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ENERGY EFFICIENCY IN ELECTRIC MOTOR DRIVEN SYSTEM (EE&EMDS)
Symposium
August 23, 2018.

Organized and co-chaired by:

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Call for Papers

The electric motor driven systems (EMDS) are the biggest consumers of electricity in the world, they consume approximately 68% of the electricity consumed in the industrial sector and 46% of global electricity. On the other hand 80% of the world's electricity is generated by fossil fuel (oil, coal and natural gas). Then improve the energy efficiency in the EMDS is an important action in order to reduce energy consumption, greenhouse gas emissions and increase the competitiveness of companies.

This special session has the goal of receiving contributions on various topics which increase the efficiency of EMDS, such as: methods to increase the efficiency of operation of electric motors, new technologies in energy efficient motors, regulations of electric motors, influence power quality in the efficiency of electrical equipment.

Session include, but are not limited to:

1. Conventional Electric Motors. Design, mathematical models, simulation, test methods and measurements, induction motors, synchronous motor, permanent magnet motors, DC brushless motors, motors with frequency inverters, motor repair, maintenance and operation, etc.

2. New Technologies in Energy Efficient Motors. *Line-Start Permanent Magnet Synchronous Motors - LSPMSM. Permanent Magnet Synchronous Motor-PMSM. Synchronous Reluctance Motor – SynRM. Switched Reluctance Motor-SRM.* Super-Premium and Ultra-Premium Motor Technologies.

3. Power Electronics and Drives. New solutions of Power Electronics in relation to EMDS energy efficiency, measurement of drive efficiency, successful application of drives, advanced integrated motor and drives.

4. Power Quality and EMDS Efficiency. Impact of Power Quality on EMDS efficiency. Impact of Power Quality in Induction Motors, Synchronous Motor, Premium and Super premium motors. Impact of Power Quality on Electric Transformers. Analysis of Power Quality problems.

5. Electric Motor System Audit. Motor challenge programs, utilities programs for motor and EMDS, audit schemes, advances in energy measurement techniques, software tools for auditors, monitoring and verification, audit case studies, national audit programs.

6. National and International Policies, Regulations and Programs. Analysis of Policy, regulations, MEPS (minimum energy performance standards), labeling, given in several countries to reduce the consumption of electricity and the greenhouse gas emissions. Analysis of market transformation strategies & programs, financing facilities given by governments.

7. Analysis on Test Standards. Analysis of NEMA, IEEE and IEC standards. Harmonization of test standards for motor efficiency requirements. Analysis of national standards compared with international standards.

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