CHARACTERISATION OF AQUEOUS FOAMS FOR BLAST ATTENUATION/

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Aqueous foams provide a medium for the attenuation of blast overpressures. Optimization of the characteristics of suitable foams has to date been difficult. This paper presents methods for determining the characteristics of stabilized aqueous foam both before and after exposure to a blast wave.

Experiments have been conducted using a variety of characterization methods. These include the use of photomicrographs suitably digitized and analyzed using a computer graphic system, measurements of electrical conductivity variation of the foam with time and the use of a line heat source for the assessment of thermal conductivity. Laser and acoustic methods are also reported.

Results of such investigations indicate that it is possible to monitor the characteristics of such foams prior to blast loading ad that it should be possible to use such results to identify foam structure for optimum blast attenuation.