DYNAMICAL HEATING OF THE DRIVER GAS OF PRESSURIZED AIR-DRIVEN BLAST-WAVE SIMULATORS

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The airblast simulator of the E-52 proving ground will be equipped with storage tanks to feed the driver tubes. This measure will serve mainly to reduce the loading time of the driver tubes, but may also be exploited to heat the driver gas.

With the storage tanks, the filling takes place in seconds instead of hours and is accompanied by a pronounced Gay-Lussac-effect, resulting in heating of the driver gas. Calculations of the heating are compared with experimental data.

The influence on the generated shock wave is discussed, and preliminary test results are presented.