

**SPECIFIC WEAR COEFFICIENTS IN $\text{gr}/\text{m}^2\text{h}$ OF STEELS
AISI 1045, 4140 AND STAINLESS STEEL AISI 304
AND SIMULATION IN FEM**

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Abstract

During the abrasion of two materials, abrasive particles produced by wear debris or foreign particles remain circulating sand and dust trapped in the sliding surface and remove material mainly by forming grooves. As bonds are broken, are produced by wear debris. To avoid this it is necessary to prevent the formation of junctions of high friction, which is achieved by separating the uneven interface with a film which inhibits the interaction of metal atoms at the points of contact between the two solids. In this paper are made abrasion test in order to find the specific tribological wear coefficients to be expressed in terms of 1 gram of material lost per unit of contact area and time. The importance of finding the specific tribological wear coefficient is to perform a good diagnostic of a material and also to see that the temperature rises during this test, due to detachment of the material. These data are very important to perform adequate preventive maintenance of equipment and machinery.

Keywords: Specific wear coefficient, Adhesive, Abrasive, Hardness, Friction Torque, Coefficient Friction.