

# Investigation of stress-strain state in the flywheel and estimation their specific energy capacity

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## Abstract

© The Authors, published by EDP Sciences, 2017. In this paper, the specific energy intensity of the kinetic energy storage devices, including the flywheel-casing scheme in the potential field, is investigated. The possibilities of using various structural materials in the manufacture of structural elements of a mechanical accumulator are analyzed, the stress-strain state of the flywheel and the casing under quasistatic increase in the rotational speed of the rotor part of the structure is investigated. It is noted that the presence of a potential field in the flywheel-casing system makes it possible to increase the specific energy intensity of the kinetic energy storage.

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