## EFFECT OF ALUMINUM PARTICLES DISPERSITY ON CHARACTERISTICS OF AMMONIUM PERCHLORATE—ALUMINUM COMPOSITION LASER IGNITION

VALERIY MEDEVEDEV, **EGOR FORAT**, VLADIMIR TSIPILEV AND ALEXEY YAKOVLEV

National Research Tomsk Polytechnic University, Russia medvedev@tpu.ru

Ammonium perchlorate—aluminum compositions taken in stoichiometric ratio were ignited in air with 1.06- $\mu$ m 1-ms-long laser pulses. The ignition energy threshold, and ignition delay were measured for samples at various dispersity of Al.

The causes of the difference in examined compositions sensitivity to the influence of laser radiation is considered from the perspective of the thermal theory.

**Keywords:** pyrotechnic composition, laser radiation, ignition, ammonium perchlorate.