

## **Effect of Rotation Speed and Load Current on Commutation and Spark Occurrence in Micro Dc Motors<sup>1</sup>**

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### **Abstract**

This research aims to study the effect of rotation speed and armature current density or load current of micro dc motors on the commutation current, especially on the final phase where electrical spark occurs on the motor collector. A relationship of how electrical spark time and density or energy is related to rotation speed and armature current density, will be deduced. This research was supported by special laboratory experiments, and ended up with useful scientific results.

**Key words:** Micro dc motors, load current, commutation current, armature current, rotation speed, electrical spark

<sup>1</sup> For the paper in Arabic see pages (49-83).

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