

Automatic Wear Measurement of Ti-based Coatings Milling via Image
Registration

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Abstract

The purpose of the present research is to use image registration, mutual information, and spatial coordinate transformation techniques for the automatic wear measurement of Ti-Base coated milling cutters. The experimental results indicated that the milling cutter multilayer-coated with TiAlN possesses the best performance under all the milling conditions. Furthermore, the proposed image-registration-based wear detection method can be used to perform on-line monitoring of cutter status during milling such that better surface integration of the workpieces can be ensured.

Keyword :