

## Написання розширеної анотації

## Writing an Extended Abstract

Анотація повинна містити наступні складові: <ul style="list-style-type: none"><li>– мета;</li><li>– методологія;</li><li>– результати;</li><li>– оригінальність;</li><li>– практичне значення.</li></ul>	The abstract should contain the following components: <ul style="list-style-type: none"><li>– purpose</li><li>– methodology;</li><li>– results;</li><li>– originality;</li><li>– practical significance.</li></ul>
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Приклад оформлення англійської анотації із зазначеними складовими:

An example of an English-language abstract with these components:

**Abstract. Purpose.** To approximate the mathematical model of nonstationary electromagnetic field calculation in nonlinear, nonuniform, conductive medium taking into account the rotor motions of the polarized monostable actuator with permanent magnets, and to determine the starting parameters depending on the storage capacitor's voltage value.

**Methodology.** We have applied the mathematical simulation of electromagnetic field in nonlinear, conductive, movable medium taking into account the equation of the electrical field of the coil and motion dynamics of the movable elements. We have correlated the simulated result with the experimental data obtained by means of the polarized monostable actuator model.

**Results.** We have developed the mathematical model for calculation of the nonstationary electromagnetic field in the polarized bistable actuator considering the equation on-off electric circuit coil and equation of motion of reduced mass armature. We have obtained the dynamic characteristics of the monostable actuator vacuum switch of medium voltage. This allows us to examine the parameters of the switch response based on the received mathematical model and to design actuators according to the specification, and to choose optimal parameters of construction and reduce substantially the time and expenses needed for the models.

**Originality.** For the first time, we have carried out the integrated research of the monostable actuator with permanent magnets based on the combined equation calculation of electromagnetic field in non-uniform, nonlinear conductive medium taking into account the armature transfer, electric line equation and movement.

**Practical value.** We have manufacture the actuator models based on the performed calculation. The experimental studies have confirmed the adequacy of the model which allows designing such actuators for new construction of switches and upgrade the existing ones.

**Key words:** polarized monostable actuator, permanent magnet, mathematical model, nonstationary electromagnetic field, starting parameters, dynamic characteristics.