

Fretting wear tests – Basics, industrial relevance and test realization

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Abstract:

In tribology, there is a common systematic approach to describe problems and develop solutions. The basic works on this approach, the tribological system analysis, are done by Czichos (1978) and later together with Habig in 1992 and later. The method has similarities with control engineering. So, a system can always be substituted from its environment and has in- and outgoing energy or mass balances. With the tribological system analysis the development of experimental methods on fretting wear problems leads to specifically fitted test benches (also known as tribometers) to meet fretting load collectives and tribosystem environments. The presentation will show a path from applications suffering from fretting wear to test methods for evaluating different solutions to fretting wear problems.

Bio:

The author works since 2014 on fretting wear topics regarding support in troubleshooting, tribological system analysis and efficient validation through simplified testing. The work benefits from a complementary dissertation work titled same as the presentation topic - spanning from the basics of fretting wear and application analysis to reasonable simplified fretting wear trials.

