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Next 2 Page(s) In Document Denied

Utilization of the Missile Troops of a Front (Army)
in an Offensive Operation

by

Colonel-General P. Koshevoy

In modern warfare, along with the decisive role of nuclear/missile weapons, extremely important tasks are entrusted to the ground troops.

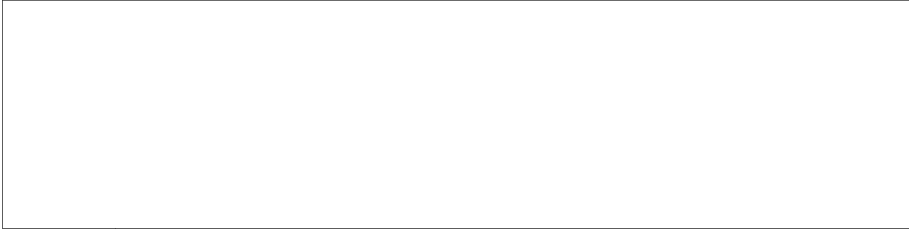
In close cooperation with other types of armed forces, especially with the missile troops of strategic designation, they are called upon to perform one of the most important tasks of armed combat, which is the annihilation of the enemy's troops on the ground and the occupation of his territory. Successful accomplishment of this task is considerably facilitated by the presence of the most modern means of combat within the composition of the ground troops: missile large units and units of operational-tactical designation and highly maneuverable motorized rifle and tank troops, also equipped with missiles.

After the ground troops were provided with missile large units and units, their fire power increased immeasurably. Fire, which now consists basically of nuclear strikes, has acquired new qualities: there has been a sharp increase in its power and effectiveness. While the role of fire formerly consisted of supporting tank and infantry operations directly on the field of battle, today missile large units and units of the ground troops are capable of destroying major installations and groupings of troops in the entire depth of the operational formation of the enemy.

Due to the high effectiveness of the nuclear/missile weapon, a front can now fulfil its tasks in an offensive operation with a greatly reduced number of forces and conventional fire means.

At present, the front is usually made up of 4 to 5 armies, including one tank and one air army, one or two front missile brigades, as well as large units and units of special troops. Altogether, in this case, there will be 17 to 22 divisions, about 4 thousand pieces (orudiye) and mortars, and up to 600 airplanes within the composition of a front.

50X1-HUM



In comparison with the closing period of World War II, there has been a considerable decrease in personnel and pieces in a front, but on the other hand, missile troops have emerged in the form of front and army missile brigades, as well as the missile battalions of motorized rifle and tank divisions.

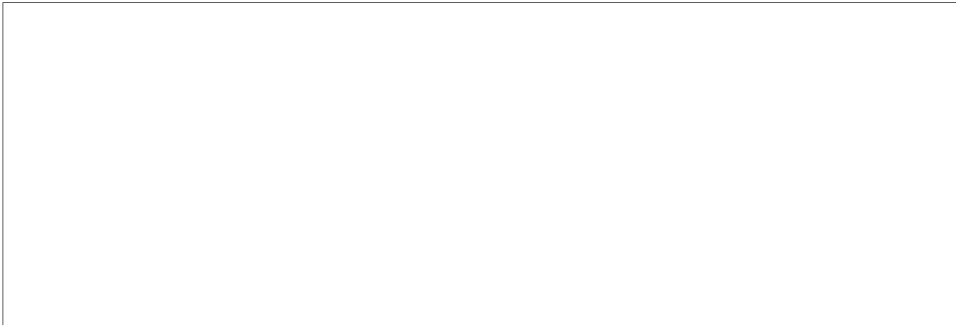
A front of the above-mentioned complement contains 58 to 80 launching mounts, including 6 to 12 front, 18 to 24 army and 34 to 44 organic (voyskovoy), and also one or two regiments of front cruise missiles.

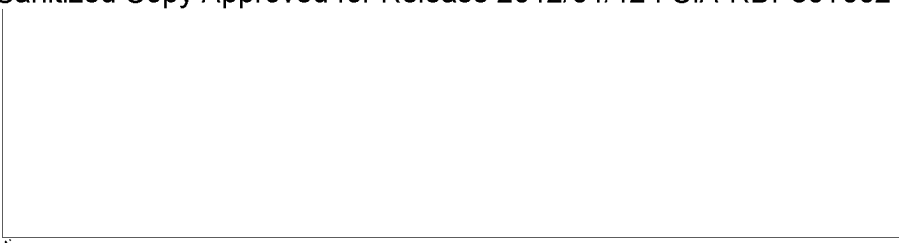
By means of these weapons nuclear strikes can be delivered against enemy objectives to a depth of 500 to 600 km. Thus, under conditions when nuclear/missile weapons have become the principal means of destroying the enemy, the problems of the use of these weapons are the basis of the decision of the front (army) troop commander in an offensive operation. The operation as a whole cannot be planned without ensuring, in all respects, the most effective utilization of the missile troops.

The newest means of armed combat and the radical changes in the methods of combat operations to which they have given rise, demand from commanders and staffs of all levels exceptionally accurate and mobile work with a minimum expenditure of time in all command and staff echelons. In view of this, we consider that the established practice of the commander working out a decision on the basis of the information reports of various officials is completely unacceptable under the new conditions.

The commander of the troops of a front (army) must be quite familiar with the condition and capabilities of the missile troops, because only then can he make a well-founded decision for using missiles, without spending time listening to information reports.

It seems to us that in the period of preparation for an operation, it is best for the commander of the troops of a front (army) to make his decision in the presence of the chief of staff, the chief of the missile troops and artillery, the commander of the air army, and the chiefs of the operational and intelligence directorates. Each of the above-mentioned persons must, if necessary, give a brief and clear description of the enemy objectives, the readiness and






capabilities of the missile large units and units, the availability of nuclear/missile warheads, and answer other questions of interest to the commander.

In his decision, the commander determines the procedure for the use of the nuclear warheads issued to the front (army), establishes enemy objectives or groupings of troops, the number of warheads, the yield, and the time of strike, and also indicates the ground zero (center) of the nuclear strikes which are intended to destroy the most important enemy objectives.

The staff of the front, together with the chief of the missile troops and artillery and the commander of the air army, organizes the execution of the decision of the troop commander; they organize the reconnaissance and preliminary reconnaissance of enemy objectives, plan the fire tasks, determine siting areas, and carry out the re-grouping of missile large units and units. After this the staff of the missile troops and artillery, the staff of the air army, and other interested directorates and departments can plan in detail the thorough support of the missile troops. This procedure of work was applied in special exercises conducted in the district (okrug) and, in our opinion, corresponds fully to the new requirements pertaining to the control of troops.

The initial data, on which the decision to use missile troops is based, consist of intelligence information on the enemy targets and objectives destined for destruction by nuclear weapons, the condition of our missile troops, and the availability of nuclear warheads. Without this information, it is impossible to plan the use of the missile troops.

In the Western Theater of Military Operations, in a front's zone of offensive, the enemy may operate with a group of armies consisting of 2 or 3 field armies (up to 6 army corps, 18 to 20 infantry and armored divisions), reinforced by units of guided missiles and free rockets, cruise missiles, and tactical aviation. Within the composition of this grouping there will presumably be about 140 to 150 objectives which must be destroyed by nuclear weapons of varying yield.



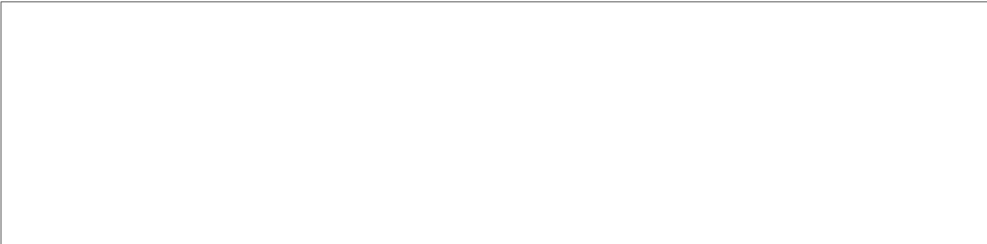
It must be taken into account that in preparing and carrying out an offensive operation, we will not always have sufficient information available on the position of the objectives and, because many of them are highly mobile, intelligence information may rapidly become obsolete. At the start of nuclear preparation, we will be able to have more-or-less correct information on only 50 percent of the objectives against which it is necessary to plan and deliver nuclear strikes. The remainder will be destroyed by massed and individual nuclear strikes, as they appear.

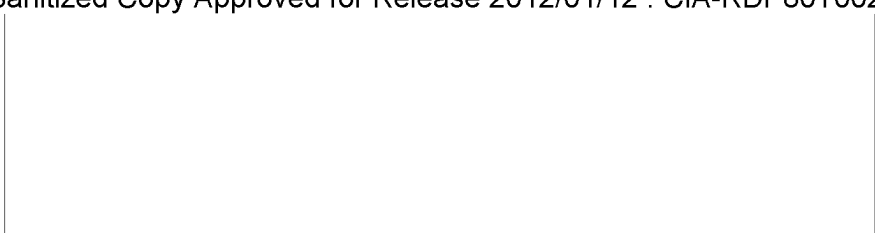
By using all the front, army and a greater part of the organic missile launchers, as well as the front cruise missiles, it is possible to deliver 50 to 70 nuclear strikes simultaneously during the nuclear preparation and in the beginning of the nuclear support. This obviously is not adequate for the simultaneous destruction of all enemy objectives. It will be necessary to destroy part of them by missiles of strategic designation or by front and army missiles in the course of follow-up strikes.

There may be instances when the front will have sufficient ballistic and cruise missiles available for delivering a simultaneous strike against all detected enemy objectives. But more often, the number of detected objectives requiring destruction by nuclear weapons will exceed the number of available missile launchers and warheads. Therefore, naturally it is necessary to deliver strikes first against those objectives whose destruction will lead to an abrupt weakening of the basic enemy grouping, disorganize the control of his troops, and, on the whole, change the correlation of forces to our advantage.

It should be borne in mind that, in the preparation for an operation, more time will be spent in working out the decision and planning for the use of missile troops than in the performance of these tasks during the course of combat operations. During the period of preparation and planning of the operation, we can have at our disposal more complete data about the enemy objectives, more time for carrying out preliminary reconnaissance of the objectives and for transmitting the tasks to those who will perform them.

In the course of the operation, however, the decision for delivering nuclear/missile strikes must be made without any delay and be transmitted quickly to the missile brigades, battalions, and batteries. This is possible only when there is mechanization and automation of the data receiving process and of the control of troops as a whole.





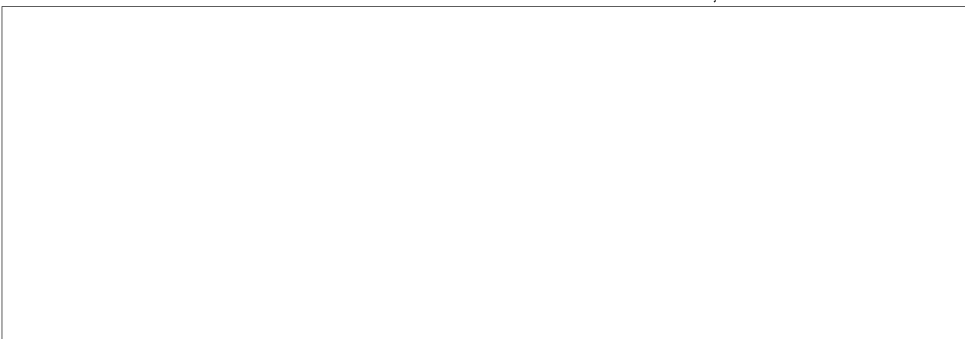
Experience gained from the special exercise conducted in the district with missile large units indicates that it will take about 3 hours to clarify the plan for the utilization of nuclear/missile weapons and to transmit it from the front to the launch batteries. At the headquarters of the missile troops and artillery this work was performed in one and one half hours; transmitting the tasks from the front headquarters to the missile brigades consumed 40 to 50 minutes, and the work performed at the level of the missile brigade and launch battery also consumed 40 to 50 minutes.

It is completely obvious that the time expended on all the above-mentioned operations must be sharply decreased.

We maintain that in the staff of the missile troops and artillery of a front, all the work connected with clarifying the tasks should consume a maximum of 30 minutes and at the level of the missile brigade and launch battery, 30 to 40 minutes, of which 15 to 20 will be used for technical preparation of the launching assembly for the launch. As various guidance devices and technical communications means are perfected, this period of time will be increasingly shortened.

During the course of an operation, as well as during its preparation, it is best that the decision for delivering a massed nuclear/missile strike be made by the commander of troops of the front (army) in the presence of the chief of staff, the chief of the missile troops and artillery, the commander of the air army, the commander of the operational directorate, and the chief of intelligence of the front. After a brief exchange of opinions and after clarifying the conditions of the situation and the capabilities of the missile troops, the troop commander must determine the ground zero of the nuclear strikes on a map for the missile troops and aviation and set the time for their delivery and the yield of the warheads to be used. The chief of missile troops and artillery of the front and the commander of the air army, on the basis of the commander's decision, ensure the preparation of the appropriate commands and their transmission to those who will carry them out.

Of course, the choice of the method for working out a decision depends largely on the personal characteristics of the individual military commander. However, we are convinced that the suggested method in which the commander of troops of the front, proceeding



from an analysis of the situation which has taken shape, personally and immediately makes the decision for the delivery of a nuclear/missile strike, requires the least expenditure of time.

In the exercise conducted in the district, after the commander had announced his decision, the staff of the missile troops and artillery of the front spent about two hours in obtaining the coordinates of the targets, distributing the missions among the units, and in relaying the commands and preparing the batteries for launching. This included 45 to 63 minutes for work within the staff of the missile troops and artillery of the front, 4 to 12 minutes for relaying the commands from brigade to battery, 17 to 23 minutes for preparing the duty batteries for launching, and 45 to 53 minutes for preparing the batteries in waiting positions.


It is perfectly obvious that such squandering of time cannot be tolerated, especially since the lion's share of it is wasted in the staffs and in the transmission of commands by technical communications means.

We believe that under the conditions of highly dynamic combat operations, the time expended, from the moment of beginning to work out the decision at the front to the moment of firing at the launch batteries, must not exceed one hour. This result can be achieved if no more than 25 minutes are used by the staff of the missile troops of the front in preparing all the commands and transmitting them to the front brigades and staffs of the missile troops of the armies, 10 to 12 minutes are used to transmit the commands at the level of the missile brigade and launch battery, and no more than 23 to 25 minutes are used for the work of the launch batteries.

Why do we contend that no more than one hour should be expended for carrying out the tasks enumerated above?

If the decision for delivering a massed nuclear/missile strike against an enemy grouping which is advancing for a counterstrike is made by the commander of troops three hours in advance of the strike, during the period when the enemy troops are still marching to the line of deployment, then there is no guarantee that the intentions of the enemy will be discovered and that his line of deployment will be determined correctly. It is quite possible that during this period of

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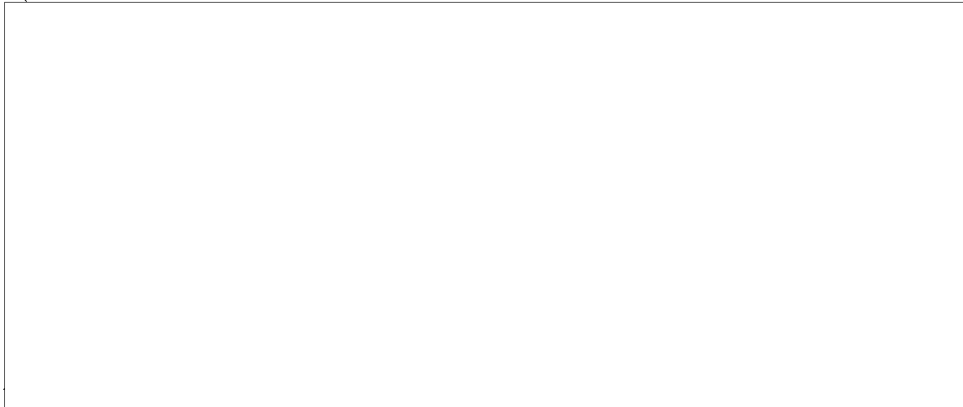


time, the direction of movement of the enemy grouping will be changed and it will not be on the line supposed by us. As a result, the nuclear/missile strike will be delivered against a vacant area. However, if there is a reserve of time available, it is essential that it be used in the most effective way possible for the preparation of the strike: to determine the most probable areas of concentration or congested movement of the enemy troops, especially his nuclear weapons, and to prepare the necessary data for conducting fire with conventional and nuclear charges.


If, however, on the basis of accurate intelligence information, the commander makes his decision one hour before delivery of the strike, by this time the enemy columns will be located somewhere within 15 to 20 km from the line of deployment. In this case, any significant change in the direction of their movement is unlikely and the probability of destroying the enemy groupings will therefore be sharply increased.

A nuclear/missile strike can be delivered immediately upon determining an enemy advance for a counterstrike. But even in this case, the destruction of the columns will be guaranteed only if no more than one hour elapses from the time of their detection to the launching of the missiles. This is explained by the fact that during the movement, for example, of an infantry or an armored division along three lines of march, the length of each column reaches 50 to 60 km and the rate of speed 20 to 25 km per hour. If we determine the coordinates of the heads of the columns an hour before the strike and subsequently deliver a strike against them, the columns will be destroyed.

The best time for delivering a massed strike is at the moment of the enemy's deployment for a counterstrike. In this case, the personnel and combat equipment are outside their concealment and are disposed in relatively compact combat formations. As deployed, enemy infantry or armored division occupies up to 20 km along the front, 8 to 10 km in depth (150 to 200 sq. km.), and has the greater part of its forces in the first echelon with a view to delivering a powerful initial strike.



50X1-HUM



If 4 or 5 nuclear strikes are delivered against the first and 1 or 2 strikes against the second echelon of the division, with a total yield of 300 thousand tons or more, the bulk of the personnel and combat equipment will be put out of action.

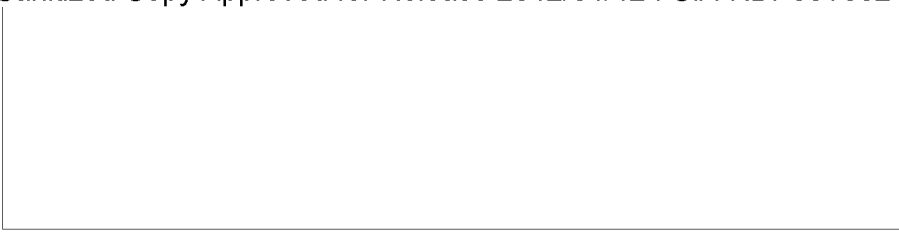
Massed strikes against troops advancing for a counterstrike or for other operations must, in our opinion, be preceded by strikes of nuclear and conventional weapons in areas of various defiles and other sectors of terrain that are difficult to traverse, in order to brake the movement and produce congestion of enemy troops.

Thus, delivery of massed nuclear/missile strikes in the course of combat requires quick and decisive actions, principally from those who make the decision for a counterstrike and organize its execution, and also smooth-functioning staff work, reliable intelligence, stability of the technical means of communications, and timely transmission of commands to those who will carry them out.

Proper organization of the control point of the chief of the missile troops plays an important role in the control of missile troops.

In conducting exercises with missile troops, we have avoided locating the control points in tents scattered at considerable distances from each other. The mobile control point of the front has been located in special buses, built on the chassis of MAZ-501 vehicles. All the motor vehicles of the troop commander, chief of staff of the front, chief of the missile troops and artillery of the front, and the chiefs of the operational and intelligence directorates were interconnected by gangways. Officers of the staff of the missile troops and artillery were located in three specially equipped ZIL-157 buses with trailers.

Convenient, compact placement of the control point permitted a decrease in the amount of telephone lines for internal communications and the wide use of selector loudspeaker communications which ensured individual as well as collective receipt of information regarding the situation, simultaneous assignment of tasks to the officers who are to fulfil them, etc.



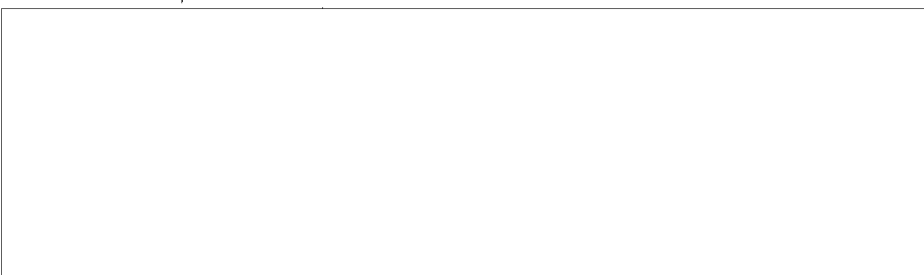
Selector communications were established with all the directing officers (napravlenets) of the armies and missile large units of the front, with the planning group, the intelligence department and with the operations group of the chief of the missile armament department located at the command post (komandnyy punkt--KP) of the front. In the course of the exercise, telegraph apparatus, equipped with a secure communications device (zasekrechivayushchaya apparatura--ZAS), were deployed in direct proximity to the directing officers' buses.

It was established at the exercises that it is possible to shorten considerably the time needed for transmitting orders to the troops and receiving information from the troops, if all the directing officers were located in one specially equipped bus in which were concentrated the receiving and transmitting ZAS and signal-code device (signalno-kodovaya ustanovka--SKU) apparatus and the direct telephone channels for radio relay and radio communications. In the exercise, direct telephone channels for radio relay communications were organized and signal-code communications (SKU) devices were used for communications with the missile brigades and the chiefs of missile troops of the armies.

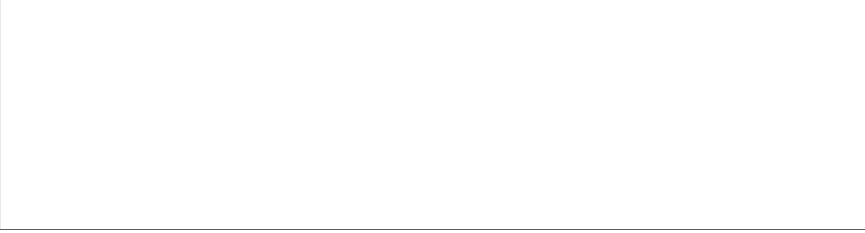
On the whole, experience from the exercises indicated that radio and radio relay means of communications utilizing ZAS and SKU ensure stable and flexible control of the fire and maneuver of the missile troops. Wire communications, including high frequency (vysokaya chastota--VCh) were found to be unsuitable during combat operations of a highly mobile nature.

Nevertheless, the use of the above-mentioned methods of organizing communications only partially solves the problem of ensuring dependable control of the missile troops. We are of the opinion that in order to achieve a radical improvement in communications, the chief of the missile troops of a front must have his organic means of communication, which would ensure the establishment of radio communications with the missile troops up to and including missile battalions not within a radio network, but only on point-to-point nets. In addition, the control point of the chief of the missile troops of a front (army) must be equipped in such a way as to ensure the transmission of orders with a minimum expenditure of time. It is also necessary to perfect control devices and the preparation of officers' working areas, to work out the sequence of issuing commands, etc. All this will undoubtedly shorten the time expended in the transmission of commands.

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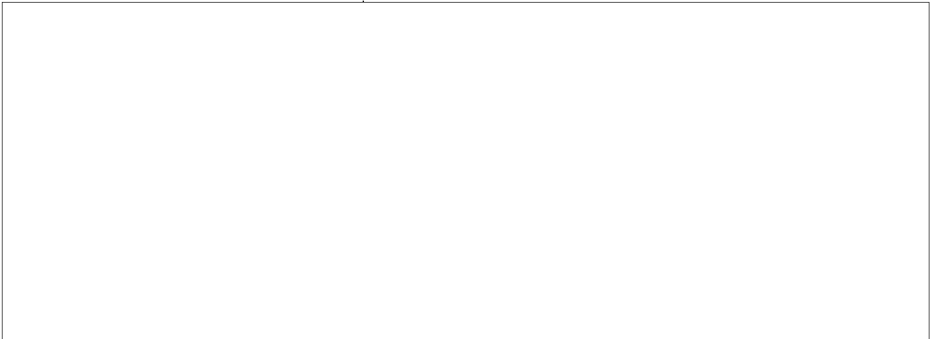
In a modern offensive operation it is vitally important to organize correctly and maintain continually coordination of the missile large units and units of operational-tactical designation with cruise missiles and aviation.

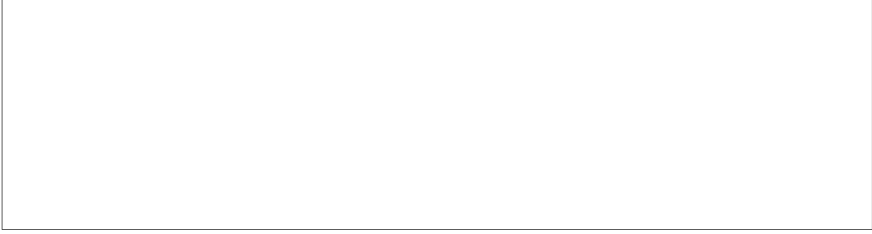
In order to coordinate the delivery of nuclear strikes by missile large units and aviation it is necessary to determine for them the objectives to be destroyed and to establish the order and the time of delivery of the strikes. These questions must be resolved more thoroughly and concretely during the conduct of fire preparation and also fire support for an offensive during execution of the immediate task of the front.

Due to the fact that cruise missiles and aviation are capable of destroying the enemy in considerable depth, zonal distribution of objectives for destruction among the missile troops and aviation is not advisable since one zone may contain objectives which it is more advantageous to destroy by missiles than by aviation and vice-versa.

The allocation of objectives within zones should be so calculated as to reduce the effect of nuclear bursts on the flight of the cruise missiles, and for this reason it is advisable to assign to them independent objectives, which are separated by some distance from objectives of ballistic missile strikes. In case of a need for a massed nuclear strike by ballistic and cruise missiles against objectives in the same area, the latter should deliver strikes 1 or 2 minutes before or 10 to 15 minutes after the ballistic missiles. It is also important that there be no nuclear bursts along the flight paths of the cruise missiles, otherwise the missile may turn itself or depart from its course. The launching times of all types of missiles should be designated on the basis of a coordinated time of strike and of the individual flight time of each of them.

The unexpectedness of a massed nuclear strike in an offensive operation is one of the most important conditions of the effective use of nuclear weapons by the missile troops and aviation. It can be achieved if the flight of delivery aircraft over friendly territory is carried out simultaneously with the delivery of nuclear strikes by missile large units or shortly thereafter, and must be done with changes in altitude which will make it more difficult for the enemy's radar stations to detect the delivery aircraft in their approach to





the objectives to be destroyed. Therefore, it is sometimes necessary to sacrifice the advantages of a simultaneous strike, especially since, in order to ensure a breakthrough by the aircraft to the objectives, it is necessary to create corridors in the enemy's PVO system for them beforehand.

In organizing coordinated action between missile large units (units) and aviation, it is necessary to establish restricted zones for the flight of aircraft over the combat formations of the missile large units (units) and over regions to be subjected to nuclear strikes by other means.

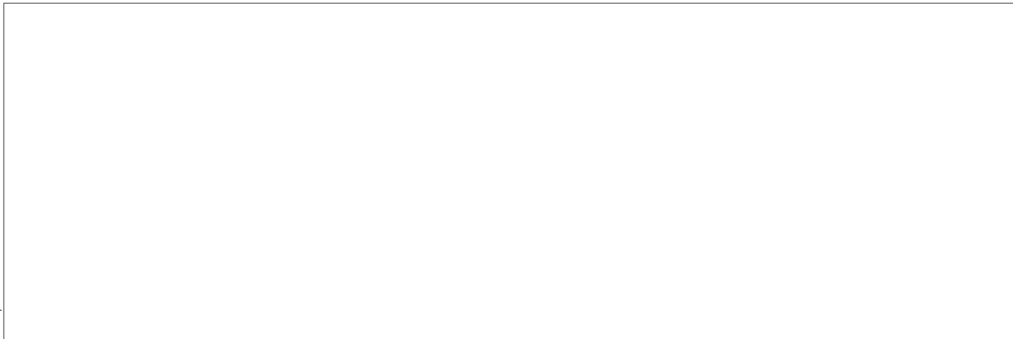
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The utilization of nuclear/missile weapons depends largely on timely engineer support of the combat operations of the missile troops. Missile troops must reach the area of combat operations without hindrance, at high speeds and, as a rule, at night, and shift rapidly to new siting areas during the course of an offensive. For this reason, it is necessary to transport missiles over long distances to the missile troops, which requires special transportation conditions.


Experience from exercises has indicated that in order to transport missiles to the armies and front missile brigades, it is imperative to designate a special route in the rear area of the front, which must have engineer preparation, well-organized traffic and control services, and appropriate forces for the protection of transports with missiles. This route should be maintained by the forces and means of the front.

Similarly, each army should designate one route for the transport of organic missiles from the army missile-depot battalion (raketno-parkovyy divizion) to the army brigades and battalions. Army routes should be maintained by the forces and means of the army.

In a special experimental exercise, we established that by using helicopters and photography it is possible, in the course of an offensive, to raise the speed of engineer reconnaissance of supply routes to approximately 70 km per hour, compared to the 12 to 15 km per hour maximum by motor vehicles.



50X1-HUM



As yet unresolved are such important problems in the engineer support of the combat operations of the missile troops as the preparation of siting areas and areas of concentration of missile large units and units with regard to ensuring their anti-nuclear protection and camouflage. Taking into consideration the high speeds of a troop offensive (for their own security), it is known that missile large units and units must not remain in one spot for more than 24 hours. Therefore, their engineer support must be so organized that all personnel and combat equipment can be satisfactorily concealed within 4 to 5 hours. On the basis of this requirement, it seems to us that it is also necessary to proceed in providing the missile brigades with engineer equipment.

Camouflage of missile troops, in our opinion, should be up to the front. Therefore, it is intolerable that front camouflage battalions have nothing for camouflaging missile troops. They should at least be equipped with dummy launching mounts.

A few words regarding the organizational structure of missile brigades. Experience indicates that in order to increase the fire power as well as to ensure the viability and the constant readiness of missile large units to conduct fire, missile brigades should be composed of three battalions. The shifting of brigades of this composition in the course of an operation should be so organized that two battalions are in constant readiness to conduct fire, and the third, meanwhile, is moving to the new position. This ensures continuity of the fire accompanying the troops in the course of an offensive.

The general conclusions which we have set forth, based on the special exercise, represent only an initial attempt to investigate the use of missile troops and their control in the course of an offensive operation of a front (army). The joint creative efforts of the generals and officers of our Armed Forces are required in order to complete the study of these important problems.