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DEVELOPMENT OF TWO STAGE LIGHT GAS GUN WITH LAUNCHING BORE OF 4.5MM

Abstract

The pressure of the high pressure section and the over loading of launching are much too high when the two stage light gas gun launches the projectile over hypervelocity. In order to realize the launching with hypervelocity, two stage light gas gun with launching bore of 4.5mm which was designed through interior ballistic optimization and pressure structure optimization was developed by China Aerodynamics Research and Development Center(CARDC).The test results indicate that the gun is able to launch steadily the 2mm-diameter aluminum sphere to the velocity of 8km/s.