

Functional surface characterization and the impact of flatness deviations

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The assumption for friction connections based on the functional compliance of the transmission of forces and moments. This is influenced by different factors in the tribological system e.g. surface geometry as well as further surface deviations caused by production. To characterize the surface geometry, which is responsible for the function, an extraction of the whole deviations for size, form, orientation and roughness is necessary. The circular friction surface will be extracted with a roughness stylus on a tactile precision reference form measuring machine. The extracted surface will be characterized by new functional parameters. Furthermore, flatness deviations from both connecting friction specimens will be analyzed and their functional impact.

The aim of the paper is the comparison of the surface geometry and the resulting functional behavior, especially the static coefficient of friction. Based on the research results the technique of the surface extraction, functional characterization and the impact of flatness deviations of two meshed specimens will be presented.

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