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METHOD FOR ACTUATING SPRINGS MADE OF SHAPE MEMORY MATERIALS

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Description

The method for actuating shape memory material springs according to the invention features a distinctive three-phase, implementable and parameterizable power supply sequence that can be modeled, integrated, adjusted and generated by programmable electronic systems as needed, so as to cause a reaction of additional speed and force, both by thermal and electromagnetic effect, simultaneously developed on the actuation spring coils within an actuator.

Advantages

- The method introduces new possibilities for electric actuation of springs made of materials with shape memory, with efficient energy consumption;
- The method improves the performance of actuators that use actuation springs made of materials with shape memory, in that it increases the reaction speed and the force developed by them at the time of electrical actuation;
- The method allows adjusting the speed and actuation force, developed by an actuator at the moment of the electric actuation of the springs made of materials with memory of the shape of the component;
- The method leads to an increase in the period of use of actuation springs made of materials with shape memory, because they are not subject to excessive thermal regimes;
- The method is compatible with actuation methods that compensate with electricity different disturbing factors on the controlled phenomena during actuation.

