Análisis cinemático de levas de baja velocidad, con leyes combinadas en base a métodos geométricos y matemáticos [

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text (article)

Analítica

The mechanism of cam - follower is widely used in various types of machines for its ease of construction, the precision of the mechanisms depends directly on the correct generation of the profile of the cam. The profile of the cam can be generated by geometric methods and mathematical models. In many applications it is useful to apply a law that governs the upload of the follower and another law that governs the download which is analyzed when generating the profile of the cam. The cam profile generated by geometric methods allows to generate twelve positions of movement of the tracker, in the twelve positions the velocities and accelerations are obtained by graphic methods based on vector sums. The cam profile generated by mathematical models allows to generate values with the help of MATLAB of positions that are useful to generate the profile of the cam and trajectory of the follower, by deriving the mathematical model of the trajectory of the follower can be obtained the speeds of the follower and the deriving the mathematical model of velocities we can obtain the accelerations of the follower. The comparison of studies of the two profiles allows to establish the variations suffered by the profile between one method and the other, these comparisons allow to establish their influence on positions, speeds and accelerations of the tracker which is very useful to analyze the accuracy of the mechanism for the work required

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