

Abstract Submitted
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Pulsed Radiography Magnetically Imploded Liners V.T. GROMOV, E.I. KARNAYKHOV, D.N. KAZAKOV, A.V. PETROVTSEV, O.N. PANSHINA, G.I. SHURANOVA, M.I. SERKOV, RFNC-VNIITF, Snezhinsk, Russia — Investigation to find the material properties in magnetically imploded liner experiments with pulsed power techniques [1] have been applied to a variety of interesting questions broadly addressing the properties and behavior of condensed matter warping. For this purpose X-ray instrument with industrial X-ray tube IMA5-320D was created. The instrument easy making, because we utilize pulse voltage generator consist of ordinary industrial components. The efficiency of X-ray tube is decrease with operation time. Thus it demands special tuning the amplitude of voltage pulse. Hence pulse generator was modified. The instrument control scheme allows regulating the amplitude of voltage pulse over the range from 100 to 300 kV now. Pulse duration is about 20 ± 7 nanosecond, therefore image degradation not exceed 0.2 mm for liner implosion velocity over some km/s. As well the results of liner dynamics investigations at the GNUV facility are presented.

[1] R. E. Reinovsky, W. L. Atchison, R. J. Faehl, and I. R. Lindemuth, *Advanced Liner Performance For Extended Experiments in Hydrodynamics and Material Properties*. 14th Pulsed Power Conference, Dallas, 2003.

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