

Investigation on formation process of a Ta-based dual phase alloy EFP liner

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Tantalum zirconium liner is a kind of dual phase liner which is mainly composed of tantalum and zirconium. The shaped charge warhead equipped with such charge liner can effectively break through the armor, and cause extra ignite/detonate effect via combustion of the Zr element.

The radius of curvature and thickness of the liner have a great influence on the forming of the liner, so the structure and shape of the liner will directly affect the penetration performance of the shaped charge.



Radius of Curvature (mm)	Thickness (mm)	10ms	20ms	30ms	40ms	50ms	60ms
10	1						
20	1						
30	1						

Compared with traditional liner, active material liner can damage targets through chemical energy in addition to kinetic energy damage.

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