能量释放速率快，因此初始加速度大，但衰减也快；ROTL-905 和 TRAL 含铝炸药由于含有铝粉等慢反应成分，后续作功能力强，ROTL-905 在圆筒膨胀距离为 6.5 mm 左右时，其加速能力已超过 JOB-9003 炸药；TRAL 在圆筒膨胀距离为 9.9 mm 左右时，其加速能力已超过 JOB-9003 炸药。

ROTL-905 含铝炸药 JWL 状态方程参数为：A = 638.7 GPa，B = 8.636 GPa，C = 1.306 GPa，R_1 = 4.36，R_2 = 1.324。

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Study on Work Ability and JWL Equation of State of Two Aluminized Explosives

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Abstract: The cylinder tests on ROTL-905 and TRAL aluminzed explosives were carried out. The results were analyzed and compared with that of JOB-9003 and TATB explosives. The parameters of JWL equation of state for detonation products of ROTL-905 aluminized explosive were calculated. The results show that because of containing slow reaction element Al, at the earlier period of copper wall expansion, the acceleration of ROTL-905 and TRAL aluminized explosives is far smaller than that of JOB-9003 explosive, whereas the former decreases slowly. At about 6.5 mm and 9.9 mm, the acceleration of the two aluminized explosives exceeds that of JOB-9003 explosive. It also shows the aluminized explosives have stronger continuous working ability.

Key words: applied physics; aluminized explosive; detonation; cylinder test; JWL equation of state

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