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(54) Title: STATOR WINDING OF THREE-PHASE ALTERNATING CURRENT ELECTRIC MACHINES

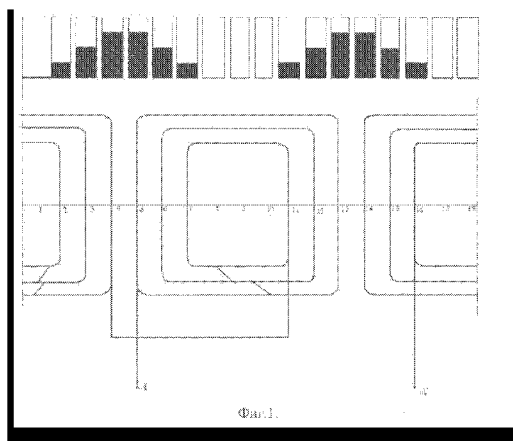


Fig. 1

(57) **Abstract:** The invention refers to the sphere of electrical engineering in particular to stator windings of three-phase alternating current electrical machines and may be used for manufacturing of synchronous generators, synchronous and asynchronous motors. The technical result is significant weakening of high space excitation harmonics of magnetic field, approximation of magnetic field distribution in machine gaps to sinusoidal distribution. Stator winding of alternating current electrical machines contains three single phase windings, made up by the equal quantity of the coils placed in the slots and connected with each other in accordance with similar diagrams that ensure spatial shift of the axes of the windings relative to each other by 120 degrees. At that each of the single phase windings along the double polar pitch of the stator is made by  $2Z/2p_m$  coils that contain  $Z/2p_m$  groups with the same number of coils in groups. Each coil group is made with different width of the coils it consists of and different number of turns that constitute the coils as compared with the other groups of coils. At that the coils of one group are made with minimal width and have got minimal number of turns. The width and the number of turns of the coil of each subsequent group are designed with different width and number of turns of the coils of the previous group. At that the coils of these groups are located concentrically relative to the coils with minimal width and minimal number of turns. The parts of the slots volume that are free after laying of the coils of this single phase winding are used for placement of the coils of the two other single phase windings made in a similar manner.



# INTERNATIONAL SEARCH REPORT

International application No  
PCT/IB2013/058012

A. CLASSIFICATION OF SUBJECT MATTER  
INV. H02K3/28  
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
H02K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 905 840 A (DUNN JR GEORGE B) 22 September 1959 (1959-09-22) column 2, lines 6-9,51-53; figures 1,2,5,6 column 3, lines 17-75 column 4, lines 1-12 column 5, lines 27-45 -----	1

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Further documents are listed in the continuation of Box C.

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See patent family annex.

\* Special categories of cited documents :

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## INTERNATIONAL SEARCH REPORT

### Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2905840	A	22-09-1959	NONE
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