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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON, D.C. 20505

2 November 1978

MEMORANDUM FOR: The Director of Central Intelligence  
FROM : John N. McMahon  
Deputy Director for Operations  
SUBJECT : MILITARY THOUGHT (USSR): Counterbattery Combat

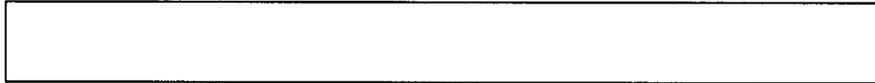
1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. This article deals with problems in calculating the requirement for artillery to carry out counterbattery combat. The author states from experience that, when nuclear weapons are not employed, a two- to threefold superiority is necessary to neutralize a battery, but the density of fire and the norms for the expenditure of ammunition still need further refinement. This article appeared in Issue No. 3 (79) for 1966.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies. For ease of reference, reports from this publication have been assigned

*JN* JOHN N. MCMAHON

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## Intelligence Information Special Report

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COUNTRY USSR

DATE OF  
INFO. Late 1966

DATE  
2 November 1978

SUBJECT

MILITARY THOUGHT (USSR): Counterbattery Combat

SOURCE Documentary

Summary:

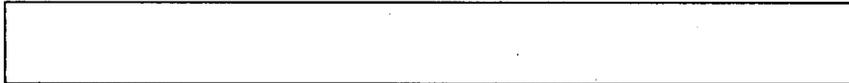
The following report is a translation from Russian of an article which appeared in Issue No. 3 (79) for 1966 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought'. The author of this article is Reserve General-Leytenant of Artillery I. Shamshin. This article deals with problems in calculating the requirement for artillery to carry out counterbattery combat. The author states from experience that, when nuclear weapons are not employed, a two- to threefold superiority is necessary to neutralize a battery, but the density of fire and the norms for the expenditure of ammunition, for which the nature, purpose, and caliber of the enemy batteries must be considered, still need further refinement. End of Summary

Comment:

The SECRET version of Military Thought was published three times annually and was distributed down to the level of division commander. It reportedly ceased publication at the end of 1970.

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Counterbattery Combat

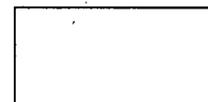
by

Reserve General-Leytenant of Artillery I. SHAMSHIN

One of the main tasks of the artillery both in a nuclear war and in the conduct of combat actions without the use of nuclear weapons is the effective neutralization (destruction) of enemy artillery, primarily heavy artillery having nuclear ammunition in its armament. But, unfortunately, the questions of counterbattery combat are far from being fully worked out among us. The lack of a single method of calculating the requirement for artillery to accomplish this task leads to the problem that the recommendations in the Manual on Fire Control of Ground Artillery are understood in different ways.

Thus, for instance, in Issue No. 54 for 1965 of the Military Artillery Academy, a calculation is recommended which may be called conditionally the "derived area method." Its essence is best made clear by an examination of the table.

It is evident from the table that the derived area for thirteen batteries equals 19.5 hectares. If one considers that, to neutralize the personnel in shelters, 0.5 hectare is planned for each 122-mm gun (page 173 of the Manual), then to fulfil the tasks indicated above requires 39 guns, or 6.5 batteries. But this means that each one of our batteries during the period of preparatory fire must neutralize two enemy batteries. The task is clearly beyond its capabilities, and, consequently, the method of calculating is faulty, since it understates two- or threefold the actual requirement for artillery.



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| Designation of targets of destruction | Number of targets in offensive zone of motorized rifle division | Percent target detection | Number of targets, figuring percent of detection | Density of neutralization | Derived area of destruction (in hectares) for personnel in shelters and full norm of destruction |
|---------------------------------------|---|--------------------------|--|---------------------------|--|
| Four 105-mm howitzer battalions       | 12 batteries  | 70                       | 8 batteries                                      | norm                      | $8 \times 1.5 = 12$  |
| Two 155-mm howitzer battalions        | 6 batteries   | 70                       | 4 batteries                                      | norm                      | $4 \times 1.5 = 6$   |
| 203.3-mm howitzer battery             | 1 battery   | 70                       | 1 battery  | norm                      | $1 \times 1.5 = 1.5$   |
| Total                                 | 19 batteries  |                          | 13 batteries                                     |                           | 19.5   |

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But if one accepts the recommendations set forth in the article of General-Mayor KONOPLEV and General-Mayor KUZNETSOV\*, then to suppress these same 13 batteries would require 117 guns, i.e., 19.5 batteries (calculating one and one-half batteries for each enemy battery).

On page 85 of the Manual it is stated that, to neutralize one artillery battery (mortar platoon) of the enemy, one should allocate not less than one battery in firing at ranges up to 10 kilometers, and one to three batteries in firing at ranges over 10 kilometers.

In this connection, one-half greater superiority may quite rightly be considered the average operational-tactical norm. But if one considers that the main gun of our enemy now is the 155-mm self-propelled howitzer, then this will not be enough, since the expenditure of shells will grow considerably.

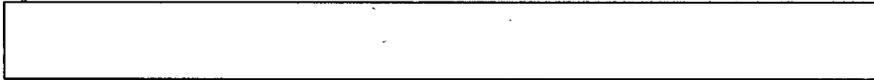
Besides that, one cannot ignore the experience of the Great Patriotic War, which showed that for effective neutralization of an enemy battery it is necessary to have double or triple superiority. Obviously, in modern operations conducted without the use of nuclear weapons, this requirement preserves its significance. And a simple calculation confirms our supposition. Thus, to neutralize one enemy 155-mm howitzer battalion at a range up to 10 kilometers, it is necessary to expend 500 to 600 shells of 122-mm caliber (the expenditure of shells is taken in accordance with the norm for neutralizing sheltered personnel). If, to accomplish this task, one battery of ours is allocated, the expenditure of shells for each gun will amount to 100 apiece (1.25 units of fire), and to discharge them will require not less than one hour. But, according to the experience of many exercises and much theoretical research, the duration of the preparatory fire in an attack from the march amounts to 25 to 30 minutes. Consequently, to neutralize the above-mentioned battery, it is necessary to allocate not less than two batteries, i.e., to have twofold superiority.

The density to neutralize enemy artillery. In the Information Collection of the Staff of Rocket Troops and Artillery No. 69 for 1965, is presented a table from which can be extracted the average norms for expenditure of shells (mortar shells) to destroy a battery when firing at a range up to 10 kilometers: 85-mm -- 280, 122-mm -- 220, 152-mm -- 180, etc. It comes out that enemy batteries of all designations and calibers are neutralized with the same density, with no consideration for their quality. But one really cannot, in fact, compare a 105-mm howitzer or a 106-mm mortar battery with the 203.2-mm howitzer battery, or

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\* Collection of Articles of the Journal "Military Thought," No. 2 (75), 1965.

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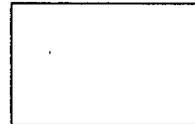
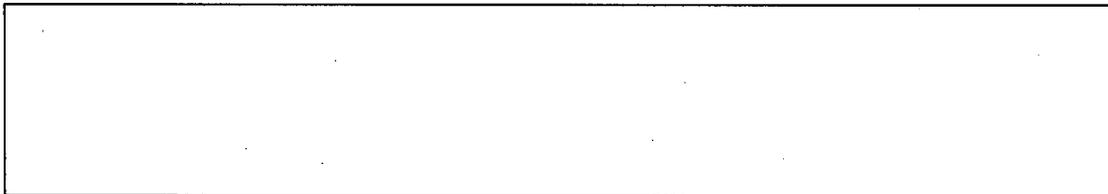
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a towed battery with a self-propelled one where the crews are sheltered by armor.

Therefore, it is necessary to differentiate the norms for expenditure of shells, depending on the nature, purpose, and caliber of the enemy batteries. The expenditure of shells may be established for one hectare of target area, since in neutralizing a battery, a definite area equal to three to four hectares on the average is shelled, the more so as batteries of all designations must be neutralized with no less density than platoon strongpoints, and the heavy and self-propelled ones even 20 to 25 percent higher.

In the same collection are presented norms for destroying guns using nuclear ammunition. But, as we know, it is very difficult to establish just which gun belonging to a battery or a battalion will use a nuclear shell. Obviously, it is necessary to destroy the personnel of the whole battery that has nuclear ammunition in its armament and to determine on this basis the norm for destroying the battery as a single target. As calculations show, it amounts to about 300 to 400 shells of 152-mm caliber for one hectare of area.

The indicated shortcomings in calculations bespeak the necessity of conducting theoretical research and experimental field artillery firing to refine all the norms for expenditure of artillery ammunition on different targets, taking into consideration the new organization of large units, the new types of artillery and other fire means.



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