

059174

JPRS 82479

16 December 1982

# USSR Report

MILITARY AFFAIRS

No. 1728

DISTRIBUTION STATEMENT A

Approved for public release  
Distribution Unlimited

19980320 087

DTIC QUARTERLY

**FBIS**

FOREIGN BROADCAST INFORMATION SERVICE

11  
53  
A04

## NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

## PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

16 December 1982

# USSR REPORT MILITARY AFFAIRS

No. 1728

## CONTENTS

### WARSAW PACT AND GROUPS OF FORCES

- Combined Operations of USSR and Czechoslovak SSR Troops  
(Yu. Beloshchuk; SOVIET MILITARY REVIEW, Nov 82) ..... 1

### ARMED FORCES

- Table of Contents of 'Soviet Military Review' No 11, November 1982  
(SOVIET MILITARY REVIEW, Nov 82) ..... 5
- Soldier's Role as Citizen Discussed  
(M. Smorigo; SOVIET MILITARY REVIEW, Nov 82) ..... 7
- Combat Training: How To Achieve Effectiveness  
(Grigoriy G. Borisov; SOVIET MILITARY REVIEW, Nov 82) .. 12
- Wartime Operations: Operation 'Uran', Stalingrad, November,  
1942, Discussed  
(N. Kobrin; SOVIET MILITARY REVIEW, Nov 82) ..... 15
- Wartime Operations: Stalingrad Battle, December 1942  
(V. M. Bogdanov; SOVIET MILITARY REVIEW, Nov 82) ..... 22
- Wartime Operations: Use of Artillery in Stalingrad Offensive Discussed  
(G. Bryukov Interview; SOVIET MILITARY REVIEW, Nov 82) 26
- Servicemen's Off-Duty Time Discussed  
(A. Yakovlev; SOVIET MILITARY REVIEW, Nov 82) ..... 31

### AIR FORCES

- Procedures for Flying in Clouds Described  
(G. Baldenkov; SOVIET MILITARY REVIEW, Nov 82) ..... 34

Helicopters: Fighting Icing (Yu. Malakhov; SOVIET MILITARY REVIEW, Nov 82) .....	37
GROUND FORCES	
Motorized Rifle Company: Assault Training (N. Yefremeyev; SOVIET MILITARY REVIEW, Nov 82) .....	40
NAVAL FORCES	
Helicopter ASW Training in Mediterranean Sea (A. Veledeyev; KRASNAYA ZVEZDA, 11 Nov 82) .....	44
PERCEPTIONS, VIEWS, COMMENTS	
Commentary on Military Use of Seas (G. Sturua; SOVIET MILITARY REVIEW, Nov 82) .....	45

## WARSAW PACT AND GROUPS OF FORCES

### COMBINED OPERATIONS OF USSR AND CZECHOSLOVAK SSR TROOPS

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 16-19

[Article by Lt Col Yu. Beloshchuk: "Internationalists"]

[Text]

**Servicemen in the countries, members of the Warsaw Treaty Organisation established on May 14, 1955 are linked by close ties of friendship. The Organisation includes the People's Republic of Bulgaria, the Hungarian People's Republic, the German Democratic Republic, the Polish People's Republic, the Socialist Republic of Romania, the Union of Soviet Socialist Republics and the Czechoslovak Socialist Republic.**

**Comradeship-in-arms is the most striking manifestation of the unity of the socialist states, vital for reliable protection of the revolutionary gains against the sallies of world reactionaries; It is an embodiment of class solidarity and of the Leninist principle of proletarian internationalism. The traditions of military fraternity born during the Second World War are constantly developing. The friendly armies exchange experience in organising combat training and political education and in training servicemen in the spirit of socialist internationalism and high vigilance. Contacts between officers, soldiers and sailors of the fraternal armies, and between military artists, journalists, cinematographers, theatrical workers and army and navy amateur ensembles are steadily growing. The stories below tell of the friendship between Soviet and Czechoslovak fighting men.**

#### Bridge

At noon Communists Major Ivan Kochnev and Captain Zdenek Travniček, the commanders of pontoon subunits of the Central Group of Forces and the Czechoslovak People's Army, were invited to the senior commander's CP, where they familiarised themselves with the situation which had taken shape during joint tactical exercises and were assigned the mission to launch a pontoon bridge across a deep river.

Pressed by motorised infantry, tanks and artillery, the "enemy" destroyed bridges across the water

obstacle on his withdrawal route, trying to win the time he needed for consolidation on the intermediate line. Therefore, the two commanders had to organise the launching of a floating bridge in the direction of pursuit of the retreating "enemy" in a very limited time.

After leaving the CP Kochnev and Travniček quickly discussed cooperation as regards time and lines of approaching the river, outlined the axis of the future bridge, determined the number of pontoon units necessary to carry out the assigned mis-

sion and distributed the duties in the organisation of the rescue and commandant's services. In so doing they took into account the intensity of "enemy" fire from the opposite bank. At the pontoneers' request the senior commander detailed as a cover a motorised infantry subunit with ATGMs and artillery, and a landing party on amphibious APCs.

It is noteworthy that all questions were tackled in a business-like atmosphere. Both officers perfectly understood each other. Their simple and spontaneous relations can be explained more by the fact that they are long-standing friends than by their common work and professional competence. They are united by special friendship tried and tested on different occasions in the field and at firing ranges. When asked how many times they had to carry out combat missions jointly, the two friends replied jokingly: "Let computers do the counting, we'll work in the meantime."

Indeed, for Major I. Kochnev and Captain Z. Travníček the Družba-82 joint tactical exercises are not only a manifestation of the close ties of friendship between the armies of the Warsaw Treaty states, but also a symbol of their personal sympathies and loyalty to the ideals of the Communist Parties to which they belong.

A whitish mist settled on a glossy black water with debris of ice floating along. IFVs, APCs and artillery brought down an avalanche of fire onto the opposite bank. Amphibious APCs with landing parties aboard cut into the mirror-like river surface, continuous lines of tracer bullets accompanying their advance.

Radio brought the order: "Forward!" A roar of truck engines shook the riverside grove. The vehicles moved to the bridge launching site at maximum speed, which was necessitated by the requirements of the battle, for the quicker the actions, the fewer the losses from "enemy" fire.

Upon arrival at the site the fighting men launched bridge erection

boats, whose task was to tow pontoon units and carry out rescue operations, if need be. Private Ivan Borzhov, a Russian, and Private Jiří Maho, a Czech, both excellent specialists, scurried along the bank with navy-like smartness. They were ready at any moment to do anything required by the combat situation.

Equal sections of the bridge were launched on two sectors, servicemen of the Czechoslovak People's Army working on the left and Soviet soldiers, on the right. KrAZ and Tatra trucks rolled up to the water's edge one after another. Pontoon units hit the water with a hollow sound, unfolding like pages of a steel book. The current picked up the bridge structures, and the soldiers had to hold them back, wading in the icy water. Selflessness is a common thing for these sturdy fellows, capable of coping with any task, fearing neither the cold, nor the feverish pace of bridge assembly. Senior Lieutenant Nikolai Yakubov, Yefreitor Khachatour Serobyán, Junior Sergeant Ivan Galaida and Private Viktor Volkov jumped onto the slippery surface of the pontoon decks. Manipulating poles and boat hooks skilfully, they pushed pontoon units towards the water's edge, joining them up and closing the pontoon deck and bottom locks with crowbars. As soon as two units were matched, the pontoneers linked them up with the aid of special connectors. The bridge was getting longer and longer before one's eyes.

The river site bridging director Senior Lieutenant Andrei Merkel, a Communist, mounted the steel deck in two jumps and gave signals to the boatmen to bring the bridge to the axis, onto the fairway. In the meantime the bank site bridging director Lieutenant Gennady Kazakov gave the signal "Hold fast!" The bank held down the beginning of the bridge belt, while its end was brought to the middle of the river by the ubiquitous boats.

Captain Zdenek Travníček's pontoneers erected their section of the

bridge downstream. The Czechoslovak servicemen worked reliably and concertedly. Oldřik Fara, Milan Holy, Vladimír Pokorný, Václav Šimanek, Jiří Palaček and their comrades did their best to assemble their section of the bridge and bring it to the axis simultaneously with the Soviet comrades-in-arms.

The work was coming to a close. The middle pontoon units were matched to be joined together. The boat propellers whipped up the water. It was difficult to overcome the strong current but the pontooneers knew their job. Some time later steel wire ropes and boat hooks joined the bridge spans into a single whole. The friends from the opposite banks shook hands. The crossing was ready in half the standard time.

A roar of engines approached from the bank, announcing that a steel armada was going into battle.

Lieutenant-Colonel Yu. Soolyatte

### Friendship Knows No Bounds

Surrounded by Soviet and Czechoslovak servicemen Lieutenant-Colonel Jiří Kubelka, a political worker, was reading verses: "Friendship has an eagle's eyesight..." After a moment's pause, he said: "How astonishingly true this is! These are the words of Wilhelm Küchelbecker, a great friend of Pushkin. He must have seen us with his eagle's vision."

One does not have to ask Comrade Kubelka whom he meant by "us." Talking about everyday life of his unit, he could not help recalling his trips to the tank unit in the Central Group of Forces where Major N. Cherkasov served.

"In spring," Kubelka goes on, "we already began thinking of the best way to mark the anniversary of the Great October Socialist Revolution. We decided to organise a socialist emulation campaign."

"Emulation for worthily meeting the anniversary of the Great October

Socialist Revolution was organised not only in subjects of combat training and political education. The servicemen's behaviour and participation in social life was also taken into account. We leave it to the servicemen themselves to say whether or not it was easy for them to keep up to the mark."

"Difficulties are easier to overcome if you are possessed by an idea, if you set yourself a lofty goal." This was the unanimous opinion of Jan Flide, František Spale and Stefan Meliško, winners of the emulation drive.

Much could be said of the positive impact the emulation made on the Czechoslovak servicemen's combat skills and the unit's combat readiness. The moral aspect, however, deserves special attention.

Let us take such an aspect of the emulation as publicity. Everything was done to enable the Soviet servicemen to learn about the patriotic undertaking of their comrades-in-arms, their achievements in their military labour. Political workers Majors V. Khafizov and P. Drapiko took care of it. Considering that Soviet tankmen were also taking part in the emulation campaign for worthily meeting the 65th anniversary of the Great October Revolution, the information on the results achieved by Czechoslovak servicemen added an element of competition to the emulation.

Captain Jozef Vrabel and Senior Lieutenant Mojmir Birtus joined in our talk with Lieutenant-Colonel Kubelka. They said that the friendship between the two military units is not based on the simplified principle: you visit us and we return the visit. Nor does it boil down to contacts between commanding officers. Mutual visits are organised at the battalion, company, platoon and section levels. During such visits exchange of experience, field firing and sports competitions are generally held. Once Soviet servicemen learned, for instance, that their

Czechoslovak counterparts had set up a circle to study L. I. Brezhnev's biography.

"This is our activists' initiative," Second Lieutenant Birtus related. "They organised and held readers' conferences on the books 'Small Land,' 'Virgin Lands,' and 'Rebirth.' A similar conference on the book 'Reminiscences' is also being prepared."

Yes, one can well understand the Czechoslovak servicemen. They and their parents know perfectly what it is to get up to the sound of the factory whistle.

"Do you remember what Julius Fucik said?" Captain Vrabel asks. "Proletarian heroes are very simple and ordinary people. Their heroism consists solely in the fact that they are doing everything necessary at the given moment." These words pronounced by the patriot-writer several decades ago are closely linked with the contents of Comrade L. I. Brezhnev's books. And we are doing our best for our servicemen to realise this as deeply as they can."

There are many paths to such a realisation, including studies of Lenin's works and the materials of the 26th CPSU Congress, showings of the film "The Great Patriotic War," the Soviet Song Days, and competitions on knowledge of the life in the Soviet Union.

"We see to it that each of these forms of international education is interwoven with information on the life of the Soviet people," Lieutenant-Colonel Kubelka says.

Here are but a few examples to illustrate this. During the Olympics-80 Captain Jozef Vrabel was in the Soviet Union. On his return to Czechoslovakia he gave a series of talks on the theme "The USSR: Everything for the Benefit of the Working People."

The best servicemen of the unit were honoured with the right to visit the places where the Separate Czechoslovak Battalion under Ludvik Svoboda fought. Ofakar Jaroš, Antonin Sohor and Richard Tesar-nik, fighting men of this battalion, were awarded the title of Hero of the Soviet Union.

Constantly functioning in the unit is the "How Well Do You Know the Soviet Union?" quizz. At every stage winners are awarded challenge pennants.

The effectiveness of joint undertakings depends primarily on the practical nature of each meeting.

"We are not the Soviet friends' guests," Captain Vrabel says. "We visit them in order to work. For the tank regiment is the pioneer of socialist emulation in the Central Group of Forces, where a wealth of experience in servicemen's instruction and education has been accumulated and where advanced methods are used. We have certainly much to learn from them. That is why joint lessons in organising and carrying out field firings and driving combat vehicles are of great use to us. The main purpose of such lessons is to adopt advanced techniques and, accordingly, to share our achievements with our Soviet friends. As a result, servicemen's combat training level is rising quicker."

Turning over a leaf of his table calendar, Lieutenant-Colonel Jiří Kubelka reads out the entry: showing of the film "The Fate of a Man." Then he asks Captain Vrabel:

"Is everything ready?"

"Yes!"

This means that the servicemen are in for another lesson in the story of the Soviet people, a lesson of internationalist education.

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

ARMED FORCES

TABLE OF CONTENTS OF 'SOVIET MILITARY REVIEW' No 11, NOVEMBER 1982

Moscow SOVIET MILITARY REVIEW in English, No 11, Nov 82 p 1

[Text]

A Road Equivalent to Centuries	2
Unity of the Army and the People by N. Smorigo	5
"Aurora" in People's Lives by V. Amelchenko	8
Capital of Soviet Kirghizia by Y. Lukin	11
For Effective Combat Training by G. Borisov	12
Internationalists	16
Flying in Clouds by G. Baldenkov	21
Fighting Helicopter Icing by Yu. Malakhov	22
Engagement on the Karasu River by N. Yeremeyev	26
An Immortal Force of the October Revolution by A. Yakushevsky	28
Red Square	31
Operation "Uran" by N. Kobrin	34
A Daring Raid by V. Bogdanov	38
Shattering Salvoes by G. Biryukov	40
For a Just International Economic Order by N. Yevtropov	43
Instrument of US Imperialism by T. Belashchenko	46
Peace to the Ocean Waters by G. Sturua	51
Servicemen's Off-Duty Time by A. Yakovlev	53

<b>Combat Cohesion by Ye. Vladimirov</b>	<b>56</b>
<b>Victory by A. Chakovsky</b>	<b>58</b>
<b>Reviews of Mass Sports Activities by V. Nikityuk</b>	<b>61</b>
<b>Tournament Useful for All by I. Barchukov</b>	<b>62</b>

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

## ARMED FORCES

### SOLDIER'S ROLE AS CITIZEN DISCUSSED

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 5-7

[Article by Lt Gen M. Smorigo, Cand. Sc. (History), under the heading "USSR-60 Years:" "Unity of the Army and the People"]

[Text]

The unity of the army and the people is one of the most characteristic features of the socialist state's military organisation and one of the most important Leninist principles of Soviet military construction. V. I. Lenin wrote: "For the first time in history an army is being built on the basis of the closest contact, inseparable contact, coalescence, one might say, of the army and the Soviets. The Soviets unite all the working people, all the exploited, and the army is being built up for the purpose of socialist defence and on the basis of class-consciousness."

The entire heroic history of the Soviet Armed Forces is a striking example of the unshakable unity of the people and the army. During its creation the Red Army was built as an army of workers and peasants and felt the help and support of the whole people. This raised the servicemen's morale and doubled their strength, and was one of the most important conditions of victory in the Civil War (1918-1920).

The unity of the army and the people rests on a solid material foundation in the Soviet state. Its economic basis is formed by public ownership of the means of production and socialist relations of production. The socio-political basis of this unity is formed by the socialist state and social system, by the popular essence of the state, by the firm alliance of the working class, collective farm peasantry and people's intelligentsia, by the fraternity and friendship of all the peoples and ethnic groups of the country. The ideological basis for this unity is Marxist-Leninist ideology and the theory of scientific communism.

In the years of the Civil War and foreign intervention one of the decisive prerequisites that ensured the Red Army's historic victory were the utmost support of the rear and the high political consciousness and selflessness of the working people and Red Army men guided by the Communist Party. The experience of the Civil War showed graphically that it would have been impossible to defend successfully the gains of the proletarian revolution without

the close unity of the Red Army and the working people and the latter's broad-based support of CPSU's military policy. Neither the difficulties nor severe trials that befell the country in the post-revolutionary years could shake this unity. The sharp turns of history only rallied closer the workers and the personnel of the army and navy around the Leninist Party in which they saw a wise leader and tested strategist.

The indissoluble unity of the army and the people was especially manifested in all its multiformity during the Great Patriotic War (1941-45). Millions of Soviet citizens took up arms to defend their Motherland. Hundreds of thousands of patriots went to the front of their free will.

The Communist Party headed the restructuring of the national economy for war needs proceeding from the Leninist tenet that to wage war a really strong and organised rear is needed which would uninterruptedly supply the front with adequate amounts of trained reserves, armament and food. The workers, peasants and intelligentsia responded to this call with selfless labour. They proved in deed their unity with the armed defenders of the country who were engaged in heavy defensive fighting against the advancing enemy.

The nation-wide support by the people was one of the main preconditions which enabled the Red Army to halt the enemy and stabilise the front. The help of the population of front-line regions who constructed defensive fortifications such as antitank ditches, trenches and fire emplacements was immeasurable. Using these defensive lines the Soviet troops stubbornly defended every inch of their native soil holding in check the advance of superior enemy forces.

In the summer and autumn of 1941 over 10 million citizens took part in defensive works. During the first, grimmest months of the fighting they dug out thousands of kilometres of antitank ditches and trenches, and built other defensive fortifications.

World history had not known such a monolithic unity of a social society, such an indissoluble unity of the army and the people. Under the guidance of the Communist Party the whole country was turned into a single military camp in a short period of time.

Inspired with infinite love for their Socialist Motherland and hatred for the enemy, the Soviet troops displayed on the fronts of the Great Patriotic War iron staunchness, tenacity, endurance, selflessness, firm belief in victory and mass heroism.

In these grim years all Soviet people did everything in their power to repulse the nazi aggressors. During the first days of the war the Latvian and Lithuanian Party organisations sponsored the formation of workers' battalions and detachments composed of Party and Soviet activists. Destroyer battalions set up in all parts of the Russian Federation, Byelorussia, the Ukraine and Moldavia played an important part in fighting enemy air landing and airborne troops. On the initiative of the Moscow and Leningrad Party organisations the people's volunteer corps was born. In the summer of 1941 about 60 divisions, 200 separate regiments,

battalions, companies and platoons of the people's volunteer corps totalling nearly two million selfless fighters were formed.

The partisan movement developed in the enemy's rear in this period of severe ordeals was the most striking manifestation of Soviet patriotism, of the truly nation-wide character of the struggle against the nazi invaders, and at the same time it was one of the most important forms of the people's support of the army. By the end of 1941 more than 2,000 partisan detachments had been organised in which over 90,000 men fought on enemy-occupied territory. In all, over 6,200 partisan detachments and underground groups totalling more than 1,000,000 men operated in the enemy rear during the war.

To win their great victory the Soviet people had to undergo terrible ordeals which had never fallen to the lot of any nation in the world, to pass through the fire and blood of battles unprecedented in their scope.

In the postwar years the unity of the army and the people and their cohesion around the Communist Party and the Soviet Government have been steeled and strengthened still further. The army and navy are linked with the people by thousands of visible and invisible ties and enjoy their respect and support. Leonid Brezhnev, General Secretary of the CPSU Central Committee, Chairman of the Presidium of the USSR Supreme Soviet noted that "the Soviet people highly value and love their army, because they know that they need a well-equipped army so long as forces of aggression still exist in the world. The Soviet Army is a special kind of army in that it is a school of internationalism, a school that fosters feelings of brotherhood, solidarity, and mutual respect among all the nations and nationalities of the Soviet Union."

The building of developed socialism in the USSR has considerably changed the nature and the whole tenor of the Soviet Armed Forces. They have become a body of the national socialist state, thus entirely proving the provision of the 8th Party Congress that in the course and as a result of social transformations the army would inevitably become "an army of the whole people in the true sense of the world."

The unity of the political, economic, social and cultural life of the Soviet people, the triumph of Marxist-Leninist ideology in socialist society and the transition of all the strata of the population to the positions of the working class have expanded the social base for the formation of the army and navy. At present military service in the Armed Forces is the honourable duty of all citizens of the country irrespective of race or nationality, religion, domicile, social or property status. The Constitution of the USSR says that "defence of the Socialist Motherland is one of the most important functions of the state, and is the concern of the whole people." These deep meaningful words of the Fundamental Law express the state and national character of the country's defence.

The Soviet serviceman enjoys the same wide socio-political rights as any other citizen of the USSR and actively participates in the country's political and social life. This

can be illustrated by the fact that about 14,000 servicemen are deputies to state power supreme and local bodies.

The role played by the Communist Party in strengthening the unity of the army and the people, in enhancing the defensive potential of the country and in guiding the Armed Forces acquires especial importance. The Party elaborates scientifically substantiated programmes and principles of military build-up, maps out the present-day tasks of the army and navy and further guidelines for the development of the Armed Forces. It is the Party which works out the basic principles of further development of military science, doctrine and strategy, and determines the content, forms and methods for training and educating the military personnel. It is the Party which purposefully directs the activities of state and public organisations of the country, aimed at further strengthening the unity between the army and the people.

The life and service of Soviet soldiers are always in the focus of attention of local Party bodies whose representatives take part in the activities of military councils, Party conferences and meetings of activists in the troops. The army and navy servicemen in turn maintain close ties with local Party, state and public organisations.

Mention should be also made that the Soviet Armed Forces are a serious school which fosters in the youth political steeling, courage, disciplinedness, patriotism and internationalism, and contributes to the fulfilment of one of the most important tasks of the Party—to form a conscious builder and defender of communism.

After service in the army, thousands of young men join the ranks of workers and collective farmers. They work fast and well on all fronts of communist construction. Tens and hundreds of thousands of servicemen discharged from the military service are sent by YCL organisations into various branches of the national economy and to priority Komso-mol building sites. This is convincing evidence of the continuity of education and the personality formation of the Soviet serviceman.

The situation in the armies of capitalist states is quite different. They serve the interests of the bourgeoisie which, resorting to threats, coercion and fraud, uses them to suit their reactionary and antipopular ends.

It is quite natural that the Western propaganda spares no efforts to conceal the real purpose of the armies, to obscure and suppress the class consciousness of their soldiers and sailors, separate them from the people and bar them from the influence of progressive ideas. For this purpose the bourgeois propaganda machine inculcates and maintains in every possible way the idea that the army is allegedly "above politics," that it is non-class and protects the interests of the "whole nation" and not the interests of a small group of the military-industrial oligarchy which makes a profit on the labour and sufferings of the masses. Reality refutes these concoctions, however. The participation of capitalist countries' troops in suppressing people's movements, racial conflicts and riots in the army and navy are irrefutable evidence of contradictions which

are typical of the bourgeois society as a whole and the armed forces in particular.

The entire history of the Soviet Armed Forces is inseparable from the momentous achievements of the Soviet people. The unity of the Soviet Army and the people is the source of its numerous victories in the past and the most important basis of the Soviet state's might at present. Soviet servicemen, united around the CPSU and feeling the solicitude of the people, perform their duty honourably, and vigilantly guard the socialist gains and peace on earth.

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

## ARMED FORCES

### COMBAT TRAINING: HOW TO ACHIEVE EFFECTIVENESS

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 12-15

[Article by Col Gen Grigoriy G. Borisov: "For Effective Combat Training"]

[Text]

**Grigory G. Borisov (b. 1924) was called up for military service in 1942 during the Great Patriotic War (1941-45). He fought against the Nazi invaders at the North-Western and 2nd Baltic fronts, commanding a platoon, a company and a battalion.**

After the war he occupied different command and staff posts of tactical and operational echelons and served in a number of military districts. In 1981 he was appointed Commander of the Central Group of Forces. Colonel-General G. Borisov, a holder of many Soviet and foreign decorations, was honoured to be a delegate to the 26th CPSU Congress. In this article he discusses the work of commanders, staffs and political bodies of the Central Group of Forces aimed at achieving a high training standard of the personnel. The author stresses that they direct their activities in line with the decisions adopted by the 26th CPSU Congress and the Sixth All-Army Meeting of the secretaries of primary Party organisations.

#### 1. COMMANDERS' PROFESSIONAL SKILL

The quality and effectiveness of combat training largely depends on commanders' professional skill. This is enhanced by the fact that besides being excellent specialists, the officers must also be able to cultivate the men's ideological outlook according to the policy pursued by the Communist Party and the Soviet Government. This is quite necessary in order to make them worthy defenders of their country. Of great importance is officers' ideological steeling which forms the firm foundation of every success.

The political education system functioning in the army ensures that officers can constantly improve their theoretical knowledge and ideological convictions. In this commanders and political workers concentrate on studying the main propositions of Marxist-Leninist theory. The knowledge thus

obtained helps the officers better to understand the burning issues of the day, to carry out their military duties without a hitch, and to be vigilant and skilful in training their subordinates.

The officers' training system established in the forces also helps the command personnel to polish up their professional skill. The officers gain combat experience during training assemblies, command and staff exercises, when attending methodological training, group exercises, tactical briefings, etc. Officers' training is planned and organised with due regard for their professional qualification. In the course of training they usually deal with themes which help them to cope with the tasks included in the annual curriculum and which correspond to the prospects for the development of military art.

Officers' field training standard deserves great attention. In this connection much

thought is given to field exercises based on tactical and fire training. Tactical exercises and especially those with field firing, special tactical, command and staff exercises involving communication facilities provide the officers great possibilities for improving their skill. Such exercises must be instructive to yield fruit. For instance, a model tactical exercise was carried out recently by Major-General F. Kuzmin. The strenuous and dynamic situation of the exercise obliged subunit commanders to manoeuvre skilfully with men and equipment, operate unobserved, deliver blows on the "enemy" flanks, change the direction of the main effort and, at the same time, to ensure fire superiority over the "enemy." During this exercise the officers mastered the skill of repulsing surprise counterattacks, overcoming the destructive effect of the "enemy" blows, controlling troops in conditions of radio jamming and negotiating mine fields covered by antitank fire. The fact that the men had to cope with such tasks showed that the exercise had been organised with the purpose of teaching them to defeat a strong and well equipped enemy.

Tactical exercises are considered a school of combat mastery. They are usually carried out in difficult terrain conditions, by day and night and in adverse weather. Carrying out their missions in conditions incorporating elements of reasonable danger and risk, the men consolidate their knowledge and skill obtained during the previous fire, technical and special training. The more complicated the situation and the fewer indulgences it tolerates, the more opportunities it provides the trainees for obtaining knowledge. At tactical exercises the men are given narratives dealing with artillery and mortar fire, air strikes, flights over troop formations, movements on foot, overcoming large demolition zones and those set on fire, hasty assault crossing, fighting against tanks, low-flying targets, saboteur and reconnaissance parties and landing forces.

Command and staff exercises, tactical briefings and group exercises also proved effective. The officers' training of this kind is especially useful if it is carried out on terrain where the "enemy" is designated and his actions are simulated skilfully. The exercise director must thoroughly prepare for setting out for the field by considering in

advance how to solve all the training questions; he must check the control of training targets and make sure that communication facilities are ready to simulate warfare. The exercise director must encourage his subordinates' initiative, resourcefulness and originality in carrying out the mission assigned. He must teach commanders and staff personnel to force their will on the enemy and to forestall his deployment and firing.

The main principle of combat training is to develop the men's ability to orientate themselves in any situation. Commanders, political workers and staff officers skilfully use this principle in practice making every man realise that besides being a sharpshooter or a military driver he must be ready to engage the enemy at any moment and to overcome all difficulties encountered on the battlefield and thus to win a victory.

## 2. MONITORING ORDER EXECUTION

The combat training process must be planned thoroughly. In this it is necessary to consider the men's training level and their ability to act in concert, the condition of weapons and combat equipment, the availability of training aids and material supplies and provision with motor potential, ammunition and fuel. The training and education process is usually planned and controlled by deputy unit commanders, staff officers and chiefs of different fighting arms and services. Experience shows that being supervised by the commander, these specialists can elaborate a training procedure in detail, combine skilfully the study of different subjects with tactical training, and specify the main elements of the training process. In this they adhere to the principle from the simple to the complicated. During this work favourable conditions may take shape to provide material and technical support of the training process, to cope with training tasks and thus to meet socialist emulation pledges.

A headquarters is the main control body assisting the commander. It must take measures to inform the subunits about the missions assigned making sure that they are properly understood, and check the decisions taken by the junior commanders and lower headquarters and whether they correspond to the senior commander's concept and the appropriate orders and directives.

To ensure uninterrupted troop control, HQ must monitor the execution of orders. In practice this process is made up of separate actions by commanders and HQ directed at the same goal. To proceed to the next mission, data concerning the work done must be obtained. Under the circumstances one cannot do without the appropriate control. However, this process should not be oversimplified by bringing it to a mere collection of information on the state of affairs. Such information must be thoroughly analysed so as to find out whether the training process is purposeful, promising and practicable. In short, checking the execution of an order requires great organisational efforts on the part of commanders, staffs and political bodies which must be directed to secure a single decision and the appropriate implementation measures.

The system for checking the training process embraces all control and execution echelons from top to bottom. Regular check-ups carried out by officials in charge make the executors eliminate the shortcomings revealed, impartially assess their work and be exact in reporting and fulfilling any order.

To make combat training a speedy and effective process, all those in charge must be exacting to the appropriate control bodies and creative in fulfilling any mission. They must encourage the executors' initiative and, at the same time, keep a strict eye on their work.

### 3. SEARCH FOR NEW TRAINING METHODS

The Soviet Armed Forces are provided with modern weapons and combat equipment. Their tanks, infantry fighting vehicles and armoured personnel carriers possess a high cross-country capacity and manoeuvrability, reliable armour protection and powerful armaments. The Soviet Army's missile, artillery and small-arms fire is characterised by long range and high hit probability. Its equipment used to provide combat security and support also has excellent performance characteristics. The aim is to teach the military personnel to handle their weapons and equipment unflinchingly so as to enable them to win a victory in the shortest possible time and with minimal losses. This flows from the objective necessity engendered by the intensive development of

weapons which is changing methods of warfare. Now officers are faced with the problem of controlling different fighting services and arms which makes the troop control process much more complicated. Hence the necessity to intensify officers' training in order to improve their professional qualification and skill in methodics as soon as possible.

To enhance the efficiency of combat training, it is advisable to use rational training methods based on military pedagogy and psychology. Various forms and methods of training must serve to ensure team-work among military units and control agencies. The commanders prove their training methods in practice, striving to make them more perfect. By so doing they create prerequisites for new successes and high combat readiness of the forces.

The units of each fighting arm need specific training. However, they possess some common features which enable them to have a single viewpoint on the improvement of the training process. This implies a scientific approach to the development and use of training methods. Today, besides his intuition the commander must be proficient in military science, pedagogy and psychology. In a nutshell, the effectiveness of training methods depends on whether they properly reflect the latest scientific achievements and advanced combat experience. Thus, very promising are speed-up training methods elaborated on the basis of the theory of simultaneous and stage development of mental functions and practical skills. Being trained with the use of these methods, the men can faultlessly operate their weapons and equipment from the very beginning. As a result, training time may be reduced by at least one third and specialists' qualification substantially improved.

Striving to convey maximum knowledge to the trainees and to develop their combat skill the instructor must conduct his lessons so as to improve his own proficiency in methodics.

The search for new training methods is an original task imposing great responsibility. The combat readiness of both individuals and a military group as a whole largely depends on the forms and methods of combat training. To elaborate perfect training methods is the key problem facing command personnel. This problem must be solved to make combat training effective.

ARMED FORCES

WARTIME OPERATIONS: OPERATION 'URAN', STALINGRAD, NOVEMBER, 1942, DISCUSSED

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 34-37

[Article by Col N. Kobrin, Cand. Sc. (History), under the heading "Military History": "Operation 'Uran'"]

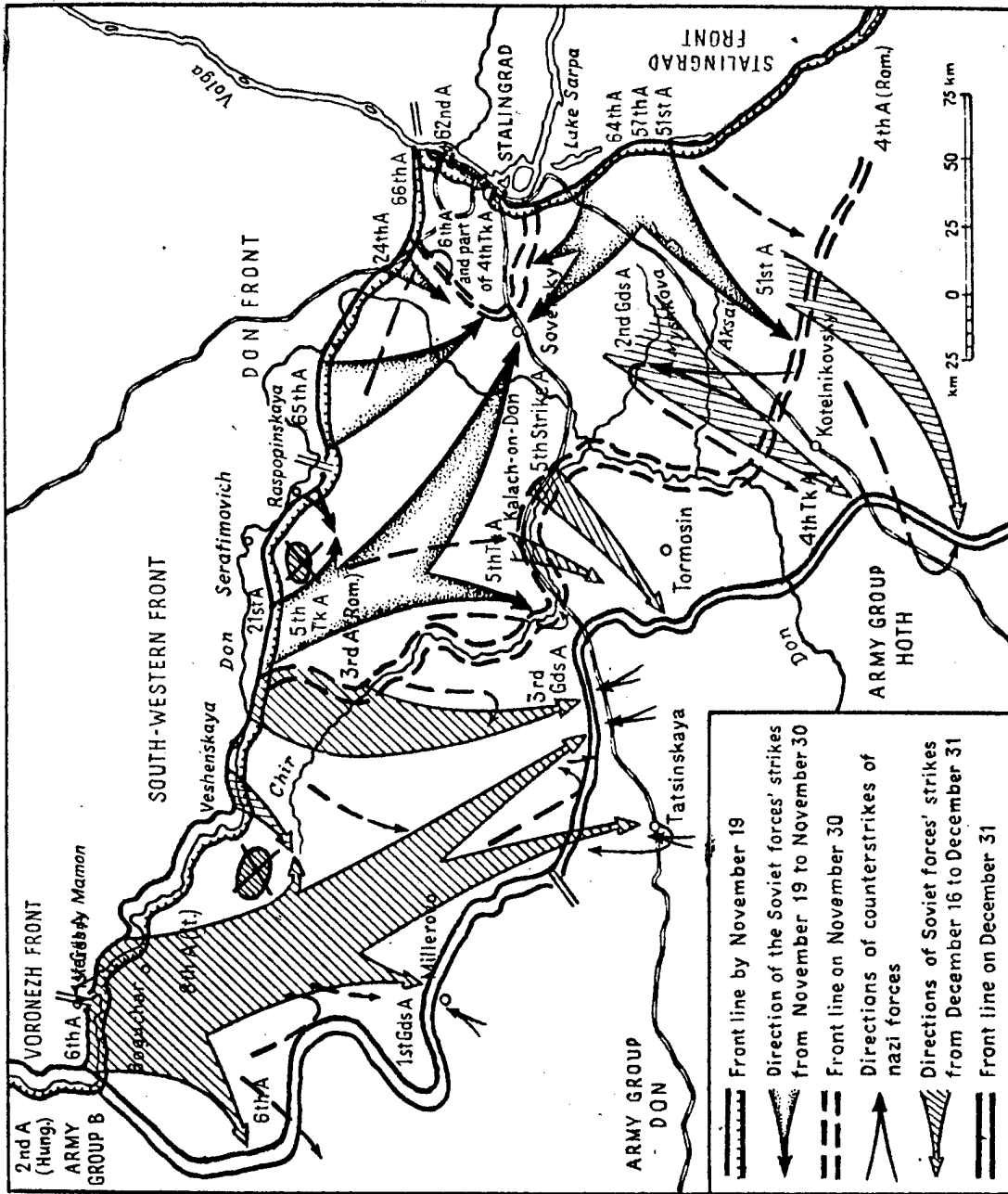
[Text]

**The article deals with the counteroffensive of the Soviet forces at Stalingrad begun on November 19, 1942. Its main result was the encirclement of the 330,000 enemy grouping.**

The Supreme Command GHQ took the decision on a counteroffensive at Stalingrad on September 13, 1942 during severe defensive fighting. "After analysing all possible variants," recollected Marshal of the Soviet Union G. Zhukov, "we decided to propose the following plan of actions to Stalin: first, with an active defence to go on exhausting the enemy; second, to start preparing a counteroffensive in order to deliver at the enemy in the area of Stalingrad such a blow which would sharply change the strategic situation in the south of the country in our favour."

As a result of strenuous work the plan of the counteroffensive at Stalingrad, codenamed "Uran," was elaborated. Its content boiled down to the following: by powerful blows from bridgeheads south-west of Serafimovich and the area of Sarpinskiye Lakes south of Stalingrad to defeat the enemy forces covering the flanks of the strike grouping. Then, pressing home the attack in converging directions to Kalach and Sovetsky to surround and destroy the main enemy forces acting in the area of Stalingrad. The South-Western Front (Commanded by General N. F. Vatutin), the Don Front (under General K. K. Rokossovsky) and the Stalingrad Front (Front Commander General A. I. Yeryomenko) were drawn for carrying out this operation.

The correlation of forces by the beginning of the operation was as follows. The Soviet forces



comprised 1,106,000 officers and men, 15,500 artillery pieces and mortars, 1,463 tanks, and 1,350 combat planes; the enemy forces numbered over 1,011,000 officers and men, 10,290 artillery pieces and mortars, 675 tanks and assault guns and 1,216 combat planes.

The moment of the transition to a counteroffensive was defined very skilfully. The Nazi troops exhausted their offensive capabilities but were unable to organise a solid defence. The enemy managed to organise with engineer works only tactical zone 6 km deep. There were no defensive lines in the enemy's operational depth.

Our Command took into consideration the fact that the most combatworthy German divisions were engaged in the battle for the city. The flanks were protected by Italian and Romanian formations. The Nazi Command had no large and strong reserves. Moreover, the activity of the Soviet forces on other sectors of the front did not allow the enemy to transport his men and equipment to the Stalingrad area.

The Soviet Command resolutely massed its men and equipment in the directions of the main strikes. Thus, concentrated at the South-Western Front on the break-through sectors with a general depth of 22 km (nine per cent of the entire offensive zone) were 70 per cent of its infantry and cavalry divisions, 85 per cent of its artillery and 100 per cent of its tanks and aircraft. These made it possible to achieve superiority over the enemy in men 2-2.5-fold; artillery pieces and tanks, 4-5-fold and even more.

Particular attention was paid to the element of surprise. It was achieved by keeping secret the idea of the operation, the direction of blows, the exact moment of the launching of the offensive, and by a concealed concentration of forces. The enemy failed to detect the preparation of the Soviet counteroffensive. The acknowledgement of Colonel-General Jodl, Chief of Staff of Operational Leadership of the High Command of the German forces, testifies to this. He said:

"We completely missed the concentration of the large Russian forces on the flank of the 6th Army (on the Don). We had no idea of the strength of the Russian forces in the area. Previously there was nothing here and suddenly a blow of a great force, a blow of a decisive significance was delivered here."

During the encirclement of the enemy it was envisaged to simultaneously organise an inner and outer fronts of the encirclement. The inner front was organised by tank and mechanised corps (mobile army groups). The outer front of the encirclement was organised by infantry and cavalry formations.

In solving the formidable tasks of the counter-offensive an important part was played by the political bodies, Party and Komsomol organisations. In the Party and political work wide use was made of the Report of the Chairman of the State Defence Committee made on November 6, 1942 and the Order of the Day of the People's Commissar of Defence in connection with the 25th Anniversary of the Great October. Addressing the fighting men, partisans and the whole of the Soviet people, Stalin, on behalf of the Party, said with deep conviction: "The day when the enemy will come to know the force of new strikes by the Red Army is not far off. Our day will come!" As soon as the order was received Party and Komsomol meetings were held in regiments and battalions. In the snowed up trenches, on positions the fighting men sized up combat missions, swore to execute the order of the Motherland with honour.

The offensive of the South-Western and the Don fronts began on November 19 and the Stalingrad Front — a day later. It was conditioned by different remoteness of the forces from the area of Kalach (the forces of the South-Western and the Don fronts were to cover 140 km, while the Stalingrad Front, 90 km).

On November 19, 1942 the forces of the South-Western and the Don fronts, after a powerful artillery barrage, passed over to the offensive. When fire was lifted into the depth of the enemy defences the fighting men of the 5th Tank Army of General P. Romanenko, the 21st Army of General I. Chistyakov and the Strike Group of the 65th Army under General P. Batov rushed forward. Overcoming fierce resistance, they penetrated to a depth of 2-3 km in two hours and broke through the first position of the enemy's main line of defence. Then tank corps were committed to action. Jointly with infantry formations they completed the breakthrough of the 3rd Romanian Army and towards evening advanced some 20-35 km. Following the tank corps the cavalry corps were committed to action through this gap. They consolidated the success of the tankmen and broadened the frontage of the offensive.

On November 20, the forces of the Stalingrad Front launched an offensive. The units of the 57th and the 51st armies under Generals F. Tolbukhin and N. Trufanov accordingly broke through the defences of the 4th Romanian Army. A mechanised and a tank corps committed to action advanced up to 40 km.

While the Nazi Command was seeking a way to prevent the impending catastrophe, the offensive of the Soviet forces proceeded successfully.

The tank and mechanised corps not engaging in battles for inhabited localities and skilfully manoeuvring, advanced 50-70 km per day. The enemy became panic-stricken. V. Adam, First Adjutant of the Headquarters of the 6th Nazi Army described these events in the following way. "Whipped up by fear of the Soviet tanks, German trucks, motor cars and staff vehicles, motorcycles, horsemen and cartage rushed westward. They ran into each other, got stuck, overturned, blocked up the road. Among them men on foot were making and forcing their way, marking time and clambering. Those who stumbled and fell to the ground could not get up again. They were trampled down, run over or squashed."

At the time the Soviet forces were approaching Kalach. They acted selflessly and courageously. Thus, the advanced detachment of the 26th Tank Corps headed by Lieutenant-Colonel G. Filippov was assigned the mission to approach the Don and, taking advantage of the darkness, to capture a crossing in the area of Kalach. By 0600 hrs on November 22 the detachment reached the area of the crossing. Nazi soldiers were warming themselves by campfires. Lieutenant-Colonel Filippov took a daring decision. He ordered the vehicle and tank headlights to be switched on. The Nazis took the moving column for their own, and it approached the bridge without hindrance. When a part of the detachment was already on the left bank of the Don a red flare soared into the sky. That was the signal for the attack. Having defeated the guard the detachment organised a perimeter defence of the bridge. By the evening tanks of Lieutenant-Colonel N. Filippenko broke through to the bridge and consolidated the success of the advanced detachment. On November 23 Kalach was liberated. For courage and heroism Lieutenant-Colonels G. Filippov and N. Filippenko were awarded the title of Hero of the Soviet Union.

The operation of encircling the enemy grouping reached its culmination. At 1600 hrs on November 23, in the area of the inhabited locality of Sovetsky a historic meeting of the units of the South-Western and Stalingrad fronts took place. The enemy grouping comprising 22 divisions and over 160 separate units (numbering 330,000 officers and men) found themselves in the ring of encirclement. That very day a large enemy grouping in the area of Raspopinskaya stopped fighting. Twenty seven thousand officers and men of the 3rd Romanian Army were taken prisoner.

While the tank and mechanised corps were surrounding the enemy grouping in the area of Stalingrad, cavalry and infantry formations were approaching the Chir and Aksai Rivers, creating

the outer front of the encirclement.

When the encirclement of the 6th Army was completed its commander asked permission for a breakthrough. But Hitler did not ever allow the thought that he would have to leave the Volga. With the aim of restoring the situation and lifting the blockade of the encircled grouping the enemy Command began immediately to transport here troops from Western Europe and other sectors of the Soviet-German front. Army Group Don under Field Marshal Manstein was hastily activated.

To lift the blockade of the enemy 6th Army and part of the forces of the 4th Tank Army, the enemy concentrated in the areas of Kotelnikovsky and Tormosin two groupings. The most dangerous was the Kotelnikovsky grouping, comprising nearly 350 tanks including new heavy "Tiger" tanks. The plan of the German Command was to strike blows from two directions to break the outer front of the encirclement and reach the Nazi forces at Stalingrad.

On December 12, not waiting for a complete concentration of their own troops, the Nazis passed over to the offensive from the area of Kotelnikovsky. The enemy delivered the main blow at the 51st Army on the narrow sector along the railway to Stalingrad. During three days of fighting he advanced 45 km and reached the line of the Aksai River. Only 60 km were left to the surrounded enemy grouping. A real threat of the blockade being lifted arose. The Supreme Command GHQ transported to this direction from its reserve the 2nd Guards Army under General R. Malinovsky. On December 19, 1942 the forward units of the army entered the battle on the move and jointly with the 51st Army stopped the enemy.

The repulsing of the enemy blow from the area of Kotelnikovsky was favoured by the successfully developing offensive of the South-Western and the left wing of the Voronezh fronts which started on December 16. The forces of the 6th Army under General F. Kharitonov and the 1st Guards Army under General V. Kuznetsov, having broken through the defences of the 8th Italian Army on the Middle Don, advanced during eight days some 100-200 km. In his memoirs Italian Major D. Tolloj, an eyewitness of these events, vividly narrates their development. "On December 16, the Soviet forces overran the front of the Italian Army. Many staffs began to change their location, thus losing any communication with the units. Units attacked by tanks tried to escape by running away. They abandoned artillery guns and vehicles. Quite a few officers tore their insignia of grade and soldiers left machine

guns, rifles and ammunition."

In a bid to halt the advance of the Soviet forces the Nazi Command committed to action the main forces of the Tormosin grouping intended for delivering a blow at Stalingrad. However, everything was useless. Without slowing down the mobile formations of the South-Western Front sped on and further penetrated the operational depth of the enemy defence.

On December 23, the enemy forces abandoned further attempts to break through to the surrounded grouping and took up defensive positions. The Nazi Command's plan to rescue the troops encircled at Stalingrad was frustrated, and the plan to supply Paulus' forces by air also failed. The Soviet Command had organised a solid air blockade around them.

The position of the surrounded enemy grouping at Stalingrad became more and more hopeless. The majority of the enemy soldiers already did not believe in the possibility of a rescue despite repeated promises by Hitler.

By that time the Soviet Command had prepared a powerful blow with the purpose of a complete routing of the encircled enemy grouping.

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

ARMED FORCES

WARTIME OPERATIONS: STALINGRAD BATTLE, DECEMBER 1942

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 38-39

[Article by Lt Gen Tanks V. M. Bogdanov: "A Daring Raid"]

[Text]

**In his reminiscences Lieutenant-General of the Tank Forces V. M. Bogdanov tells us about an episode in the counteroffensive of the Soviet forces at Stalingrad in December 1942. At that time the 24th Tank Corps under his command captured Tatsinskaya station, an important communications centre in the enemy rear.\***

On December 12, after concentrating their tank forces the Nazi troops making up Army Group Goth launched an offensive along the Kotelnikovsky-Stalingrad railway. Paulus began to draw up his tank forces in the south-west of the "pocket" in the area of Marinovka for the purpose of delivering a meeting blow from inside and breaking through to join up with Army Group Goth.

A very tense situation arose.

The Soviet Supreme Command GHQ decided to break through the enemy defences in the area Novaya Kalitva — Monastyrshchina with the forces of the South Western and Voronezh fronts and to send four tank corps into the gap. The purpose of the operation was to deprive the enemy of the possibility to free his surrounded forces by blows from inside. To do so the Red Army was to destroy all enemy operational reserves and create a threat to the newly concentrated enemy groupings.

By the morning of December 17, the Soviet forces managed to break through the enemy defence and the tank corps were sent into the gap.

Thus began the Tatsinskaya raid of the 24th Tank Corps.

The situation demanded of the forces quick surprise actions, high rates of movement and rapid blows, skill in manoeuvre and battle, but the weather hampered their actions. The winter was severely cold and snowy.

The 24th Tank Corps launched an attack along two routes and in two echelons. The operational group was in

---

\* "The Stalingrad Epopee," Moscow, 1968.

the first echelon. There was a tank-borne motorised infantry raiding party. In order to conceal our movement we were forced to carry out long raids by night while at the daytime we tried to move in small groups, rolling from cover to cover. During six days of this rapid advance we moved forward some 240-300 km.

The 24th Tank Corps broke off from the friendly forces, courageously penetrated the enemy rear, struck at the enemy on its route, capturing depots of ammunition, fuel, food, etc. and handed them to the 24th Infantry Brigade which in its turn passed them on to the infantry units.

By the end of December 21, the 54th Tank Brigade had captured Bolshinka and the 4th Heavy Tank Brigade, Ilyinka. On the night of December 22, the 130th Tank Brigade was assigned the mission to continue movement and by the end of the day to capture Skosyrskaya station.

The battle for Skosyrskaya station ended by 2200 hrs. The enemy withdrew in the direction of Morozovsk, remaining in our rear and on our flank when we moved to Tatsinskaya station and threatening us with a surprise blow. We had to cover nearly 30 km to Tatsinskaya. I was confronted with a dilemma: either to put the materiel in order, to fuel vehicles, to replenish ammunition and to give the men a rest, or to immediately start fulfilling the mission. If we postponed the offensive till morning our corps would be deprived of the main condition — surprise action at the last stage of the main mission and the enemy would understand the direction of our movement; he would prepare for battle, throw in his aviation and we would become vulnerable to his air attacks. Therefore I decided to give the men a brief time (2-3 hours) for rest and for fuelling combat vehicles and to continue to carry out the mission.

In the morning of December 24 a thick fog hung low. Our forecast came true: the enemy did not expect us. At 0730 hrs on the signal "Salvo of Guards Rocket Mortars!" our tank brigade launched the attack unexpectedly for the enemy.

Tanks of the 54th Tank Brigade carrying the infantry raiding party penetrated the aerodrome and began to destroy its guard. They shot with machine and submachine guns the nazi pilots running to their combat planes. Simultaneously the 130th Tank Brigade captured Tatsinskaya station, destroyed several artillery batteries and enemy tanks, broke through to the aerodrome from the east and jointly with the 54th Tank Brigade began to destroy the enemy combat planes. The 4th Tank Brigade attacked the village of Talovsky. Two infantry companies launched an attack from the north thus diverting the attention of the enemy.

In 1952, an article entitled "About Those Who Tore Themselves Away From the Nether World or a Blood Bath in Tatsinskaya" appeared in the German newspaper "Die Deutsche Soldatenzeitung." Kurt Streit, a surviving pilot of the nazi air force, wrote: "The morning of December 24, 1942. Day is just beginning to break in the east, illuminating a grey horizon. At that moment Soviet tanks firing on

the move broke into the village and aerodrome. Combat planes immediately blazed up like torches. Flames were raging everywhere, shells bursting, ammunition blowing up. Lorries rushed about and desperately shouting men were running between them.

— Who will give an order, where will the pilots who are trying to get out of this hell, go?

— Start in the direction of Novocherkassk, was all the general managed to tell us. The combat planes were taxiing on the takeoff strip from all directions. All this was happening under fire and in the light of raging fires. A crimson sky over thousands of dying people, their faces expressing horror. One Junkers-52 failing to take off was telescoped by a tank and they both blew up with a terrible thunder and tumbled into a huge cloud of flame. A Junkers and a Heinkel already in the air collided and flew to bits. The roar of tanks and aircraft engines mingled with the explosions of the artillery and machine-gun bursts into a monstrous symphony."

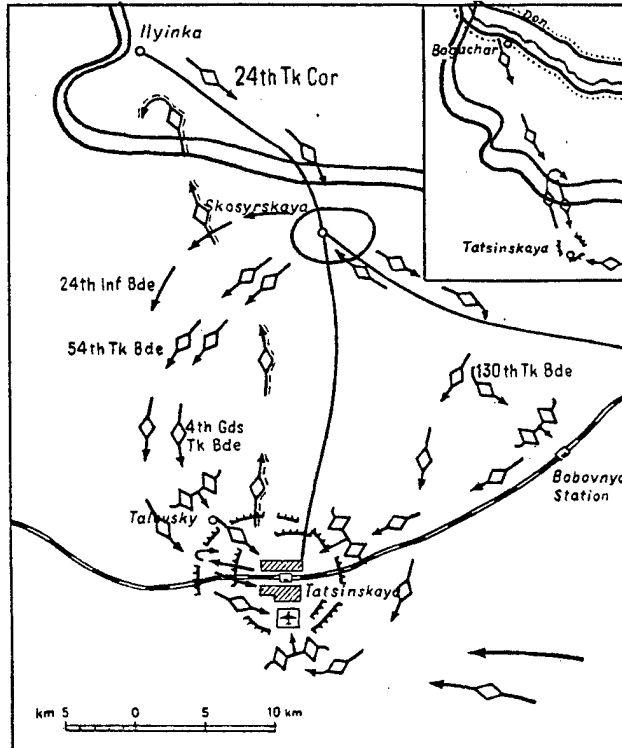
The corps destroyed up to 300 enemy combat planes on the aerodrome and nearly 50 aircraft on a train. It captured or destroyed several dozen aircraft engines, stacks of air-bombs and artillery shells of various calibres.

With the approach of the 24th Tank Corps to the area of Tatsinskaya and the blow of the Stalingrad Front forces the advance of Manstein's troops petered out. Some of the forces, earmarked for saving Paulus, he was forced to send to Tatsinskaya. Thus, by the evening of December 24 north of Tatsinskaya tanks of the 6th Tank Division were detected, south of it the 11th Tank Division and between them we took prisoner nazis from the 100th Infantry Division.

Marshal of the Soviet Union A. M. Vasilevsky wrote that our success forced the nazi Command to abandon their intention to send units and formations of Operational Group Hollidt and the 42nd Tank Corps to help the Kotelnikovsky grouping. Now they were forced to throw them to the area of Tatsinskaya as also the approaching four tank and four infantry divisions which were earlier destined for reinforcing the blow at Stalingrad from Nizhne-Chirskaya in order to free Paulus.

The glad news was transmitted to us over the radio that the 24th Tank Corps had been reorganised into the 2nd Guards Tank Corps and I was awarded the Order of Suvorov, 2nd Class, No. 1 and promoted to lieutenant-general.

From December 24 to December 29 we fought heavy battles with the advancing enemy. German combat planes began intensive bombing of Tatsinskaya station and our forces. The situation was extremely tense. Ammunition was running low, especially artillery shells. The enemy pressed harder and harder and we had to save every shell. We had at our disposal 39 T-34 and 19 T-70 tanks. However, the 2nd Guards Tatsinskaya Corps went on fighting stub-



bornly. The Tank Corps of General Pavlov and the Mechanised Corps under General Russiyanov were hurrying to our aid but the nazis continued to hold them up. On December 28 all commanders and political workers of the corps resolved as one man to fight till the last shell and tank.

We reported the situation to the Front Commander General N. F. Vatutin. On the night of December 29 we were given permission to break out of the encirclement on our own. The corps having assumed wedge formation rammed the enemy battle formations and deploying its flanks both to right and to left began rapidly with insignificant losses to break out of the encirclement in the direction of the rear to Ilyinka.

On December 30, 1942 the glorious raid of the Guardsmen ended.

During the raid the corps destroyed 11,292 enemy officers and men, took 4,769 prisoners, shot up 84 tanks and 106 guns, and destroyed 431 combat planes.

During the fighting the Soviet officers and men demonstrated high organisation, fearlessness and courage.

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

ARMED FORCES

WARTIME OPERATIONS: USE OF ARTILLERY IN STALINGRAD OFFENSIVE DISCUSSED

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 40-42

[Interview with Maj Gen Arty G. Bryukov, under the heading "November 19-- Rocket Forces and Artillery Day": "Shattering Salvoes"]

[Text]

**Artillery Day (since 1964 — Rocket Forces and Artillery Day) was established to mark the outstanding role of the Soviet artillery in the rout of the Nazi troops at Stalingrad. In the Stalingrad operation [November 19, 1942-February 3, 1943] the artillery, for the first time since the beginning of the Great Patriotic War, delivered massed blows of tremendous force at the enemy.**

**Our correspondent Colonel N. Yelshin interviewed Major-General of Artillery G. Biryukov. During the Battle of Stalingrad Major G. Biryukov was Chief of Staff of the 1st Army Group of the Guards Rocket Mortar Units of the Stalingrad Front. At the end of the war he was deputy chief of staff of the front's artillery. Now Prof. Grigory F. Biryukov is a department head at the M. V. Frunze Military Academy, D. Sc. [Military] and an Honoured Scholar of the RSFSR.**

Comrade Major-General, the literature on the Battle of Stalingrad throws light on the fact that while achieving superiority over the enemy in manpower and equipment, and concentration of large masses of artillery, the Soviet Command had to solve quite a few complicated problems. What can you, a participant in the battle, tell us about it!

Speaking of the great battle on the Volga I shall repeatedly use the expression "for the first time." These include difficulties and without overcoming them one could not count on success. We were to concentrate and deploy 15,500 artillery pieces against 10,290 pieces possessed by the enemy. Imagine, how much ammunition we needed and how many transport vehicles and other means we had to use to deliver them. And everything was to be done secretly! How we managed to do so can be judged by the forced confession of General Jodl, chief of staff of operational leadership of the Nazi High Command, who, in reference to the cases of failure of the German reconnaissance wrote that the largest one was in November 1942 when "we completely missed the concentration of the large Russian forces on the flank of the 6th Army (on the Don.)"

Realising the complexity and responsibility of the mission

the Soviet Command elaborated in the minutest detail measures for concealed concentration of the forces. It was carried out on a large frontage and over a prolonged period. Here great attention was paid to uninterrupted (mainly night) manoeuvring on a wide frontage. It was forbidden to use written, printed or graphical documents. The main method of communication was personal contact. Even representatives of the Supreme Command GHQ personally visited battle positions and had talks with commanders and soldiers, and cleared up on the spot points about organising battle. I had occasion to witness two such visits of the forces of the Stalingrad Front by Marshal of the Soviet Union G. K. Zhukov.

Our difficulties were compounded by our disadvantageous disposition. On many sectors the enemy observed the Soviet forces' defences to a great depth. You can imagine how difficult it was to camouflage guns, mortars, rocket mortar launchers in a bare steppe. However, accuracy, well considered disposition of battle formation, fire emplacements, a soldier's acumen and the team-work of crews made it possible during one night to conceal the guns on the fire-swept patch so that in the morning the enemy was unable to discover any changes.

I remember how two days before the counteroffensive ten battalions of the M-30 rocket mortar launchers arrived at the Stalingrad Front. We had long prepared to receive them. We trained guides and dug fire trenches, covers and shelters. That is why the guides in the pitch darkness faultlessly led the fire crews to their positions.

As to other measures, I can mention an active fire which did not stop for a single hour and to which the nazis got used to such an extent that they missed an adjustment fire carried out simultaneously by the entire front.

Target acquisition was not an easy problem. But it was also solved successfully. Everywhere observation posts were set up which the artillery recon men occupied by night and lay motionless for the whole day plotting fortifications and fire positions of the enemy on maps. Many thousands of eyes watched the enemy continuously. And when on November 19, 1942 (the following day on the Stalingrad Front) powerful salvos were brought down on the enemy, the artillery blow was accurate and crushing.

**What new tendencies appeared during the Battle of Stalingrad!**

During the counteroffensive at Stalingrad we managed, for the first time in the Great Patriotic War, to carry out an artillery offensive in full volume.

**But the term "artillery offensive" already existed at the time.**

Yes, it did. It appeared during the counteroffensive of the Soviet forces at Moscow. The Directives of the Soviet Supreme Command GHQ on January 10 assigned the mission to pass over from practice of an artillery preparation to an artillery offensive. The artillery was not only to prepare an attack of the infantry and tanks but also to advance jointly with them, to break through the entire depth of the enemy defences. The infantry and tanks were ordered to

begin their movement under the cover of artillery fire, following mine and shell bursts.

Proceeding from the nature of the infantry and tank actions at various stages, the artillery offensive was divided into three periods: artillery preparation of the attack; artillery support of the attack and artillery support of actions of the infantry and tanks in the depth of the enemy defences. Subsequently the third period was called artillery accompaniment.

The first experience of organising and carrying out an artillery offensive (minus the third period) was accumulated during the breakthrough of the enemy defences by the 20th Army on the Lama River in January 1942. But the full-scale artillery offensive was carried out for the first time in the counteroffensive of the Soviet forces at Stalingrad.

I was an eyewitness and a participant in both events. In January 1942, I took part in planning an artillery offensive in the breakthrough zone of the 331st Infantry Division of the 20th Army.

Exactly one year later, on January 10, 1943 when after the enemy refused to accept our ultimatum, and the destruction of the surrounded grouping began, the artillery functioned accurately during all three periods.

I should like to note one very important peculiarity. Before the beginning of the liquidation of the surrounded grouping, the Don Front, which was assigned this important mission, had no decisive superiority over the enemy. On the contrary, in manpower and tanks it was even inferior to the enemy. The front had only a 70 per cent superiority in artillery. However, such a superiority was not sufficient for a successful offensive. All the same, possessing approximately an equal number of forces, the Soviet Command managed in the direction of the main strike to create a superiority in all indices while in artillery, a more than ten-fold superiority! On January 10 the fire was so heavy that the enemy was literally paralysed. That day, for the first time in the Great Patriotic War our artillery supported the attack of infantry and tanks with a barrage fire.

**An artillery offensive, particularly its second period, when it was necessary to strictly maintain a safe distance between the infantry, tanks and shell and mine bursts, demanded a high combat standard and team-work of crews. How did subunits of the Guards rocket mortars act! What missions were they assigned!**

The specifics of using rocket artillery were determined by its capabilities: massing of fire in a short time, enormous moral, psychical and physical influence on the enemy.

During the artillery preparation of the attack the most powerful salvos were the first and particularly the last. Because of this, while the enemy was in a state of shock for 2-5 minutes, the infantry and tanks reached the first trench in a rapid rush and engaged the enemy.

During the second period the rocket artillery fired at the

targets located in front of the barrage fire. It prevented the enemy's withdrawal and cut off his reserves.

In the depth of the defences the rocket artillery destroyed and neutralised the enemy reserves, the counterattacking enemy subunits, and his command posts and strong points.

In the Battle of Stalingrad the M-30, BM-13 and BM-8 rocket mortar launchers were widely used. The M-30 represented frame-type launchers from which high-explosive shells of 200 and 300 mm calibre were fired. They neutralised and destroyed centres of resistance and strong points provided with shelters of the field type. BM-13s having 132 mm fragmentation high-explosive shells and installed on the truck chassis, were used for destroying the enemy and equipment located out of shelters. Combat vehicles of the BM-8 type based on the T-26 and T-27 tanks with 82-mm fragmentation shells accompanied the tank and cavalry corps.

#### **How was the experience of using artillery, accumulated at Stalingrad employed subsequently?**

This experience proved the correctness of views and propositions advanced in the Directives of the Supreme Command GHQ on January 10, 1942. The artillery offensive was employed in all subsequent operations, and was constantly improved upon. In large offensive operations its plan was usually elaborated by the front staff. Proceeding from its instructions, the staffs of the armies, corps and divisions concretised the artillery actions by periods.

When preparing an attack, a massed and concentrated fire was used to the entire tactical depth of the enemy defence (8-10 km and more) in combination with guns detailed for direct fire at the targets on the forward edge. To destroy particularly solid enemy constructions and structures a preliminary period was sometimes fixed. The main methods of the artillery support of the attack was the successive fire concentration or a barrage fire (first individual fire and then double and triple fire) to a depth of more than 3-5 km. Frequently these types of fire were used in combination. During artillery accompaniment of the infantry and tanks in the depth of the defences, the fire and manoeuvring of guns and self-propelled gun mounts were combined with a concentrated fire of artillery groups and battalions at the most important objectives.

Today with the advent of new means of combat the search for the most rational forms of using artillery jointly with other weapons of destruction is under way. In particular it is envisaged to carry out fire preparation, support and fire accompaniment of the offensive in which the artillery plays an important role.

At the same time an artillery offensive under certain conditions can be used for organising and planning combat action of the artillery in modern conditions.

**Forty years have elapsed since the beginning of the battle on the great Russian river. It is a long period of time. But when one meets those who took part in it one immediately**

points out that time has not faded the memory of the details of the battle and the names of army buddies.

We fought a merciless, savage and strong enemy, that is why our victory in the struggle for the right cause is so dear to us. And it is impossible to forget those with whom shoulder to shoulder we defended every inch of our Homeland and then drove the enemy from it.

It is always with great emotion that I meet K. Karsanov, Major-General (Ret), Hero of the Soviet Union, the former Chief of the Operational Group of the Guards rocket mortar units of the Stalingrad Front.

After the Great Patriotic War many front-line soldiers who were lieutenants and captains during the Battle of Stalingrad became experienced teachers training cadres for the defence of the Motherland. Lieutenant-General (Ret) I. Shamshin and Major-General (Ret) V. Kobzev, taught at the Frunze Academy for many years. The activity of Lieutenant-General V. Reznichenko, Deputy Chief of the Academy, Major-General P. Leontyev and instructors Colonels V. Saksonov and F. Savchenko has been very fruitful.

They carry out an active patriotic work with the youth. Many of them visited the 36th Moscow Secondary General Education School whose pioneer detachment is named after Captain V. Novikov, commander of a mortar artillery battalion, who died a hero's death on the battlefield. There is also a museum of the 85th Guards Mortar Regiment which fought at Stalingrad and Captain V. Novikov was an officer of this regiment.

The participants of the Battle of Stalingrad meet in Volgograd on the land drenched with the blood of the front-line soldiers. I have been there too. And every time I remembered the city during those grim days when it lay in ruins, when the slopes of the Mamai Hill were everywhere covered with splinters of shells and mines. In Volgograd literally everything is reminiscent of the heroic past. Here there are many monuments to the heroes of the Battle of Stalingrad. The city proper, raised from the ruins with its broad and light streets and avenues, is an eternal monument to the courage and staunchness of the Soviet people.

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

## ARMED FORCES

### SERVICEMEN'S OFF-DUTY TIME DISCUSSED

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 53-54

[Article by Lt Col A. Yakovlev: "Servicemen's Off-Duty Time"]

[Text]

The moral and physical state of a serviceman and his efficiency depend not only on the way he works but also on his rest during off-duty hours.

Servicemen's off-duty time is specified in the regulations of the Soviet Armed Forces. Men on active service are entitled to an average of 1,180 hours of free time annually. This proves sufficient for their all-round cultural development and also to satisfy their spiritual interests and develop their artistic and creative abilities. How servicemen spend their free time is largely determined by the organisation of their daily routine and off-duty environment.

For young men on active service the Soviet Armed Forces are a school of high culture contributing to develop their abilities and talents. For quite a few of them their amateur activities in the army pre-determined the choice of their civilian occupation. Thus, when serving in the Baltic Fleet Seamen Yu. Vinogradov, V. Grishin and A. Krasnov joined the amateur association functioning in the navy. Later they chose the literary profession and were admitted to the USSR Union of Writers. People's Artists of the USSR Ye. Matveyev maintains that his amateur art activities in the army launched him on his theatrical career.

The widely known weapon designer M. Kalashnikov, constructor of the famous submachine gun, also revealed his aptitude for technology while he was on active service. Private of the Reserve A. Privalov, who is now a well-known coach in weight-lifting, also went in for sport in the army.

The army provides favourable conditions for educating the men's cultural taste and developing all aspects of their personality.

In military units and on ships there are soldiers' and sailors' clubs and in subunits, Lenin Rooms (Cabins). The army's educational impact is enhanced by institutions functioning on a voluntary basis such as Museums and Rooms of Combat Glory, people's universities of culture, amateur film and art studios, amateur theatres, literary associations, etc. Many servicemen devote their free time to amateur theatricals.

Servicemen's amateur artistic activities develop as an integral part of the Soviet people's culture. In this country a total of 24 mln people engage in amateur art activities catering for a total average daily audience of up to 1.5 mln.

The amateur art collective of a military unit is based on appropriate circles functioning in companies.

For instance, in one unit of the Order of Lenin Leningrad Military District the companies have vocal and musical circles and a chorus to meet the servicemen's diverse requirements. The amateur art activities of this unit are supervised by a club, which also plays the role of a methodological centre. With the assistance of the amateur art collectives in subunits the club organises literary-dramatic performances and concerts to celebrate holidays and red-letter days. The musical ensemble called "Praporshchik" is very popular in the unit, each of its members having been awarded the title of Honoured Artiste of the Karelian ASSR.

Many servicemen are keen on technology and devote much of their free time to improving their knowledge in this field. In the army they have ample opportunity for this. For instance, they may attend consultation centres or innovator's rooms provided with assembly and fitter's equipment. Military innovators are active participants in the all-union review of scientific and technological achievements of the youth. The best inventions of the unit's military specialists were shown at the country's central exhibitions and earned high praise. During the Tenth Five-Year-Plan period (1976-80) 891 military inventors were awarded medals of the USSR Exhibition of Economic Achievements and 1,804 young participants were presented with diplomas for their achievements in science and technology.

One can hardly imagine soldiers' off-duty time free from sports activities. All servicemen indulge in sport. Military subunits have sports sections (volleyball, track-and-field, chess, etc.). Almost all military units have stadiums and gymnasiums. On Sundays and holidays sports games and competitions are frequently organised in the forces.

To provide perfect off-duty environment is the task confronting commanders and political workers acting in cooperation with Party and Komsomol organisations.

Servicemen's rest is classified as follows: breaks (rest) between training lessons, daily rest after training, rest after shortened training on the eve of days off, rest on Sundays and holidays.

Each kind of rest is organised specifically with the use of the appropriate forms and methods. In the intervals between training lessons the men usually relax in short games, entertainment, informal talks and other measures organised by the most active men in the subunit.

The men's rest, after their daily training, is usually arranged in the barracks by commanders, political workers and Lenin Room councils, taking into account the definite degree of fatigue the men experience after their strenuous training.

The rest programme for the day before the free day or for Sunday is drawn up so as to diversify the men's leisure. Here is an instance of Sunday rest in one motorised infantry unit.

One group of men made an excursion by bus, another went to the theatre and some men were permitted to go to the town on a walking-out pass.

Those who stayed in the unit lines gathered in the Lenin Rooms to see the TV programme "I Serve the Soviet Union!" Some men went to the gymnasium, where weight-lifting competitions were held.

In the afternoon the men were visited by amateur artistes from the local works. In the packed club they performed songs, dances, acrobatic feats and gave recitations. After the concert all present left for the soldiers' tea-house in a cheerful mood. The day of rest ended with dancing in the club's foyer.

Rest programmes for Sundays also envisage film festivals, matinées and soirées devoted to various themes, debates, talks, quizzes, etc.

Great effort is required to arrange servicemen's rest on holidays. The purpose of festive activities in the forces is to enrich the men spiritually by observing the appropriate ceremonies. The marking of red-letter

days, such as the anniversary of the Great October Socialist Revolution and the formation of the USSR, the 1st of May and the day of the Soviet people's victory in the Great Patriotic War (1941-45), must be directed at showing the political essence of this or that event in order to bring up servicemen in the spirit of devotion to their Motherland.

To provide perfect off-duty environment is a complicated task requiring much effort. But this work will be rewarded because good rest multiplies the men's strength, broadens their outlook and enriches their spiritual life.

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

PROCEDURES FOR FLYING IN CLOUDS DESCRIBED

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 21-22

[Article by Lt Col G. Baldenkov, under the heading "Combat Training": "Flying in Clouds"]

[Text]

**F**LYING IN CLOUDS, when the pilot can see neither landmarks nor the natural horizon, is a complex and important task. It becomes even more complicated when the flight is to be carried out along a specified route with the purpose of performing a combat mission. To find and destroy the target the airman should not only perfectly pilot his aircraft but also penetrate enemy AD lines, bypass his missile launching sites and artillery positions, avoiding encounters with enemy interceptor-fighters.

All this requires of the flying personnel high aerial and combat training standards, moral and psychological steeling and profound navigational knowledge and skill. As piloting and navigation in the clouds are carried out with the use of instruments, the crew must be well versed in the use of electronic and radar equipment for navigational purposes, have sufficient flight experience and possess an appropriate proficiency level.

The main elements by which the quality of air navigation during an en-route flight is judged are the accuracy of maintaining the line of flight and the accuracy of approaching the target both in time and place.

During preflight training the crews always take into account the possi-

bility of flying in instrument meteorological conditions. The engineer and navigation plan (a preplanned procedure of crew operation in the air) is also drawn up with due regard for this possibility. The content of the flight plan depends on the character of the mission, aircraft equipment, navigational and tactical situation in the area over which the plane is to fly. It includes the flying mode and flight profile, fuel consumption estimations for each stage of the flight, methods for controlling and correcting the route, the target approach procedure and other measures aimed at ensuring reliable execution of the task and enhancing safety.

Modern equipment and versatile navigation systems enable airmen to solve air navigation problems with high quality and in any weather conditions. But it may happen in combat that when flying over enemy occupied territory the pilot will fail to find a radio beacon. Besides, in combat conditions the crew will use, for reasons of secrecy, the aircraft radio equipment only in emergencies. Therefore the crew will have to rely mainly on its own forces and the available aircraft equipment. The main navigational equipment will include an aircraft clock, speed and altitude indicators, radio and magnetic compasses and a

ground-position indicator, and the main air navigation method will be dead-reckoning.

Initial flight route calculations do not take the wind into account. Corrections are introduced during pre-flight training after receiving the latest meteorological data.

Prior to take-off, it is necessary to adjust course indicators, switch on pitot-static tube heaters and check the anti-icing system.

If the horizon line is clearly visible, take-off presents no difficulties. The clouds are usually entered without changing the heading and bank to avoid illusions. Further climb to the assigned flight level and approach to the initial route point (IRP) are performed with the aid of a radio beacon. The plane is turned towards the ground radio station and flies in its direction with the help of a radio compass. To ensure accurate passage of the IRP maintaining the course of the next flight stage, the aircraft should be led out onto the roll-in point keeping the pre-calculated relative bearing of the radio station.

If the assigned flight level has been reached before approaching the IRP, the next stage of flight, after passing it, should be used to determine the true values of the ground speed and the drift angle. This data will serve as a basis to define wind direction and speed. During subsequent stages this data is constantly refined. After correction of the heading the aircraft proceeds to the route turning point (RTP). The moment of approaching it is determined by the dead-reckoning method and is checked against radio bearings.

During subsequent stages of flight the crew checks the accuracy of navigation by determining the actual position of the aircraft relative to specific route points. The direction and range can be monitored separately.

Direction monitoring boils down to determining the actual course of flight and the value of the deviation from the course line. The range

monitoring consists in calculating the distance to the RTP or a check reference point to ensure accurate approach to them in due time.

Further course corrections consist in changing the heading and the flight speed so as to return the plane to the assigned course line or direct it to the RTP and lead it out onto the target.

The course is altered only if the value of heading or speed corrections tangibly exceeds probable computation errors.

To ensure target approach in due time, a speed manoeuvre is most often used. The minimum distance required to execute such a manoeuvre is calculated before the flight. Using this distance and the revealed time error, the ground speed is determined.

If the target is to be approached from under the clouds, the breaking of the cloud layer begins from a specific line which provides timely visual referencing to the ground and enough time to prepare for combat use of weapons. When calculating the time of target approach it is necessary to take into account a probable manoeuvre to avoid the fire of enemy AD devices.

The target escape is normally carried out at a low altitude. The flight terminates in approaching the point of arrival which is usually designated as a radio fix.

The nature of the cloud cover may be unfavourable for flight. Thunderclouds, for instance, are characterised by powerful ascending and descending currents. A high degree of their saturation with water may cause rapid and heavy icing. Hail, which is not a rare occasion in such clouds, may damage the skin, tail-plane, canopy, air intake, external tanks and other parts of the aircraft. Strong electric fields existing in thunderclouds completely rule out the possibility of plane-ground communication. Furthermore, bright flashes and deafening thunder exert an adverse psychological effect on the crew members which may lead to the loss of spatial orientation in

the conditions of extreme turbulence and poor visibility. That is why flights in thunderclouds are dangerous and flight manuals prohibit them.

In most cases thunderclouds can be detected visually. At night or if they are covered by other clouds, they can be located with a radar. The approach to the thunderstorm zone can be determined by the swinging of the radio compass needle, cracks and noise in earphones, lightning flashes and increased turbulence.

It is recommended to bypass thunderstorms at a distance of at least 10 km or with an elevation of 1,000 m and more over the thundercloud.

Skilled flying personnel can successfully cope with all these dangerous phenomena. In combat such weather conditions will be widely used by the airmen to achieve the secrecy and element of surprise necessary to penetrate the enemy AD system and successfully attack him.

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

HELICOPTERS: FIGHTING ICING

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 22-23

[Article by Eng Lt Col Yu. Malakhov, Cand. Sc. (Technology): "Fighting Helicopter Icing"]

[Text]

**To make effective use of the de-icing systems with which modern helicopters are provided the pilot must be well aware of the conditions under which icing arises, how it manifests itself and what danger it presents.**

This phenomenon is most common within a temperature range of +5°C to -20°C at altitudes of 450 to 1,800 m. Icing may also take place at zero or small negative temperatures in conditions of high humidity (drizzle, rain, sleet). Very dangerous in this respect are cumuli and strati, and also ascending currents rising above mountain peaks from the windward side.

Ice generally formed on the helicopter's frontal parts, main and tail rotor blades, canopy glazing, instrumentation sensors, aeri-als and engine input devices is conducive to a decrease in the flow rate through the engine and disturbance of its uniformity at the inlet to the compressor, which, in turn, may give rise to considerable vibration, and, in some cases, to engine surge and even stalling.

Also troublesome is icing of the leading edge of the main and tail

rotors, the ones with a sharp leading edge covering with ice quicker.

At the present time helicopters use electrothermal and liquid de-icing systems. According to foreign press reports, systems for micro-wave heating of the blade leading edges and their vibrational excitation to remove ice are currently under test. Some specialists think it most effective to use special de-icing pastes applied to the blades of the main and tail rotors. Quite a few varieties of such pastes have been proposed, with their base formed by polyethyleneglycol, glycerine, shellac, or polyvinylacetate and dibutylphthalate. Recent foreign publications, however, carry conflicting reports on the effectiveness of these compounds.

A heating element is the main component of the electrothermal de-icing system of the main and tail rotor blades. A. C. generators are used as a power source. Heating elements, which are basically a flat spiral protected by several layers of fibre glass with a rubber layer to increase erosion resistance glued on top are arranged on the upper and lower surfaces of the blades close to the leading edge. The elements are combined into sections, the main rotor blades carrying up to four sections and the tail rotor blades up to two. The

\* Based on foreign press reports.

system operates in the cyclic pulse mode, which prevents overheating of the elements and reduces power consumption. The sections operate one after another in succession, with switching being effected automatically by means of a time relay. For the average helicopter the operating cycle of the de-icing system of the main rotor blades is 12 sec., and that of the tail rotor blade, 24 sec. Depending on the intensity of icing, the crew may alter the duration of the cycle at will.

Engines generally use combined de-icing systems. For heating of the input and dust-protection devices electrothermal protection is commonly used, whereas the spinner front struts and compressor first stage units are heated by hot air taken off the compressor or by waste hot oil pumped from the engine.

Pitot-static tubes are heated solely by electricity. The system is cut in automatically by means of a sensor, which signals the beginning of icing.

The crew can determine the beginning of icing visually, judging by the condition of the canopy windscreen. Some helicopters use a passive de-icing sensor in the shape of a small rod placed outside the cockpit within the pilot's field of view. The rod carries red marks enabling the pilot to determine the intensity of the process when the system is actuated. These methods, however, are largely approximate, for icing of the windscreen and the rod takes place later and proceeds slower than that of the blades.

Today wide use is made of the RIO-3 type radio-isotope icing sensors, whose operating principle consists in registering the number of moisture particles passing from the sensor to the pick-up. With the helicopter flying, the RIO-3 automatically cuts in the de-icing system of the main and tail rotor blades.

Timely actuation of the de-icing system is an important condition for

ensuring flight safety. After the engine has been started at an ambient air temperature of  $+5^{\circ}\text{C}$  or lower care should be taken to see that heating of the pitot-static tube, air intake and engines is turned on.

It is practicable that the hot air supply throttle or valve is switched on depending both on the indications of the warning panel installed in the cockpit and on the mounting gas temperature behind the turbine. Delayed switching of the blade de-icing system is very dangerous, for the blades may be damaged during removal of the ice. Asymmetric removal of ice is no less dangerous; therefore, when the blades are covered with ice during flight, it is prohibited to manipulate sharply the controls, e.g. pedals, collective-pitch and cyclic control levers.

Delayed switching of the engine de-icing system may cause damage to parts of the engine gas-flow passage (primarily compressor blades) by lumps of removed ice. It is therefore advisable in such cases to leave the icing zone.

It should also be borne in mind that arbitrary use of the de-icing system is impermissible, for its switching reduces engine power and impairs engine economic operation. Considerable consumption of hot air reduces engine power by close to four per cent, and increases fuel consumption by three per cent.

The canopy glazing uses an electrothermal and occasionally a liquid de-icing system with alcohol serving as the working fluid. The electrothermal system includes a wire — or film-type heating element. According to foreign press reports, the latter is finding ever increasing application. Films are applied by the method of cathode atomisation in a vacuum, which virtually does not affect optical properties of the glass.

The glazing heating system normally operates in the pulse mode, for which purpose automatic temperature regulators functioning on the

principle of the bridge circuit are used. When the glass temperature rises above the rated value (+40°C), the heating element is de-energised, and the glass cools down; when the temperature drops below the rated value, the operating cycle is repeated.

Although provision of helicopters with the de-icing system has substantially expanded their potentialities during the autumn-winter period, this system calls for competent operation.

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

## GROUND FORCES

### MOTORIZED RIFLE COMPANY: ASSAULT TRAINING

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 26-27

[Article by Captain N. Yefremeyev: "Engagement on the Karasu River"]

[Text]

The attention of Senior Lieutenant Samsonov, commander of the turning force, was fixed on an ugly, rickety looking bridge across a mountain river which the local inhabitants named Karasu — dark water. Samsonov wondered why it was called dark, because, on the contrary, it was clear. You could see every stone on the bottom. But his thoughts were concentrated on a totally different matter. He was baffled when the "enemy" had managed to straddle the bridge and organise an effective defence system which halted the advance of his turning force. Samsonov did not know, nor could he know, that the "enemy" had landed a helicopter descent made up of two platoons with mortars and recoilless guns.

Samsonov's turning force consisted of his motorised infantry company reinforced with a tank and a mortar platoon, combat engineer section and two anti-aircraft quadruple gun mounts.

The force had executed the march with all possible precautions. The commander had organised all round air observation. He placed a part of his submachine gunners outside the armour to shower any ambush with lead. The company commander placed one anti-aircraft quadruple mount closer to the head of

the column to provide cover against air attack and against the possible appearance of "suboteurs." The column reached the bridge without running into an ambush. The "enemy" allowed the patrol vehicle to come within effective range of his fire weapons. Machine gun and submachine gun bursts struck suddenly from the other bank of the river, from the rocky crests that squeezed the narrow valley. His missile launchers joined in. Samsonov realised that the "enemy" had forestalled him.

The company commander decided to drive the "enemy" out of his positions on the heights adjacent to the valley. To this end he intended to employ mortar and tank gun fire. Having neutralised the "enemy" emplacements he wanted to launch an assault to seize the bridge coup de main.

After a brief fire attack Samsonov led his company into the assault. The "enemy" stopped the attackers with well-coordinated accurate fire and forced them to withdraw. He had chosen highly suitable positions for his strong points and ranged all the weapons on the approaches to the bridge. The rocks afforded the defenders reliable cover from all fire. It looked as if the battle for the bridge would be a

protracted one. Samsonov was even sorry he had asked to be appointed turning force commander. But then he felt ashamed of his weakness. He started looking for a way out of the situation. He pressed his cheek to the rough surface of the rock which had preserved the coolness of the night. He felt as if it were easier to breathe. The area smelled of dust, powder smoke and diesel fuel.

Wondering what he should do Samsonov cast a glance at his watch. The hands had already "recorded" the time he had lost. The turning force had been delayed for half an hour at the bridge. How long would it be kept here altogether?

Who could have thought that such a small pass so far away from the exercise area would become so important? The narrow mountain road passing through it opened a short way to a broad valley. It was now clear that the side which was the first to straddle the pass would hold the initiative in its hands and dictate its terms to the opposing side. That was why at daybreak the regimental commander sent a small descent under Senior Lieutenant Yurchikov. And the helicopters delivered it to the mountain pass. Thus, Yurchikov had forestalled Senior Lieutenant Samsonov's force that should have seized and fortified the pass.

And now it was necessary to drive the descent out of its positions and consolidate the ground.

Samsonov knew that if he had the time it would be difficult for Yurchikov to hold the pass with his small descent.

"It will be impossible to knock the 'enemy' out with a head-on assault. Even if he managed to do so, the price would be extremely high. The bridge had obviously been mined. The 'enemy' would surely demolish the bridge if forced to withdraw. And that would mean the end." His obedient imagination gave him a graphic picture of the bridge being exploded. In his mind's eye he vividly saw a tall pillar of

dust and dispersed rocks.

While thinking over his mission, Samsonov decided to assemble the platoon leaders. This was easier to do in the mountains than in the field. The "enemy" had stopped firing.

Samsonov heard somebody approaching him from behind. Turning round he saw Lieutenant Pertsev, first platoon leader, hurrying towards him.

Then Senior Lieutenant Bazlov, tank platoon leader, and the others arrived. Samsonov asked them:

Well, Comrades, how are we going to take the bridge?"

Pertsev was the first to speak. He said:

"Under cover of all fire weapons two infantry fighting vehicles will make a rush for the bridge at top speed and seize it."

As the company commander listened to the platoon leader, he knew what to do in that situation. Despite this, he asked the officers:

"Have you any other suggestions?"

Bazlov was the next to speak. He said:

"I propose we attack not with two infantry fighting vehicles, but with all the forces available."

"To raise all the clamour we can," Pertsev remarked with a smile.

"Precisely so," Bazlov continued unperturbed. "We should not underestimate the 'enemy'. We've learnt that already. He can observe all our manoeuvring very well. So, let him see that we intend to launch an assault on him. We shall open fire, make a lot of noise and put up a few smoke screens. Let him try to fight us back. Meanwhile Pertsev with two or three infantry fighting machines will turn this mountain at a high speed (Bazlov pointed to the mountain) to strike at the flank and rear."

"That's a way out," Samsonov thought. He was surprised to see that Bazlov's intention had coincided with his own. He asked the of-

ficers:

"Any other views? Here are my orders..."

The mortars, tanks and infantry fighting vehicles struck almost simultaneously. The thunder of fire echoed in the valley. The "enemy" responded with machine gun bursts. Mortars fired from behind the bridge. The exchange of fire reached a climax. Senior Lieutenant Samsonov radioed:

"Storm calling Birch and Pine. Forward!"

Samsonov felt the excitement rise in him as always before an engagement.

The tanks slowly headed for the bridge with the infantry fighting vehicles in their wake. Dense clouds of smoke rose from their exhausts. They gradually enveloped the whole valley. The smoke screen puzzled the "enemy". His fire subsided, but only for a moment.

The smoke screen prevented the "enemy" from seeing two infantry fighting vehicles making a sharp turn to the left and disappearing between two heights through a saddle to execute a turning movement. Fifteen minutes later they had turned the mountain and stopped in front of the river. The Karasu was flowing swiftly between its rocky banks. Fording it in vehicles was out of the question. Pertsev radioed the situation to Samsonov.

Samsonov thought with disappointment: "I should have foreseen that." However, he was pleased that the manoeuvre had been successful. The main thing now was to prevent the "enemy" from spotting the group before it went into the assault. He calculated the time Pertsev would need to cross the river and complete the turning movement. It would be quite a while, but there was no alternative.

"Dismount," Samsonov ordered. Then in a friendly way he added: "Alexei Dmitriyevich, we have all our hopes pinned on you."

Samsonov could not help being excited. Twenty minutes had passed after Pertsev's last report. There were no calls from him any more. An estimate showed that the infantrymen should have already completed the turning movement and arrived at the lines of assault on the flank and in the rear of the "enemy." They should have fired a green flare signalling their readiness for the assault.

The company commander "traversed" the entire route of the group on the map wondering what had caused the delay. Samsonov assumed that it must have been the river that had caused the delay. "The Karasu is a nasty river," he thought. He was even sorry that he had not headed the group, but had assigned a young lieutenant this mission.

At long last a flare soared from behind a mountain not far from the bridge. Leaving a whitish trail in the sky it divided into three green buds. That very second the "enemy" opened rapid submachine gun fire on his left flank. There were a few grenade bursts. Samsonov had long waited for that moment. That was why he lost a few moments. In his mind he commended Pertsev. Then he gasped:

"Forward!"

The tanks and infantry fighting vehicles headed for the bridge firing on the move. The infantrymen attacked in dismounted formation.

The surprise assault from the flank and rear caused confusion in the "enemy" ranks. He started to withdraw in haste.

Lieutenant Pertsev and his machine gunners forced their way onto the bridge. He located the demolition charge, because it had not even been concealed. The way was now clear.

The turning force resumed the advance. Senior Lieutenant Samsonov was thinking about the next enga-

gement on the pass, helping beat off an "enemy" assault.

Samsonov cast a glance at the gorge where he saw the Kerasu. From the top it seemed dark and even black. He took note of this fact. He saw that he was wrong wondering why the name of the river did not correspond to the colour of its waters. Everything fitted in right now. However, his mind was now fixed on the forthcoming engagement, and this thought ousted all others. The pass was not far off now.

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

NAVAL FORCES

HELICOPTER ASW TRAINING IN MEDITERRANEAN SEA

Moscow KRASNAYA ZVEZDA in Russian 11 Nov 82 p 1

/Article by Sr Lt A. Veledeyev: "From a Ship's Airfield"/

/Text/ The helicopter, whose crew is commanded by Sr Lt S. Zobov, lifted off the deck of the ASW ship "Admiral Isakov" which was proceeding at full speed under the flag of the First Deputy Commander of the Red Banner Northern Fleet Vice Adm V. Kruglyakov. /End editorial comment/.

In the assigned region "enemy" aircraft sought to prevent the operations of the ASW helicopter. But radar operators, subordinates of Sr Lt S. Nemkov, observed the airborne target and passed the information to the men of the fire control unit. The missile and artillery men covered the helicopter's actions with precise fire.

Soon the helicopter located the submarine. The crew passed the necessary data to the ship. Sailors of the mine and torpedo unit dropped the winning point in the duel. Mediterranean Sea (Sent by radio operator seaman V. Shakinov).

CSO: 1801/60

PERCEPTIONS, VIEWS, COMMENTS

COMMENTARY ON MILITARY USE OF SEAS

Moscow SOVIET MILITARY REVIEW in English No 11, Nov 82 pp 51-52

[Article by G. Sturua, Cand Sc. (History), under the heading "International Affairs": "Peace to the Ocean Waters"]

[Text]

The Soviet Union's business-like and constructive approach to the most urgent problem of the present time — curbing the arms race, was vividly manifested in the memorandum submitted to the Second Special Session of the United Nations General Assembly on Disarmament in June and July 1982. An important part of this document is devoted to the problem of limiting naval activities in certain areas of the world ocean. It is difficult to overestimate the importance of this problem, especially in this decade, when the Western powers have been pushing ahead with their naval build-up and aggressive plans in the World Ocean.

The responsibility for the growing tension in the seas and oceans lies first of all with the United States of America, who openly declares that it will never agree to anything less than naval supremacy. One of the central objectives of the Reagan Administration's military build-up programme is a plan to bring the US regular Navy to 600 units by the 90s, including the construction of two "Nimitz" class nuclear aircraft carriers and commissioning of four "Iowa" class battleships to be equipped with "Harrier" aircraft and "Harpoon" and "Tomahawk" cruise missiles. The immense scale of the naval build-up is clear from the figure of the financial appropriations planned for the US Navy, which are three times as large as in the 70s. Great Britain, seeking to consolidate its position on the Falkland Islands (Malvinas), is also expected to review its military plans in the direction of building up its naval strength.

Washington intends to concentrate its nuclear strategy still more on its nuclear-powered ballis-

tic missile submarine force. New "Ohio" class nuclear-powered ballistic missile submarines (SSBNs) are presently being made operational; they possess greater speed and carry one and a half times as many nuclear warheads as the former "Trident II" SSBNs. Washington has put into mass production another dangerous "counterforce" weapon — the "Tomahawk" cruise missile, which can be mounted on a variety of surface ships and submarines. In the context of the Reagan Administration's military strategy providing for "all-out" and "limited," protracted and short wars, the "Tomahawk" cannot be considered in any other way than as a "first strike weapon."

Other Western states are also taking steps to modernise their strategic naval forces. Great Britain declared its intention to replace the existing submarine fleet with the "Trident II" submarine-launched ballistic missiles (SLBMs) bought from the United States, while France has begun construction of a second series of the modified "Inflexible" class missile submarine carrying longer-range ballistic missiles with independently targetable nuclear warheads.

The Soviet Union has repeatedly proposed to limit the build-up of strategic naval forces. Addressing the United States in particular, the USSR offered to refrain on a mutual basis from developing new missile submarines and ballistic missiles for them. The United States ignored the proposal, and a new round of the arms race began. So in response to the US "Ohio" submarine the Soviet Navy had to develop its similar "Typhoon" system.

The Soviet memorandum presented to the Second Special Session of the UN General Assembly reiterates the Soviet Unions' call to limit the deployment of new SLBMs and to desist from building long-range naval cruise missiles. The Soviet proposals go even further: they stress the necessity to withdraw missile submarines from their present patrol areas and to limit their range of operations to mutually agreed lines.

In tabling the question of limiting naval activities the USSR has in mind more than just the operations of the naval component of the nuclear missile forces. The situation in the Persian Gulf cannot but cause serious Soviet concern. Late in 1979 the United States concentrated in that area a powerful naval force, comprising dozens of fighting vessels. The Diego Garcia Island in the middle of the Indian Ocean has been turned by the Pentagon into a major base of interventionist rapid deployment forces. The USA has built a naval and an air-force base on the island and stationed seven-

ral depot ships in its vicinity to supply the US Marine units with heavy weapons. It is also notable that some other Western states supporting Washington's intervention plans are building up their naval forces in the Indian Ocean.

The recent war in the South Atlantic and the US gunboat policy in the Persian Gulf, also the numerous provocative declarations made by US Navy officials prove that the sharpening of international tension provoked by the US and NATO is accompanied by wider use of naval forces in the imperialist struggle against the national-liberation movement.

In order to provide for swifter commitment of naval forces in support of political pressure or military intervention Washington is deploying a forward-based system US naval formations which are thus moved into parts of the ocean thousands of miles away from United States territory. Immediately after World War II the United States deployed on a permanent basis two operational fleets, each comprising an aircraft carrier group — one in the Mediterranean and the other in the Western Pacific. Recent years have seen a sharp increase of the US naval presence around the world. The US Navy now operates also in the Indian Ocean, it may also be permanently deployed in the Caribbean. Even before the end of the conflict in the South Atlantic Britain announced plans to station a group of warships in that area.

The Soviet Union never regarded it as normal for naval forces of the great powers to operate far from their own lands for extensive periods. The Soviet naval presence in the Mediterranean, for instance, was actually occasioned by the deployment of nuclear weapons delivery vehicles in the area, which posed a direct threat to the USSR. The Soviet Union proposed as early as 1971 that all naval powers should discuss limitation of naval activities in the World Ocean. Concrete steps were proposed to turn the Mediterranean into a zone of stable peace and cooperation, to consolidate peace and security in the Persian Gulf. The USSR supported the move of the coastal states to establish a zone of peace in the Indian Ocean.

It is easy to notice that all these proposals concern areas where military conflicts are highly possible, and they were all repeated in the Soviet memorandum. The comprehensive and consistent approach of the USSR to limitation of naval activities was once again reaffirmed by the declaration that the Soviet Union is ready to discuss ways of reducing naval arsenals with other naval powers.

Implementation of these proposals requires, among other things, a certain degree of mutual trust between the contracting parties. Aware of that, the Soviet Union holds that creation of such an atmosphere of trust may be achieved by methods that had already proved effective: these are so called "confidence-building measures," a system of which was developed during the preparation for the Conference on Security and Cooperation in Europe. They provided for mutual notification of the parties concerning forthcoming military exercises above an agreed level and large-scale troops movements. Similar measures may well be agreed on now in relation to the naval forces.

Many states are interested in the positive solution of the problem of limiting the activities of naval forces. Preparations are under way in the United Nations to convoke an international conference on establishing a zone of peace in the Indian Ocean. But the United States opposes such a conference, Washington's negative attitude towards this plan is of long standing. For instance, the United States broke negotiations with the Soviet Union in 1978 on the military activities of the two states in the Indian Ocean. Soon after that Washington took extensive steps to increase its military presence there, and began setting up a network of war bases and other military installations.

The reason why Washington is so violently opposed to an international conference on the Indian Ocean is very much apparent: an international forum would definitely and clearly condemn the US militarist posture in the Indian Ocean and would tie its hands in respect of the countries which the USA threatens with armed intervention.

Whatever resistance the USA and some other states offer to the idea of limiting military activities in the Indian Ocean, it is steadily breaking its way ahead and winning an ever growing number of supporters. Further evidence to that effect is the conference "The Indian Ocean — a Zone of Peace," which took place in India this year, and other forums. The World Ocean which links all nations by its trade routes and which makes the earth's food and mineral resources available to millions of people in all continents deserves a better destiny than militarisation.

Peace to the ocean waters!

COPYRIGHT: "Soviet Military Review", No 11, 1982

CSO: 1812/29

END