SE-18.3 Transparent acquisition and processing of energy data in the field of industrial production – Requirements and applications (S)

M. Brandmeier[1], N. Eckl[2], J. Franke[1]
[1]Lehrstuhl FAPS, Erlangen
[2]Siemens AG, Amberg

Energy efficiency becomes a critical production factor due to legal regulations, sustainable customer-side production requirements and the increasingly volatile supply situation. Energy transparency is of crucial importance for the definition of strategic measures to increase energy efficiency. However, the transparent collection and processing of energy data in production not only forms the basis of industrial energy management, but also facilitates the additional optimization of subareas in the production environment. Especially in the context of production-related data, such as process and product quality data and production planning and control information, as well as combined with expert knowledge, energy data provides a wide range of application fields. This paper analyzes the requirements for a holistic, transparent collection and processing of energy data and identifies possible applications for the optimization of production and production-related areas.