

## **Blast Arena in the Near Field**

**Manfred Held**

Hemaconsulting GmbH

Pfarrer Meierstr. 8, 86561 ARESING, Germany

email: [manfred.held@MBDA-systems.de](mailto:manfred.held@MBDA-systems.de)

### **Abstract** (oral)

Damages by detonating conventional high explosive charges in the near field –  $< 2 \text{ m/kg}^{1/3}$  – are caused by the impulse. Therefore this size has to be mainly measured, what can be reliable, simple and integrated over a larger area achieved by a simple diagnostic arrangement.

For getting the global values of impulse and impulse densities a special test arena with 1,0 m and 1,5 m radius was built in two semicircles around the charges, which allow to measure the scatter of the blast waves of spherical charges and of cylinders with the vertical arrangement of the symmetry axis. If the axis is horizontally arranged to the hemispherical circles the strongly changing impulses in the different polar angle directions was analysed.

With this test set up also the transferred blast/fragment loads of fragmenting charges were measured.

Used test set up and with this arrangement experimentally achieved test results will be presented.