

INFANTRY LETTERS



MORTAR MUNITIONS

Mr. Earl W. Rubright's letter on mortars and smart munitions (INFANTRY, September-October 1992, page 3) was timely and provocative.

As a matter of professional curiosity, I did some back-of-the-envelope analysis of the effects of introducing smart mortar munitions into the force. Let me offer one old mortarman's glimpse into the future:

- Smart munitions will likely require new mortar organizations and tactics. Dispersion between gun positions must compensate for the larger, sensor-determined "footprints" of smart munitions. Range differences between smart and dumb—high explosive munitions—may also influence how future mortar-unit firing positions will be organized.

- Smart munitions could degrade the mortars' inherent high rate of fire. Volley or salvo firing of smart munitions without intermittent gunner traverse could result in multiple hits on the same vehicles inside overlapped sensor footprints. Further, if experience with the Copperhead is relevant, the firing of guided munitions would also slow the sustained rate of fire.

- Shaped-charge smart munitions may not deliver the desired effectiveness against tanks or other armored vehicles shielded by explosive reactive armor (ERA) tiling. Tandem-charge warheads may be feasible only for the

120mm mortar.

- Smart munitions are likely to be heavier and longer than the current HE rounds. Fewer projectiles could be carried in unit basic loads, unless unit transportation capabilities were increased.

- Smart munitions will probably cost more than HE rounds, complicating budget allocation and distribution planning. Scarce smart munitions may have to be consolidated within one mortar squad or section.

- The identification friend or foe (IFF) problem could be alleviated by employing direct-lay, or squad leader-observer techniques of fire, in which the mortar team makes a positive, line-of-sight identification of the armored target before engaging it.

In summary, smart and dumb (HE) munitions may turn out to be an oil-and-water combination. The infantry community may have to think about splitting the mortar unit into antipersonnel elements (firing HE, smoke, and illumination) and antiarmor elements (firing smart and guided munitions) to realize the full battlefield potential of smart munitions.

In my opinion, defending against a human-wave attack is still the infantry's worst-case scenario, especially when terrain and weather limit the effectiveness of air and artillery support.

Alternatively, the development of dual-purpose submunitions (DPSMs),

designed to improve mortars' bread-and-butter antipersonnel mission across all mortar calibers, may be a smart and more cost-effective first step.

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SMOKE/OBSCURANTS SYMPOSIUM

The Smoke/Obscurants Symposium XVII will be held 13-15 April 1993 at the Kossiakoff Conference and Education Center, The Johns Hopkins University, Laurel, Maryland. The theme of the symposium is "Smoke: Early Entry Survivability."

Members of the Department of Defense, industry, academia, and allied nations are invited to submit papers. The abstract deadline is 15 January 1993.

The symposium is sponsored by the U.S. Army Edgewood Research, Development and Engineering Center at Aberdeen Proving Ground, Maryland.

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