32−45 Underwater explosion of spherical expliosives

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Underwater explosion of high explosive generates underwater shock waves. This phenomenon has been observed by optical measurement. Propagation histories of underwater shock waves in the range close to explosive have been obtained by processing photographs. In order to obtain pressure distributions of these shock waves, the non-linear curve fitting technique was applied to these histories. Underwater explosions have been simulated by an arbitrary Lagrangian-Eulerian (ALE) method and calculated results agree well with experimental results in both propagation histories and pressure distributions. Therefore, pressure histories can be determined by numerical simulation.

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