

BENEFITS OF BULK EXPLOSIVE USE IN UNDERWATER DRILLING AND BLASTING OPERATIONS

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ABSTRACT

Using bulk repumpable water gel explosives in underwater shooting results in even more benefits to the user than a "dryland" customer. It is nearly impossible to reshoot underwater, so a bad shot causes tremendous problems. The huge expense of operating drill boats, dredging buckets and clamshells makes shot loading, hookup and digging cycle times critically important.

Solving the logistical problems of timely bulk delivery to "on site on the water. storage and transfer to working storage tanks on the drill boats insures that explosives are available when needed. Bulk explosives minimize required storage space on the drill boat. Proper integration of the explosive storage and delivery system into the drill boats insures easy operation while reducing the chance of loading errors, loading cycle times and the crew's work load. Because uneven bottom can result in each hole being drilled to a different depth, automatic controls can be used to allow the crew to precisely load the proper amount of explosives into each hole. A totally redundant two-path nonelectric initiation system has similar benefits: it speeds up loading and hookup time, reduces crew work load and minimizes the potential for shot failures. This is even more important when you add high tides, fast currents, boat chains and submerged logs to the list of potential initiation system problems.

Successful use of an easily pumped, waterproof, 100 percent borehole coupled bulk