

# Spall Fracture of Specimens of Steel 12Cr18Ni10Ti Manufactured Using Selective Laser Melting

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The results of the initiated cycle of studies to determine the dynamic strength characteristics of samples based on powder from steel 12Cr18Ni10Ti, manufactured using the technology of selective laser melting (SLM) and comparing them with the properties of steel obtained using the traditional technology of hot-rolled steel, under shock-wave loading in the range of compression pressures from 3 to 9 Gpa. Under high-speed impact loading, the strength characteristics (yield strength, spall strength) of SLM steel are higher than those of traditional steel. However, due to the inhomogeneity of the initial structure of the SLM samples, it was not possible to obtain a reliable picture of wave flows. Therefore, technological changes were made to the process of manufacturing SLM samples, which made it possible to eliminate the defectiveness of the original structure. The results and, especially, the pattern of wave flows on newly obtained samples are presented in the proposed report.