CAVITATION RESISTANCE OF THE MATERIAL PA 3200 GF PRODUCED BY SELECTIVE LASER SINTERING

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Abstract

The present study focuses on the results of cavitation resistance research of samples obtained by the Selective Laser Sintering technology. The material used was Polyamide powder PA 3200 GF reinforced with glass fibers. The laser-sintered samples were produced from 100% new and recycled powder mixed with 70% of new powder. The samples were tested under cavitation conditions using an ultrasonic vibration method with a stationary sample according to the ASTM G-32 standard. Examination of the morphology of cavitation damage was investigated by scanning electron microscopy. The change in mass loss during different cavitation times was measured on the tested samples. The main objective of the research was to determine the validity application of the tested material in cavitation conditions.

Keywords

Polyamide powder PA 3200 GF; morphology, cavitation rate, laser sintering, SEM

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