Special Issue

Failure Diagnosis and Prognosis of AC Rotating Machines

Message from the Guest Editor

Induction or synchronous machines present numerous advantages due to their robustness and their power–weight ratio. However, they are subject to several electrical and mechanical faults. Many methods have been developed to diagnose such failures and prevent unwanted stoppage. These can be based on MCSA, vibrations, noise, electrical or magnetic field, etc. Different techniques have been developed, such as model-based and data-driven approaches. Data-driven methods deal with signal processing, statistical tools, data mining, and artificial intelligence. Recent trends include improvements in diagnostic reliability and accuracy, and new prognostic techniques have been developed for assessing the remaining useful life of these electrical drives and, thus, optimizing maintenance scheduling. This Special Issue deals with the most recent research on incipient failure diagnosis of induction and synchronous machines, the prognosis of their remaining useful life in steady state or in variable speed, and the operation in degraded mode.

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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