

"THE EXPLODING BRIDGEWIRE DETONATOR - A SAFER EXPLOSIVE INITIATION METHOD"

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ABSTRACT

An Exploding Bridgewire Detonator (EBW) is an explosive initiator which contains only secondary explosives such as PETN and RDX. It is safer than the normal blasting cap because it requires both high electrical energy and a very fast application of that energy to function

These EBW detonators, which were originally designed by the Atomic Energy Commission, are now being used for general explosive blasting operations including underground and open pit mining, seismic prospecting, forestry, and quarrying.

Most of these users have some special safety hazard relative to the use of standard caps. These hazards include high static electricity, possible induced electrical currents, hot rocks, and general handling, transportation and storage problems.

The overall use of EBW detonators is limited by the amount and rate of energy which must be applied to the detonator. Multiple point shots using a detonator on each point cannot be performed. Part of the firing system must be placed relatively close to the detonator. However, their usefulness to provide added explosive initiation system safety has been proven.