

# **Determination of parameters permanent-magnet synchronous motor with iron losses without torque measurement**

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## **Abstract-**

**This paper proposes systematic procedures to estimate the circuit parameters of an interior permanent magnet synchronous motor when it is fed by an inverter and torque measurements are not available. The methodology presented here does not neglect iron losses. New procedures have been developed and justified, taking into account international standard recommendations (IEC standards). Experimental results from a test rig will be presented in the paper to validate the most important contributions.**

**Index Terms-** Parameter determination, permanent magnet, synchronous motor

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