The Use of Optical Microscopy to Evaluate the Tribological Properties

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Tribology is an important method for evaluating the coefficient of friction and wear of friction pairs of technical materials. The most commonly used modes are "pin on disc", resp. "ball on disc". Tribology can simulate the stress of two objects (the friction between the objects) under the real conditions. The output of the tribological test is a specific value of the coefficient of friction and wear rate. For a comprehensive evaluation of tribological properties is used the optical microscopy - to evaluate the size of wear of the pad (groove width) and of the pin (loss of material of the ball or roller). The use of modern sophisticated equipment allows to evaluate the coefficient of friction and wear also in various environments, such as in the process fluids.

Keywords: tribology, coefficient of friction, optical microscopy, process fluids

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