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Temperature dependence of spall strength of magnesium alloy over the 90–750 K temperature range SVETLANA MALUGINA, RFNC VNI-ITF, DMITRY KAZAKOV, MIKHAIL SERKOV, VYACHESLAV BYCHKOV — The paper presents results of investigations aimed to determine how spall strength of the MA14T1 magnesium alloy depends on temperature. These investigations were performed with the help of the one stage gas gun and the impact method. The stress wave profiles were measured by the two-channel push-pull VISAR in one speed range of loading (impact velocity approx. 345 m/s). The data on the shape and amplitude of the elastic precursor was also obtained. The temperature dependence of spall strength was obtained for temperatures ranging from – 90 to 750 K. The impactor thickness was 3 mm, and that of the sample – 6 mm.

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