

Evaluating the Effects of Measurement Points and Sampling Method On Flatness

楊美玲、鄧志堅

E-mail: 9315378@mail.dyu.edu.tw

ABSTRACT

Coordinate measuring machines have been predominately used to generate measurement points for a surface. The measurement data are then analyzed to yield geometric tolerance information for the surface features such as flatness. With the availability of tolerance information, it should be possible to check if the surface is within the specified limit. In this paper, we compare the effectiveness of Hemmersley sequence sampling, Halton-Zaremba sequence sampling and the aligned systematic sampling. The mathematical model is used for the measuring points of the workpiece. The experiment is used to find the optimal number of measuring points and sampling method.

Keywords : Measurement Points ; Sampling Method ; Flatness ; Coordinate Measuring Machine ; Minimum Zone Method

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