to compress the turns of the segment and thereby increase the turns density thereof. The insulation on the wire contains a proportion of thermosetting material. Heat is applied to the winding so as to cause this material to become adhesive and then cured. The apparatus (170) comprises a mandrel (188) which is rotated about a longitudinal axis and causes a longitudinally fed conductor (178) to be wound into the space between a pair of forms (180, 182) which have relatively inclined facing surfaces. One of the said forms (180) is axially movable along the mandrel (188). The other form is horizontally split, but is normally stationary, the two halves being located in respective slidable carriers (192, 194). A hydraulic cylinder means (230) urges the movable form (180) towards the other form after the segment is wound. Electrical heating means (226) heat the insulation to cure it. The two halves of the stationary form (182) are moved apart and the segment is translated onto an adjacent storage mandrel (174).

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Citation (search report)

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