

Bombs, TNT- and ANFO-charges have been detonated out- and inside two tunnels with an approximate cross-section area of 100 m². Both tunnels had a 90° bent close to the muzzle but in one case the inlet also had a blind end prolongation.

Since the propagation is disturbed by a bent in the tunnel close to the test section and before an one-directional behaviour is established, transvers waves are dominating the pressure-time histories. Some of those pressure peaks have short durations and could therefore be hard to follow in a loose mesh of gauges. Since most histories can not be described just by given pressure and impulse it is difficult to illustrate the results in tables and diagrams.

From the test results it is evident that cylindrical ANFO charges can be used to simulate the blast effects from 250 - 500 kg bombs. Of course this is not true at very high pressure levels and where damages from primary debris are of concern.

The duration of the loading inside the tunnels is long and is often exceeding 100 ms. This displays that the association: conventional bomb - short duration, is false when it comes to propagation in tunnels.

A simple formula for propagation in straight tunnels seems to give the right order of magnitude but can hardly be used for prediction in this geometry. It can, however, be used for extrapolations of empirical results.