

Geometrical error analysis of a cold forged AUV propeller blade using optical measurement method

ABSTRACT

Accuracy is the key issue in the precision forging. Geometric and dimension errors are the two significant defects found in most of near net or net shape manufacturing process. It becomes more critical for complex part such as an AUV propeller blade. In this study, geometric error was quantified by comparing the blade profile obtained from nominal geometry of the blade and the profile constructed by commercial optical method namely Alicona system.

Keyword: Cold forging; Deformation ratio; Geometric error; Propeller blade