

DUAL DELAY DETONATORS: A PRACTICAL SOLUTION TO BLASTING PROBLEMS

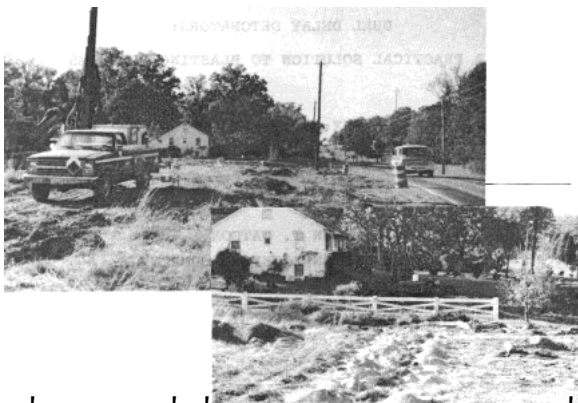
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I. Challenges For The Blasting Industry

Increasing public awareness is probably the single most important challenge faced by any blasting contractor today. This increased awareness usually results in an outcry for higher regulations and restrictions on those in the blasting industry. Those affected do not often understand the dynamics of blasting and are simply fearful of the unknown. This reaction very often results in more regulations and restrictions which frequently fail to address the real problems.

Blasting contractors for the road, utility and construction industries are especially hard-hit by this problem in that each day typically brings a new neighbor and a new challenge.



Steady growth trends and increasing population densities will only add to the public's awareness. Those involved in blasting most certainly will be spending more time and money on controlling the noise and vibration pollutants associated with blasting. Challenges facing today's blasting contractor do not stop with the public's concern and awareness. Federal, state and local regulations provide the blasting contractor with a multitude of regulatory hurdles that must be overcome simply to stay on the job site; to say nothing of the expense related to staying in business. Often the regulations are confusing and beset and require operators to invest a significant amount of resources to ensure compliance. Regulatory compliance is no doubt of key importance to the successful operation of the blasting contractor but I am certain all will agree it remains a constant challenge.



Heavy equipment manufacturers are doing their fair share in challenging today's drill and blast operations. Equipment size and efficiencies have grown to the point that productivity burdens are placed squarely on the blaster's shoulders. Today's jobsites are bid and equipment sized with little or no room for wasted drill and blast productivity.

One challenge that any type of business faces involves hiring, training and maintaining quality personnel. The drill and blasting industry obviously should be keenly aware of this challenge. Training, education, and safety must be a priority and most will agree will be the single most important factor for one's success. Today's insurance premiums will not allow this aspect of the business to be ignored.

The aforementioned challenges are just a few of the issues for anyone who is involved with blasting. Problems and challenges can be as different as there are different jobs. That is why when new technology is developed which can provide answers and solutions to these challenges, most will take notice.

Drill technology has given rise to more efficient equipment, allowing increases in penetration rates and production capabilities. There have been dramatic developments in recent years with explosives that have provided for more rock breakage with fewer holes. Recent developments in both electric and non-electric systems have provided new technology and applications that can increase productivity.

One such new development involves a dual delay non-electric detonator developed by The Ensign-Bickford Company and is trade named the "EZDe(R)". This single unit is the complete initiation system and was designed specifically for utility and construction contractors, though it has found uses in all types of blasting situations.