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Structural-phase state and mechanical properties of 316L stainless steel products obtained by selective laser melting(Conference Paper)

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Краткое описание

The results of the structure and phase composition investigation 316L stainless steel of samples formed by selective laser melting in Mlab Cusing R (Concept Laser) equipment are presented. The physical and mechanical properties investigation was carried out by X-ray diffraction analysis, scanning electron microscopy, and micro-hardness measurements. It was found that 316L steel powder after selective laser method has the austenitic structure. The structure of the samples is characterized by cross sections of tracks left by the laser. A thin cell-dendritic substructure has been identified, there are pits inside which droplets with a diameter of about 50 μm are observed, which is typical for objects obtained by laser melting of powder material. Samples are characterized as the structure with high degree of homogeneity. © 2018 TANGER Ltd., Ostrava.