P14 Airblast Equivalent Weight and Yield Determinations Based on Measurements of Energy and Other Blast Wave Parameters

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Abstract:

Equivalent Weight (EW) values of the airblast behavior of various explosives are of primary significance in the field of Protective Construction. There are explosives and charge shapes where the EW exceeds values of 3 and there are explosives and other energetic materials that have EW values of less than 0.5.

In addition to this pioneering concept of EW based upon energy measurements, comprehensive descriptions, demonstrations and comparisons with EW determinations based on Incident Pressure, Time of Arrival, Positive Phase Duration, Incident Impulse, and Charge Configuration are presented. Furthermore, a new, simplified methodology is presented for determining explosion yield based on measured values of Incident Pressure, Time of Arrival, Positive Phase Duration, and Incident Impulse.

Notes: