

"EFFECT OF DETONATING CORD DOWNLINE ON EXPLOSIVE ENERGY RELEASE"

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ABSTRACT

Deleterious effects of detonating cord downline in a blasthole depend on:

1. Explosive composition
2. Coreload of the cord
3. Blasthole diameter
4. Position of the cord.

Effect of each of these variables has been well characterized for ANFO. This paper presents results of underwater energy measurements for one watergel and one emulsion type of slurry explosive which were initiated by 3 types of initiators (one electric and two cords of different strength) in 2 and 3 inch diameter steel pipes. Results of this 2 x 3 x 2 factorial experiment show the effects of detonating cord on energy released by the watergel and the emulsion explosive. Effect of diameter and its interaction with cord strength have also been characterized for the two explosives.