

Energy Efficiency Analysis of Crossover Technologies in Industrial Applications

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Abstract : Industry accounts for one-third of global final energy demand. Crossover technologies (e.g. motors, pumps, process heat, and air conditioning) play an important role in improving energy efficiency. These technologies are used in many applications independent of the production branch. Especially electrical power is used by drives, pumps, compressors, and lightning. The paper demonstrates the algorithm of the energy analysis by some selected case studies for typical industrial processes. The energy analysis represents an essential part of energy management systems (EMS). Generally, process control system (PCS) can support EMS. They provide information about the production process, and they organize the maintenance actions. Combining these tools into an integrated process allows the development of an energy critical equipment strategy. Thus, asset and energy management can use the same common data to improve the energy efficiency.

Keywords : crossover technologies, data management, energy analysis, energy efficiency, process control

Conference Title : ICIT 2018 : International Conference on Industrial Technologies

Conference Location : San Francisco, USA

Conference Dates : June 06-07, 2018