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Study of Torsion in the Systems with Ramifications for Transmitting the Rotation Motion

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ABSTRACT

This work presents a finite element approach for the study of torsion in systems with ramifications for transmitting the rotation motion. The finite elements used are of composite type, including a part of the elastic beam with rigid discs at the extremities. On the discs are usually acting motor or resistant moments depending only on the angular velocities so that a steady state motion of the system is established. The method of the Lagrange multipliers is used for determining the contact forces in the gear pair.

***Keywords**: torsion, finite elements, Lagrange multiplier*

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