

Machinability evaluation – Drilling Process

Motivation

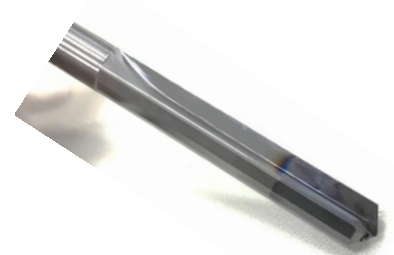
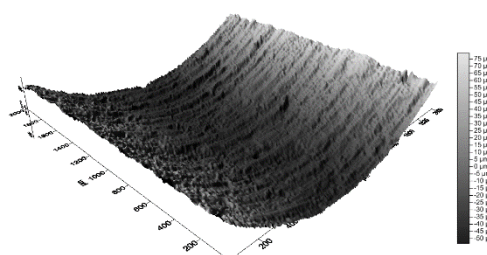
In order to stay competitive on its market, companies are looking for improvements in the manufacturing processes of their products. They are looking for innovation by adding high product yield and low cost. One of the materials that has been developed is the Compacted Graphite Iron.

Objective

Analysis of three Compacted Graphite Iron (CGI) types on machining operation to manufacture precision holes. The evaluation was done on the quality aspects of the holes produced throughout the life of the tools.

Approach

The machinability evaluation was made through the wear of the cutting tool in the drilling process. The tool used in the experiment was a straight channel drill with internal coolant. Dimensional (diameter), geometric (circularity and straightness) and superficial (roughness) parameters were evaluated at the beginning and end of the tool's life for the purpose of comparison and identification of the viability of producing precision holes with the techniques used.



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