A method is put forward to improve the effective length of the high-speed metal jet for High Explosive Anti-Tank. The high-speed metal jet is reshaped by strong pulsed magnetic field and its penetration ability to armor vehicles is improved. When the generating of the pulsed magnetic field and the high-speed jet metal comply with a certain time sequence, the metal jet can obtain better performance. Or else, the metal jet may have passed through the pulsed magnetic field generator but the magnetic field does not begin to work. In order to improve the performance of the enhancing system of the metal jet, this paper will discuss the time sequence of the high-speed metal jet and the strong pulsed magnetic field, and then give the determination method of the delay time for the high-speed metal jet.

**Verification of the Time Sequence Determination Method for the Metal Jet**

A. Simulation Results Without Considering the Velocity of the Metal Jet

B. Simulation Results When Considering the Velocity of the Metal Jet

Through the theoretical analysis and simulation, it can draw the conclusion that the high-speed metal jet can be affected by the axial strong pulsed magnetic field. To some extent, the metal jet with uneven radius can be reshaped by the electromagnetic force, and the external surface of the metal jet will be more smooth and even. Thus, the effective length of the metal jet can be improved and the putting off of the metal jet can be avoided, which is beneficial to the improvement of the penetration ability for the metal jet. Furthermore, the problem of the time sequence for the metal jet and the magnetic field can be solved by the period time of the discharge current, the inherent time of the detonator and SCJ response time of the trigger switch, and etc. Meanwhile, the determination method of the delay time for the metal jet has been obtained based on the time sequence relation. When the velocity of the metal jet is 3000 m/s, the delay time of the metal jet in the paper is about 122.5 μs.