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## **MEASUREMENT OF SHOCK WAVES WITH AN AUTONOMOUS DATA RECORDING SYSTEM**

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The measurement of pressure, temperature and other quantities during a detonation with current measurement methods is very costly. In addition, one also has to take into consideration the risk of losing data through splinter or other damages emerging from the detonation.

The use of an autonomous data recorder, working without interference-sensitive connections between sensor and data acquisition device, leads to a pronounced improvement of the carrying out of measurements and thus enhances the quality of the obtained data considerably.

Built upon experiences in the development of autonomous acceleration recording measurement systems, which are able to be integrated into a penetrator and to resist strong mechanic strains, an autonomous data recorder for the measurement of pressure from a detonation has been developed which was successfully tested at the WTD 91 in Meppen.

The presentation gives an overview of the design and construction of the autonomous pressure measurement system. Additionally the measured march of pressure for shock waves will be compared with the data acquired with conventional methods.