

33–46 Shock pressure measurements in plates under odd loading

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Overdriven detonation (O.D.D.) brings out higher detonation parameter values than the common Chapman-Jouguet detonation. We carried out the measurement of the pressure by using the manganin pressure gauge and photon observation of the detonation wave to research O.D.D. phenomena. In this study, we used the device to generate O.D.D. by colliding flyer plate to explosives. When the flyer plate collided with 5mm, 7.5mm, and 15mm-height explosives, the pressure due to O.D.D. become 17.6GPa, 16.1GPa, and 15.0GPa respectively. Detonation velocities obtained from these pressures are about 10760m/s, 8840m/s, and 7900m/s respectively.

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