
Loading automation of a vibrating hoppers of the robotic technological complex

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The article describes a vibrohopper loading sensor. Its work is based on the phenomenon of changes in the oscillations amplitude of a bowl when the number of uploaded details is changing. The sensor consists of an elastic plate, a lever rotating around an axis, and a hermetic contact. Some quantitative ratios that characterize the sensor design parameters are considered. Guidelines for choosing the main geometrical dimensions of the sensor element and the lever controlling a state of the hermetic contact are given.

Keywords: the vibrating hopper, the sensor of the loading level.

REFERENCES

- [1] Biderman V.L. *Prikladnaya teoriya mekhanicheskikh kolebaniy* [Applied theory of mechanical vibrations]. Moscow, Vysshaya shkola Publ., 1972, 416 p.
- [2] Kuvshinsky V.V. *Avtomatizatsiya tekhnologicheskikh protsessov v mashinostroenii* [Automation of technological processes in mechanical engineering]. Moscow, Mashinostroenie Publ., 1972, 272 p.

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