عنوان فارسی مقاله:
پایش آنلاین عیب در ماشین ابزارها براساس آنالیز مصرف انرژی و اکتساب داده‌های غیر هجومی برای بهبود کارایی منابع

عنوان انگلیسی مقاله:
Online fault-monitoring in machine tools based on energy consumption analysis and non-invasive data acquisition for improved resource-efficiency

توجه!
این فایل تنها قسمتی از ترجمه میباشد. برای نسخه کامل بهبود کارایی و بهبود منابع با فرمت ورگر ویرایش همراه با نسخه انگلیسی مقاله اینجا کلیک نمایید.
7. Conclusions and Outlook

The proposed fault-monitoring framework for manufacturing systems provides a number of features that go beyond state-of-the art, such as existing condition monitoring and maintenance standards for machine tools. This fault-monitoring framework contains data stream mining techniques, and a CEP engine that provides indicators for decision support in order to schedule energy-based maintenance actions and to allocate product-specific quality losses out of electrical power intake from the machine tools.

Unlike the indirect observation of degraded operating processes and abnormal machine behavior, such as vibration, and force at the component level, the fault-monitoring framework presented can be observed at the machine/cell-level.

The major advantage here is that, other than experience from maintenance and quality engineer, no further information is required in order to initialize and monitor the operating process from other data sources automatically. Additionally, data acquisition based on the hall-effect sensors (power meter) allows high flexibility, low-cost and simple retrofit for a range of machine tools with different automation degrees, without access to a specific machine controller.