

[[Abstract](#)] [[Summary](#)] [[Drawing Description](#)] [[Detailed Description](#)] [[Claims](#)]

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Detonation through solid-state explosion fiber bundle

Inventors: Guirguis;
Raafat H.
Fairfax VA
Kim;
Kibong
Potomac
MD

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DC

Abstract

An explosive round is formed by a bundle of fibers made of explosive material held in peripheral contact with each other within an outer casing. Axially extending channel passages thereby extend between the fibers to conduct shock waves periodically impacting explosive blockage plugs in order to generate auxiliary detonation waves in forward and reverse directions. The auxiliary waves propagated in the reverse direction collide with the original detonation wave in the fibers between the blockage plugs at the locations of axial gaps between the fiber segments so as to reduce peak pressure oscillation.