1st PACMAN Workshop



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Some physical aspects of tactile measurements

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Summary

Concerning CMMs tactile probing is the most popular type of measurement during the process of qualitycontrol. The different types of tactile sensors (switching and measuring) will be described with some of their advantages and disadvantages. The dependency of the measurements on certain physical properties like spring-constant, mass, probing-speed and damping-effects will be described as well as the time needed for measurement. The effect of the force on the surface will be shown and the impact of dirty environments will be described. There is a lot of principles which can be applied for the calibration of the probes. Some of these principles will be discussed as well. These principles reach their limits if one considers materials with a deformable surface. As one example a thin plate is measured and the different principles of measurements will be shown.

Some principles for checking and guaranteeing the quality of the probeheads will be described in a short outlook.

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