

NEW PHOTO-OPTIC SYSTEM FOR ADAPTATION TO MEASURE VOD

William H. Snyder
Sr. Research Engineer
(303)871-2817
Denver Research Institute
University of Denver
University Park
Denver, CO 80208

ABSTRACT

A relatively inexpensive, very fast response photo-optic/fiberoptic system has been conceived, constructed and employed by Denver Research Institute (DRI) to measure charge breakout uniformity on the surface of a very large ANFO detonation. The new equipment and technique was coined OWL (observation without leads). Its unique design provides the ability to monitor or measure detonation velocities and/or detonation breakout characteristics without fiberoptic or any other direct contact with the explosive. This system has proven to be versatile and has been used to measure surface breakout simultaneity on large ANFO detonations, munition case breakout times and velocity of detonation (VOD).

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