A DIFFERENTIAL PRESSURE GAGE FOR MEASUREMENT OF DYNAMIC PRESSURE IN BLAST WAVES

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A differential pressure gage has been constructed by the Kulite Corporation to a configuration designed by the Ballistic Research Laboratory (BRL). The gage is intended to provide a capability to measure dynamic pressure in blast waves and shock tubes at pressures of particular interest to the tactical systems and aircraft. In this low pressure regime the use of separate stagnation pressure and overpressure measurements can be lead to large errors in the derived dynamic pressure. The gage has been used to a limited extend at the large blast simulator at CEG, Gramat, France; on 1000 lb HE tests at the Defense Research Establishment-Suffield, Alberta, Canada; on Pre-DIRECT Course, at White Sands Missile Range; and in a shock tube at BRL. The results will be presented and the
gage performance and recommended improvements will be discussed.