

### 33-36 Pressure control of the underwater shock wave produced by underwater explosion of detonating cord

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This paper presents the study on the decoupling effect of detonating cord for the control of the pressure of shock wave resulting from its explosion. The piece of detonating cord is cut into the desired length. Inserting the cord piece into the PVC tubes forms the test pieces. The tubes have a different diameter so as to obtain an adjustable parameter called decoupling ratio. The decoupling ratio is defined as to be the division of the tube diameter by the diameter of the detonating cord. Differing from the common method used in underwater explosion of detonating cord in which only the length of the cord as well as the distance away from the cord were set to control the pressure of water shock, an air chamber is kept around the detonating cord to achieve the aim on the control of shock pressure. The experimental results clearly demonstrate that with the increase of the decoupling ratio, the peak pressure and the energy decreases, however, the impulse is almost unaffected.

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