

Abstract Submitted
for the SHOCK13 Meeting of
The American Physical Society

Dynamic properties of a magnetic alloy Fe-Cr-Co NATALIA NAUMOVA, SVETLANA ATROSHENKO, YURI SUDENKOV, NIKITA MOROZOV, XUEYIN SUN, IVAN SMIRNOV, 7-9, Universitetskaya nab., St.Petersburg, 199034, Russia — The high-strain-rate methods of materials were developed for dynamic strength investigations under microsecond durations of shock loads on the base of electrical explosion of conductors. The experimental investigations of dynamic properties for magnetic alloy Fe-Cr-Co under shock loads of microsecond duration (4-8) mks in the pressure range up to 20 GPa were carried out. The values of HEL and spall strength for these amorphous alloys were received. The results of microstructure analysis of saved specimens revealed essential differences in deformation mechanisms determining fracture and plasticity in these alloys under high-strain-rate.

Natalia Naumova
7-9, Universitetskaya nab., St.Petersburg, 199034, Russia

Date submitted: 21 Feb 2013

Electronic form version 1.4