SOME ASPECTS OF SHOCK WAVES IN LIQUID FOAMS

KRASINSKI,J.;ANSON,W.;RAMESH,V.

Field experiments backed by shock and flame tube tests simulating blastwave conditions have indicated some very unusual properties of liquid foams with respect to shockwave attenuation; unusually low velocity of propagation of sound (less than 100 fps), extremely low particle speeds, rapid diffusion of shockwave front, very high thermal capacity, high boundary friction, facility of producing large quantities of foam in a
short time. Liquid foams can also be used very easily under different con-ditions and circumstances.

Work done in this laboratory was sponsored by the Defense Research Board, Canada. This paper discusses a) some fundamental aspects of acoustic and shockwave propagation in liquid foams, b) field and shock and flame tube simulated blastwaves interacting with liquid foams, c) various methods of producing liquid foams.