Initiation of the nitromethane by exploding wires

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Experiments have been carried out on initiation of liquid high explosives (LHE) by an electrical explosion of wire array. Experimental setup includes high voltage RLC-circuit, thin-wall plastic vessel with LHE and exploding wires. Nitromethane-DETA mixtures have been investigated at different conditions of initiation. Low sensitivity of the mixtures demands a sufficient size of the initiation spot and high enough pressure. Irrespective to power of an initial pulse, the non monotonic evolution of high energetic process could be observed, as well as failure of a detonation. At a low pulse of pressure, the total amount of output heat would appear sufficient for conventional LHE burning. In addition, experiments will be interesting with Al-Cu foils specimens in the given scheme, to measure amplitudes and profiles of waves of pressures.