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MEMORANDUM FOR: The Director of Central Intelligence

FROM : John N. McMahon
Deputy Director for Operations

SUBJECT : MILITARY THOUGHT (USSR): The Assault Crossing of Rivers from the March in an Offensive Operation of a Combined-Arms Army

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 is a critical review of a book of the same title published by the Frunze Academy in 1961. While agreeing with the book on some subjects, such as remaining difficulties with the PMP pontoon bridge sets, the reviewers fault it for its overly broad scope, improper treatment of the application of nuclear weapons and airborne landing forces, and lack of proper substantiation throughout. This article appeared in Issue No. 2 (69) for 1963.

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

John N. McMahon

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SUBJECT

MILITARY THOUGHT (USSR): The Assault Crossing of Rivers from the March in an Offensive Operation of a Combined-Arms Army

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Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (69) for 1963 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal 'Military Thought''. The authors of this article are Colonel I. Yermachenkov, Colonel A. Babushkin, Colonel A. Shlyapkin, and Colonel S. Likhovidov. This article is a critical review of a book of the same title published by the Frunze Academy in 1961. While agreeing with the book on some subjects, such as remaining difficulties with the PMP pontoon bridge sets, the reviewers fault it for its overly broad scope, improper treatment of the application of nuclear weapons and airborne landing forces, and lack of proper substantiation throughout. End of Summary

[redacted] 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. [redacted]

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The Assault Crossing of Rivers from the March in an Offensive Operation of a Combined-Arms Army

by

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The enormous strength of modern means of destruction, primarily nuclear weapons, the abundance of tanks in the ground forces, and the full motorization of all branch arms now permit carrying out the defeat of opposing groupings of the enemy in ground theaters of military operations in short times and conducting a non-stop offensive virtually to the full depth of these theaters at rates approaching up to 100 kilometers per day. Such high rates of conducting operations, along with other conditions, are ensured by the troops' quick negotiation of water obstacles from the march during the offensive, independently of their width and the nature of the defense organized on them.

Much attention, both in theory and in the practice of troop training, has always been given to the problems of the assault crossing of water obstacles from the march. Devoted particularly to this matter is the special theoretical book written by a team of authors of the M. V. Frunze Military Academy under the direction of Assistant Professor and Candidate of Military Sciences, General-Leytenant of Engineer Troops V. Ya. PLYASKIN*.

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* The Assault Crossing of Rivers from the March in an Offensive Operation of a Combined-Arms Army. Theoretical Work. Responsible Editor, Assistant Professor and Candidate of Military Sciences, General-Leytenant of Engineer Troops V. Ya. PLYASKIN. Publication of the M. V. Frunze Military Academy, Moscow, 1961, 168 pages and three diagrams.

In the book, along with research of questions directly connected with the organization and execution of the assault crossing of water obstacles as applicable to the foreign part of the western theater of military operations, much space has been given to questions of the theory of a modern offensive operation of a combined-arms army. On a broad scale are examined the tasks and methods of the combat employment of rocket troops and artillery, airborne landing forces, and front aviation, as well as the organization of air defense and engineer support during the assault crossing of rivers.

Let us examine to what extent the authors have succeeded in revealing the content of these questions and working out "scientifically based recommendations on the organization of the assault crossing of water obstacles in a modern offensive operation of a combined-arms army" (page 5).

The nature of a modern offensive operation. The authors have, on the whole, correctly and consistently examined the most important theoretical aspects of an offensive operation of a combined-arms army, such as the possibility of simultaneous pressure on the enemy to the entire depth and achievement of his defeat in a short time, the increase of the scope of operations, their decisive and maneuvering nature, the absence of continuous fronts, actions of troops in dispersed formations, and other things.

However, some points, in our opinion, are set forth too imprecisely. Thus, on page 8 the authors state that "to achieve surprise in an offensive, troops must be able to disperse and quickly concentrate on the necessary axes," though it is well known that dispersal is one of the measures to protect troops from weapons of mass destruction, and concentration is employed to achieve superiority in forces and means over the enemy in the delivery of strikes on the main axes of the offensive, and, consequently, none of this has a direct relationship to the achievement of surprise. Surprise in an operation is achieved by keeping one's intentions secret, by the quick and concealed maneuvering of troops, by the delivery of strikes where the enemy does not expect them, by the use of new means and methods of conducting combat actions unknown to the enemy, and by the conduct of camouflage and other measures.

The basis of success in a modern offensive operation the authors see in the destruction of enemy reserves, especially the operational reserves. They consider this the main task for the rocket troops (page 9). However, the authors do not take into consideration that the enemy puts his main

stock in nuclear weapons, which he is introducing on a wide scale at all levels of the army. For this reason the basis of success under modern conditions will be constant combat with the nuclear means of the enemy along with annihilation of his main groupings. The main efforts of the rocket troops must also obviously be concentrated on the accomplishment of these tasks.

In examining the importance of rivers in modern operations, the authors of this work devote special attention to the possibility of a quick and drastic change in their state as a consequence of the destruction of hydrotechnical structures on them, which may seriously affect the success of actions of troops during an assault crossing. The possible nature and methods of the enemy conduct of defense at rivers according to the views of the US Army command are set forth in detail. Here it would be desirable to emphasize that defense at water lines in the depth will most often be occupied hastily by the enemy with forces of troops withdrawing from the front or with reserves moving up from the depth. The advance occupation of such defense by troops will most likely be an exception. Let us note in passing that the thesis that "the assault crossing of rivers from the march is a standard rule of a modern offensive operation" is left undeveloped in the book.

Organization of the assault crossing of rivers. In the book are properly defined the role and place of a combined-arms army in the offensive operation of a front, the goals of the operation, as well as the conditions under which the assault crossing of rivers from the march may be done. The working out of the decision on the assault crossing is shown, and some recommendations are given on the organization of cooperation and control of troops during an assault crossing.

The recommendations on the swift development of the offensive into the depth after the assault crossing of a river deserve attention. The authors are quite correct in saying that the taking and holding of beachheads on rivers has changed from the positive factor it was in the past to its opposite under modern conditions. Stopping on beachheads is now fraught with the danger of troops being subjected to nuclear strikes from the side of the enemy; it may be a trap for them and even lead to disruption of the operation.

At the same time, not all the positions on questions of the organization of an assault crossing presented in the book can be accepted unconditionally.

The authors of the work, in making recommendations on warding off the counterthrusts of enemy reserves, quite rightly give preference to the method of smashing these reserves from the march with the forces of the first-echelon troops of the army. However, when part of the forces of the first echelon temporarily go over to the defense to repel a counterthrust, the rout of the counterthrust grouping of the enemy is made to depend on the necessary use of the second echelon of the army for these purposes (page 31), which cannot be acknowledged as correct.

It stands to reason that cases are possible when the second echelon of the army will have to be brought in to smash large forces of enemy reserves. But this will rather be the exception. The main purpose of the second echelon of an army is the development of an offensive on the main axis, and there is no sense in drawing it into protracted battles with a counterthrust grouping, since this may seriously affect the rates of development of the operation.

The combat tasks of the troops are not defined precisely enough in the book. There is no good reason, for instance, for dividing the task of the combined-arms large units into immediate, subsequent, and follow-up (page 38). Under modern conditions it will hardly be possible to define such tasks for a large unit to a depth of 80 to 100 kilometers. Clearly, for a division it is now possible to define more or less concretely only the immediate task and an approximate one for one to two days of an operation.

On the use of missiles and artillery. In the book it is correctly emphasized that by using missiles with nuclear and chemical warheads under modern conditions it is possible to inflict decisive damage on the enemy long before the arrival of our troops at the river, thereby creating favorable conditions for the successful assault crossing of the river obstacle from the march by the troops of the army.

However, the authors regard operational-tactical and tactical missiles as a means of fire neutralization of the enemy (page 44), a means of support of tactical airborne landing forces, forward detachments, and the main forces of the army (page 46), i.e., as a means of artillery support of infantry and tanks. This is wrong. Missiles with nuclear warheads are not a means of fire neutralization of the enemy, much less of support of motorized rifle and tank large units and units, but a main means of destroying the enemy, a powerful force in the hands of the commander to accomplish the main tasks of an offensive operation -- annihilation of enemy means of nuclear attack, destruction of the main groupings of his troops, and disorganization of the system of control and the work of the

rear services.

The questions of the use of army missiles during the assault crossing of a river are examined in this work only within the framework of the army, with no connection with the actions of the remaining forces of the front. It must be kept in mind that both army and front missiles with nuclear warheads will be employed in a coordinated manner according to the general plan of the front with the permission of the front commander so as not to permit the aimless expenditure of expensive nuclear warheads and not to hamper the actions of one's own troops. As for tactical missiles, they will, during the offensive, in all probability be employed according to the decision of the commanders of divisions. For this, the division commanders must know well the general situation, the position of the troops of the army, and the concept of the formation commander, as well as the condition of their own missile units.

The authors quite properly pay attention to the necessity of the sound use of every nuclear warhead in conformity with the importance of the tasks to be accomplished and the nature of the enemy targets. However, in the estimates of the requirement for nuclear warheads, they do not completely fulfil this demand. The necessary number of nuclear warheads to destroy one or another enemy target is given in a rough approximation without proper substantiation of the norms taken for the expenditure of nuclear warheads, their yield, or assessment of the degree of destruction of the target.

In examining the question of destruction of the enemy means of nuclear attack (pages 48-50), the authors of the work propose accomplishing this task with only the missile batteries on alert and they do not take into consideration the other means of destruction.

To destroy enemy means of nuclear attack, as is known, all the forces and means available to the formation commander must be brought in: missile units, artillery, tanks, airborne landing forces, forward detachments, reconnaissance groups, as well as such an effective means as fighter-bomber aviation. Accordingly, for this purpose in motorized rifle and tank divisions it is advisable to establish special detachments up to a tank company in strength, which must accomplish this task both by fire from indirect positions and by direct destruction of enemy launchers with fire and tracked vehicles.

The questions of using artillery are examined in more detail and, on the whole, correctly. It would be desirable to treat in greater depth the

employment of missiles and shells with chemical charges, which are an effective means for hitting enemy personnel and disrupting the work of his rear services.

The repelling of counterattacking enemy tanks in the work is based on the use of the old means: gun and howitzer artillery, tanks, and antitank artillery. Such modern powerful antitank means as antitank guided missiles are not examined at all. But it is precisely the antitank guided missile, possessing a considerable range of fire, high accuracy, and a powerful warhead, that is becoming a real threat to tanks.

The use of airborne landing forces. The authors correctly write that the use of airborne landing forces is one of the most important factors ensuring the success of the assault crossing of water obstacles during an operation. However, in examining the tasks of airborne landing forces, they reduce them chiefly to the taking of bridges, crossings, and advantageous tactical lines and holding them (page 61). Undoubtedly, these tasks are important, but it should be mentioned that tactical airborne landing forces also will be employed in this period primarily to destroy enemy means of nuclear attack, since without their destruction the assault crossing of rivers will be hindered.

In examining the actions of airborne landing forces after landing, the authors of the work direct them mainly towards the taking and passive holding of areas and installations on the bank of the river. More attention should have been given to the conduct by landing forces of aggressive actions with the delivery of surprise strikes on the enemy from different directions.

In the work it is said that operational airborne landing forces (usually not less than an airborne division) can be employed when troops are making assault crossings of water obstacles having great operational importance (page 62). Such a case is not ruled out entirely, but, in our opinion, it will be extremely rare. Airborne divisions, as a means of the Supreme High Command, will most often be used for actions in areas of the nuclear strikes of the strategic rocket forces.

The use of front aviation. The authors correctly point out the important role of front aviation in support of the assault crossing of water obstacles by ground forces from the march. Aviation is able in short times to obtain the necessary data about the enemy and the water obstacle, to destroy enemy nuclear means and aviation in conjunction with the rocket troops, to combat approaching reserves, to support the landing and combat

actions of airborne landing forces, to support one's own troops on the approaches to the river during an assault crossing and during battle on the opposite bank, and to cover troops and crossings against air strikes.

Attention is also paid to aerial reconnaissance, which must provide troops with complete data about the characteristics of the river in advance, the composition and grouping of enemy troops located on the approaches to the river and on its opposite shore, and the nature of their actions, and also continually watch for approaching reserves and discover the missile and nuclear means of the enemy.

Completely valid is the indication of the need for organizing continual combat with enemy means of air attack with the allocation of all types of aviation, rocket troops, and other means of the front.

In an offensive with an assault crossing of a water obstacle from the march, combat with enemy reserves must begin beforehand and be conducted with such intensity as to maximally delay their movement and contain their actions, to inflict losses and thereby create favorable conditions for our troops to quickly get to the river and to carry out a successful assault crossing. The main burden for accomplishing this task falls to front aviation.

The work correctly points out the capabilities of aviation to offer direct assistance to troops in negotiating water obstacles from the march at high rates by means of helicopter transportation of crossing means and subunits of engineer troops and participation in the assembly of ferries and the laying of bridges.

Of all the tasks which front aviation will perform in support of the assault crossing of a water obstacle by troops, under modern conditions the most important will be combat with the enemy missile and nuclear means. However, the authors have given clearly insufficient attention to this. Moreover, the idea is erroneously advanced that a strike on missile and nuclear means must be timed to some definite period in preparatory fire, at the start of the assault crossing (page 97), i.e., voluntarily or not, this task is permitted to be accomplished intermittently. In reality, though, combat with missiles and other carriers of nuclear weapons is conducted continually during the entire operation without any pauses.

In the work the idea of continual support of the actions of troops by aviation is insistently cited (pages 86, 87, 191). This concept requires a precise definition. Under modern conditions air support of troops in no

way presumes the constant location of aircraft over the battlefield and continual attacks ahead of the advancing troops as it was, say, in the years of the Great Patriotic War. Air support now will consist in hitting enemy targets which the troops of the army cannot destroy with their own means. Such targets will be primarily missiles located in the depth and especially on the move, as well as approaching reserves, in particular tank reserves, and other small-dimensional and mobile targets.

In examining the questions of air defense of the troops of the army during the assault crossing of rivers, the authors of the work rightly point out that in organizing it, it is necessary to proceed on the importance of the objects of cover and their place and role in the operation.

All objects of cover are arbitrarily broken down in the book into three groups:

-- forward detachments and airborne landing forces, crossings over the river, and the main grouping of troops of the first echelon of the army;

-- the second echelon and reserves of the army, the operational-tactical and cruise missile units located in siting areas, and the command post of the army;

-- the most important rear installations of the army (pages 110-111).

We agree with the authors of the book that for each group of objects it is necessary to create a separate grouping of surface-to-air missile units capable of destroying targets at all altitudes. Also deserving attention are the recommendations on the procedure of relocating surface-to-air missile subunits and units which ensures continuity of cover of the advancing troops.

The questions of radio camouflage and jamming of the air enemy, which hinder his approach to targets, execution of precision strikes, and conduct of radar aerial reconnaissance, are examined in sufficient detail in this work.

For reconnaissance of the air enemy, the creation of continuous radar detection coverage is recommended. The authors rightly note that the radars now in the service of a radiotechnical battalion of an army can establish radar detection coverage at an altitude from 300 to 16,000 meters, which does not support the action of surface-to-air missiles, whose

altitude range is 25 to 28 kilometers and more. For this, new radars are needed.

In the work it is said that it is advisable to carry out warning in the army by two methods: centralized from the air defense command post of the army, and decentralized, when data on air targets come to troops directly from the closest radar post (page 121).

One must agree with the authors that the existing methods of organizing warning do not meet modern requirements. This problem can be solved only by automating the whole process of warning from the moment of detection of a target to the display of reconnaissance data on the receivers of the surface-to-air units, fighter aviation, and command posts of combined-arms large units.

The work speaks of the great demands on control of the means of air defense. This is caused by the fact that the combat actions of the air defense troops take place in a complex air situation, and in a limited time, to boot. And we agree with the authors that control of all the forces and means of air defense must be done from one center (organ).

It is known that cooperation of the surface-to-air missile units with fighter aviation can be done in three ways: by zones, by altitudes, and by targets in one zone. But not one of these at the present time provides for full exploitation of all the capabilities of both weapons simultaneously. It is necessary that surface-to-air missile troops, fighter aviation, and other means of air defense be able to operate in one zone without limitations. The way to the solution of this problem also lies in automation of control of all the means of air defense.

The assertion that the fighter aviation of the front is meant to give assistance to the surface-to-air missile troops (page 129) arouses objection. It is true that the surface-to-air missile troops at the present time are the main weapon of the air defense troops. However, fighter aviation also remains an important means of combating the air enemy. It accomplishes tasks in cooperation with surface-to-air missiles and other means of air defense, and some of these tasks it accomplishes independently.

Engineer support of the assault crossing of water obstacles. In the work are listed a number of theoretical positions on support of the assault crossing of rivers by an army under conditions of the conduct of nuclear war, and some conclusions are drawn and proposals made on the preparation

and maintenance of different crossings and on the use of amphibious crossing and bridging means. The questions of engineer reconnaissance of rivers and maneuver of crossing means are analyzed in detail. Measures to ensure the survivability of the crossing are shown quite completely.

The authors, in giving an evaluation of different kinds of crossings, quite correctly affirm that in a modern war success in the assault crossing of rivers greatly depends on the skilful combination and use of all types of crossings and crossing means, although their importance is gradually changing.

Thus, under conditions of nuclear war the role of amphibious crossings and crossing means is increasing. They are less vulnerable, more maneuverable, hardly depend on the nature of the water obstacle, and require considerably less time to organize and prepare. In the book it is correctly indicated that, in the support of a crossing of forward detachments and regiments of the first echelon of divisions, already at the present time the main role belongs to amphibious and ferry crossings, and when making assault crossings of wide rivers a considerable part of the main forces of the army can also cross on amphibious and ferry means.

Bridge crossings have their positive aspects, and their role in support of the assault crossing of rivers also cannot be belittled. They have greater carrying capacity and require considerably fewer personnel to maintain them. The latter feature has especially great importance in case of radioactive contamination of the terrain in an area of crossings.

Our new pontoon bridge set (PMP) has a considerable advantage in comparison with all its predecessors; the necessary number of personnel, as well as the time to lay bridge crossings is reduced to half, and greater speed is allowed in moving troops over bridges assembled from it.

However, as the authors of the book correctly note, the maneuvering qualities of the new pontoon set remain as before. The transport base of the PMP is YAAZ-214 and KRAZ-214 trucks, which have poor capabilities on dirt roads. The front axle of the KRAZ-214 cannot stand the load on weak ground conditions and often breaks down. And if one takes into consideration that the crossing means will move immediately up to the shore of the water obstacle, as a rule over broken terrain, then the degree of dependence of the PMP on the transport means is still further increased.

Hence, one can assume that the new PMP pontoon bridge sets will lag behind the troops, be late in getting to the river, and thereby reduce the

rate of its negotiation by troops.

In recent years, as is known, much attention has been devoted to the crossing of tanks on the bottom of water obstacles. In evaluating this type of crossing, the authors of the work mainly stress its weak points, the difficulty of selecting paths for movement under water, the imperfection of the means and methods of river reconnaissance and of negotiating underwater obstacles, the considerable expenditure of time for sealing the tanks, the possibility of assault crossing only in sectors of rivers having suitable slopes and exits and firm bottoms. In connection with this, they come to the conclusion that bottom-crossing of rivers at the present time can be employed only occasionally.

Undoubtedly, there are still considerable difficulties in organizing tank crossings on the bottom of water obstacles. However, as the experience of exercises conducted shows, a crossing of the tanks of a tank division is done in one hour and 30 minutes, and of a tank regiment in 50 to 60 minutes. This is a good rate. The importance of this method of crossing grows even more if one considers that tanks can successfully cross under water also in the winter. Thus, for instance, a tank regiment, making an assault crossing of the Desna River in March of 1960, crossed 37 tanks to the opposite shore in 58 minutes using only two lanes. In the area of the exercises the river had a width of over 200 meters, a depth of around four meters, and the ice was up to 60 centimeters thick.

Can we already now use this type of crossing on a large scale? It seems to us that we can. Modern equipment for underwater driving of tanks allows completely preparing a tank for driving under water in 30 to 40 minutes.

The tactical advantages of this kind of crossing are not doubted: concealment, insignificant expenses in forces and means for equipment and maintenance, great traffic capacity, and low vulnerability to enemy nuclear means. All of this in a modern war makes a crossing on the bottom of water obstacles one of the most important types. And it seems to us that it is advisable in all cases when organizing the assault crossing of rivers to try to establish underwater crossings both for forward detachments and for the main forces of the divisions of the first echelon and reserves of the army.

The availability of paths for underwater crossing will considerably reduce the requirements of the army for bridges of great carrying capacity (50 tons) and thereby permit laying, from one and the same set of pontoon

bridge materiel, a larger number of bridges with a capacity of 20 tons, providing for the crossing of the most numerous equipment and transport means of the army.

Deserving attention is the recommendation of the authors of the book about the production of special large-scale maps of water lines (rivers) for purposes of a more thorough study of them. On the maps of water lines should be shown the width and depth of rivers, the speed of the current, the soil of the bottom, and the characteristics of the banks and approaches to the river. Such maps will facilitate the work of generals and officers organizing the assault crossing of rivers.

It is necessary to mention also that the value of the recommendations on engineer support of the assault crossing of rivers is somewhat reduced because of the lack of proper substantiation and calculations.

For support of assault crossing under the conditions of nuclear war at rates of advance of troops reaching 80 to 100 kilometers per day, it is necessary to make especially careful calculations, and it is very regrettable that such calculations are lacking in a book in which the theory of assault crossing is set forth.

It should also be said that very little attention is devoted in the work to matters of the organization of engineer support of assault crossing: the tasks and measures for support of assault crossing are enumerated but the organization of their fulfilment is not sufficiently illustrated.

Absolutely nothing is said about road traffic control service at crossings and engineer measures for support of assault crossing under conditions of radioactive contamination of the terrain and the water obstacle.

The value of the work is also considerably reduced by the fact that engineer support of the assault crossing of rivers is examined only during a war, and the peculiarities of this support in its initial period are not shown. In our literature, engineer support of the assault crossing of water obstacles in the initial period of war is still not sufficiently worked out, and the availability of such materials in the work would have given generals and officers great help in studying these questions.

In conclusion, it is necessary to mention that the work under review touches a wide range of questions, a considerable part of which go beyond the framework of the theme of assault crossing of rivers and pertain to the conduct of an offensive operation of an army on the whole. Certain questions directly pertaining to assault crossing, in particular, such as the use of rocket troops, engineer support of assault crossing, and others, are set forth superficially without the in-depth scientific analysis that is necessary for a theoretical work. Many propositions and recommendations are poorly argued and insufficiently corroborated with the appropriate calculations and exercise data produced in recent years among the troops.

Therefore, we believe that the established goal of giving commanders and staffs scientifically based recommendations on the organization of the assault crossing of water obstacles in a modern offensive operation of a combined-arms army has not been fully achieved by the authors of the work.