

Machine tool and CMM performance evaluation methods

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Abstract

The evaluation of machine tools and CMMs has advanced rapidly over the last 50 years or so. Although much work was done in the late 1920s and 1930s, modern testing includes a variety of measurements that were not possible for the earlier practitioners. In this paper I will discuss four such innovations in some detail. They are the machine response to the environment, the linear displacement accuracy, the dynamic spindle error motions, and contouring performance. Some speculations regarding the future will also be made.