General Case of Movement of Solid System with Two Massive Eccentrics on a Rough Plane

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ABSTRACT

In two previous articles [1-2], a solid system with two massive eccentrics, standing on a rough surface as a tripod, was considered in two special cases: purely translational motion without rotation and purely rotational motion with one fixed support point. In this paper we consider a general case where the system can move in a plane without restriction on the type of motion.

The main result of this work is that the equations of motion for the general case of motion of a tripod with two eccentrics are obtained.

The main features of this study are that there is an experimental stand that allows you to study the behavior of the mechanical system in full-scale tests.

The main conclusions are that the obtained equations of motion for the general case can be used for numerical experiments. In the future, these numerical experiments can be carried out and compared with full-scale tests.

The significance of the work is that now this direction of research – movement due to internal movers – is quite interesting for many researchers.

REFERENCES
