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## INFLUENCE OF THE VARIABLE AIR-GAP UPON THE ELECTROMAGNETIC TORQUE DEVELOPED BY THE D.C. MOTOR

BY

**\*R. HANGANU, \*Al. SIMION, \*L. LIVADARU and \*A. MUNTEANU**

**Abstract.** The paper presents the influence of the air-gap width and shape upon the electromagnetic torque developed by the d.c. motor equipped with lap and wave winding respectively. Each case has a different air-gap under main poles. The results have in intention to point out the torque ripple in order to relieve the superiority of the wave winding from this point of view. The presented study relies on a FEM-based analysis.

**Keywords:** wave winding, lap winding, FEM analysis, torque ripple.