

The Influence of Surface Preparation by Laser Process on the Properties of DLC Film

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The objective of this research was to study the influence of surface preparation by laser process on the properties of DLC Film coated on Stainless steel 316L samples. The parameters of surface preparation included laser power and laser speed were set at 3 levels. The treated sampled was coated by DLC films at 500 nm film thickness. Average surface roughness was measured by Surface roughness tester. Adhesion strength between film and substrate interface was measured by scratch tester. Friction coefficient was performed by Tribometer with Ball on disk type. The results indicate that with the increasing laser power, average surface roughness and friction coefficient increases. Additionally, with the increasing laser speed, adhesion strength increases.

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