Title: SIX PHASE SYNCHRONOUS MOTOR GENERATOR AND TRANSFORMER WITH MAGNETIC BALANCE

Abstract: A six phase synchronous motor/generator incorporates two circumferentially separated three phase coil groups arranged in slots, each group is star connected. The rotor provides two salient poles of alternating polarity arranged at an angle of 90 degrees mechanical and having a pole width overlying three coil sides or slots respectively.
SIX PHASIC SYNCHRONOUS MOTOR GENERATOR
AND TRANSFORMATOR WITH MAGNETIC BALLANCE

Description of the invention

This invention is related to the field of electrotechnics.

Technical problem

Technical problem solving by this participation contains the solvation in producing electrical producing electrical energy in three phasic of alternant current at the frequency of the 50 Hz. Harnessing of energy is reduced (related to the mass of the generator and input of the energy (Nm)).

At the six phasic synchronous generator motor and transformer with the magnetic balance of the alternant current of the output frequency 50+100+300=450Hz x2=900Hz, the harness of the energy is bigger: 5 (five) times more in relation to existing three phasic generator.

The excitation strengthening is 50% lower than of the three phasic generator. By this device we are solving the problem of damaging generator' winding at the short circuit. The electrical power of the short circuit at the full loading is zero (0) and the result of mechanical energy is idle work.
Technical status

On the first prototype during the testing in laboratories the following results are shown:
1. the frequency of generator=50-100 i 300 Hz
2. the shape of energy is shown on drawings (see scheme)
3. by connecting two generators in series (prototype of generator) the result is regular
double sinuside
4. fluo tubes work without coils and glowing thread, with the economizing of 500% as all
and inductive resistance

The description of technical problem solution

Six phasic sinchron motor generator and transformator with magnetic of alternative
balance consists of stator and rotor.

- Stator

Stator is winding six phasic in two tropole groups connected for each group into
star with following marks:
1. The beginning of the coils: U-V-W-U1-V1-W1
2. The end of the coils: X-Y-Z-X1-Y1-Z1
(see scheme)

In each phasic there are doubled coils connected in the serie. Two tropole groups
are devided by electricity. In every phasic the condensator is connected C=3.75nF. The
indeduct electro-motor power is individually going on the first group U-V-W. It occupies
one half of the stator or the circle of 180 degrees. Leaving the first group enters the second
group U1-V1-W1 i.e. into another half of the stator of 180 degrees.

When the poles in one phasic are exactly under the double floor coil, the directions
of the powers are opposite each other, because the direction of the revolution poles is equal.

The stator’s magnetic field is rejected from the rotor’s magnetic field. At this point
generator works as the motor. Condensator gives the energy of the consumer and
mechanical energy is in that case –0-Nm. When pole - S - or - N - leaves doublefloor coil
and transverses into one half of the coil, then I.E.M.S. in half of the coil of each phasic with
one pole equal in one half of the coil, then the condensators fulfill.
Magnetic coils of the half of the pole S and one of the half of the pole N in inner side of the pole closed while magnetic coil of the outer half of the pole S-S and the half of the pole N close the other circle around the half of the stator.

While the rotating of rotor rotates outer (stream of coils of the poles S and N) then it transformed E.M.S. in the half of the stator’s coils with the frequency 50 Hz.

\[ UF = \frac{278-V \times 4 + (2,5769099 \times 5)-(83,446533 \times 100) \times 4)^2}{5} = 235V \]

\[ C = \frac{3,75 \text{ nF} \times 6}{22,5 \text{ nF}} \]

\[ N = 391,83673 \text{ W} \]

- Rotor

Rotor has two poles moving each other for 90% (see scheme) and winding with coils - CU - supporting by moving rings and grafit brushes for input of electricity, excitation and strenghts.

Rotor has protoweight of plumbum (Pb) because of the balance (see scheme of stator and rotor).
Request patent

Six phasic synchronous motor generator and transformator with magnetic balance of the alternative current, worked by the containing of the six phasic stator with two separated tropole groups, each group connected into the star. In one phasic are doublefloor coils connected into the series contains of the rotor that has two poles moved for 90% winding with coils, fulfilled by moving rings and graffit brushes and contra weight made of plumbum (Pb) because of the balance.

Scheme 1:

Stator – rotor.

Scheme 3:

Rotor

Frequencies (50+100+300=450Hz) x 2

(produced by rotor and stator)

Scheme 2:

Group 1: 450 Hz
Group 2: 450 Hz

Remanent bowl carries the energy made by rotor and stator

a) the surface of the remanent circle of the bowl carrier of the mass (page 4)
b) the surface of the remanent bowl (the carrier of consumer)
c) boundary of the remanent bowl (carrier of Nm mechanical energy)
<table>
<thead>
<tr>
<th>OPERATION DISPLAY OF ONE PHASE</th>
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<tbody>
<tr>
<td>AUTHOR: SLAVKO TOMAC, Delnice</td>
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<td>DATE: 08/2003, god.</td>
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</table>

![Diagram](attachment:image)
a) 8-positions of the rotor operation of the converter 1/2 half mechanical energy

b) 8-positions of the rotor operation mechanical energy

$\frac{f_1}{f_2} = 50 \text{ Hz}$

$\frac{f_2}{f_3} = 100 \text{ Hz}$

$\frac{f_3}{f_4} = 300 \text{ Hz}$

Number 5: 1, 3, 7, 9, 3, 5, 7, 9

Number 4, 6: 4, 5, 6, 7, 8, 9
A. CLASSIFICATION OF SUBJECT MATTER
IPC 7   H02K19/22   H02K19/34

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)
IPC 7   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 practical, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<tbody>
<tr>
<td>A</td>
<td>FR 2 566 975 A (PRECISION MECANIQUE LABINAL) 3 January 1986 (1986-01-03) page 1, lines 1-7 page 2, line 16 - page 3, line 22 page 4, line 3 - page 6, line 22; figures 1-6</td>
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</table>

Date of the actual completion of the international search
18 May 2004

Date of mailing of the international search report
28/05/2004

Name and mailing address of the ISA
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Authorized officer
Beitner, M
Continuation of Box I.2

Claims Nos.: —

In view of the wording of the claim presently on file, which renders it difficult, if not impossible, to determine the matter for which protection is sought, the present application fails to comply with the clarity and conciseness requirements of Article 6 PCT (see also Rule 6.1(a) PCT) to such an extent that a meaningful search is impossible. Consequently, the search has been carried out for those parts of the application which do appear to be clear (and concise), namely

- a six phase synchronous motor/generator
- incorporating two circumferentially separated three phase coil groups, each group star-connected
- a two pole rotor with the salient poles arranged at an angle of 90 degrees mechanical

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.
INTERNATIONAL SEARCH REPORT

Box I  Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. □ Claims Nos.:  
   because they relate to subject matter not required to be searched by this Authority, namely:

2. [X] Claims Nos.:  
   because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
   see FURTHER INFORMATION sheet PCT/ISA/210

3. □ Claims Nos.:  
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II  Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. □ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. □ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. □ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. □ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the inventions first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

□ The additional search fees were accompanied by the applicant's protest.

□ No protest accompanied the payment of additional search fees.
<table>
<thead>
<tr>
<th>Patent document cited in search report</th>
<th>Publication date</th>
<th>Patent family member(s)</th>
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<tr>
<td>FR 2566975</td>
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<td>03-01-1986</td>
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</tbody>
</table>

Form PCT/ISA/210 (patent family annex) (January 2004)