THE DEVELOPMENT OF A LOW SHOCK ENERGY AMMONIUM NITRATE BASED EXPLOSIVE

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ABSTRACT

The detonation pressure of ANFO can be significantly reduced by the addition of low density materials such as polystyrene, bagasse, sawdust or perlite. Laboratory and field test results have shown that homogeneous mixtures of these low density explosives can be produced in a bowl truck and loaded into a blasthole without segregation. The detonation pressure of the mixture can be altered to be more compatible with the material in which it is being used by varying the quantity of low density additive incorporated into the mixture. Field results have shown that these low density explosives can lead to significant cost savings without compromising fragmentation or production.