

ADVANCED PRIMER DESIGNS

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Abstract

After many years of research, ICI staff have developed a numerical modelling system for the study of detonator/primer/explosive configurations. Results from this work clearly identified that current primer designs were not as effective in delivering their energy potential as needed. Alternative designs were evaluated and several prototypes, all essentially spherical in shape, were built for testing. Results have shown a significant improvement in various aspects of primer performance, including omni-directional pressure transferral and increased energy release rates. Reliable, high performance priming of explosives is now achievable for a much wider application range.