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AVIATION DAY ARTICLES PUBLISHED

Marshal Kutakhov Interview

Moscow SOVETSKIY VOIN in Russian No 15, Aug 78 pp 2-4

[Interview of Chief Mar Avn Hero Soviet Union Pavel Stepanovich Kutakhov, deputy minister of defense of USSR, CIC of Air Force: "Mighty Wings of the Homeland"]

[Text] The winged knights--military aviators--wrote vivid pages in the glorious heroic annals of our Motherland. As with personnel of other branches of the Armed Forces and combat arms, they showed high courage and valor in flame of battle. Named by newspapers among those who distinguished themselves in battles against the fascist German invaders was the fearless fighter pilot and squadron commander, Maj Pavel Stepanovich Kutakhov. Together with his comrades in arms, he screened Murmansk and other northern cities from enemy aviation. It was about him that a poet composed the following lines in those days:

Another command, and again without fear,
Casting a look at the blue of the skies,
The fighter--Maj Kutakhov
Leads his eagles into battle.

On the threshold of a national holiday--USSR Aviation Day--a correspondent of SOVETSKIY VOIN asked Chief Mar Avn Hero Soviet Union P. S. Kutakhov the following questions:

[Question] What is most typical of the modern development of the Soviet Air Force?

[Answer] The historic documents of the 25th CPSU Congress, subsequent party decisions, and speeches by CPSU CC General Secretary, Chairman of the Presidium of the USSR Supreme Soviet, Comrade Leonid Il'ich Brezhnev

attached great importance to scientific-technical progress in our country. We know that one of its directions is the development of modern aircraft, including military aircraft. Thanks to the unremitting concern of the Communist Party, the Soviet government and Comrade Leonid Il'ich Brezhnev personally, and thanks to the persistent labor of scientists, designers and workers of the aviation industry, the Air Force is outfitted with remarkable contemporary combat equipment and weapons.

Missile-carrying aircraft outfitted with powerful weapons and reliable means for detecting and destroying the enemy now comprise the basis of our Air Force. Today's aircraft is a concentrated reflection of all the latest achievements of scientific-technical progress. The modern aircraft has all capabilities for conducting effective actions in a wide range of altitudes and flight speeds, including low altitudes and supersonic speeds. In such aircraft, the crews are capable of operating successfully in difficult weather conditions day or night and covering great distances.

Our aviation possesses diversified combat capabilities, and above all, high efficiency, firepower and a great operating depth. Its technical outfitting permits successful destruction of enemy means of attack, support to ground forces, successful struggle for air superiority, aerial reconnaissance and the accomplishment of many other difficult missions.

But it is not only the first-rate equipment and powerful weapons which determine the increased level, combat effectiveness and combat readiness of our Air Force. The chief element is the people, the remarkable pilots and navigators, engineers and technicians, junior aviation specialists, communicators and rear services workers: in short, everyone who proudly wears the blue shoulderboards of defenders of the Motherland's skies and whose hands control the combat equipment.

Our military aviators--fiery patriots and internationalists--are utterly devoted to their people and to the great cause of the Communist Party. They unanimously approve and support the wise domestic and foreign policy of our party's Leninist Central Committee and its Politburo headed by Comrade Leonid Il'ich Brezhnev, an outstanding party, state and military figure. The aviators' high ideological conviction and patriotism is clearly manifested in their day to day affairs.

I must note with satisfaction that a high political and labor enthusiasm reigns in the Air Force as in the entire country. The personnel's ideological life is filled with the richness of decisions of the 25th Party Congress, the materials dedicated to the 60th Anniversary of the Great October and the Soviet Armed Forces, the provisions and conclusions stemming from appearances by Comrade L. I. Brezhnev during his trip through parts of Siberia and the Far East, at the 18th Komsomol Congress and from his remarkable works "Malaya Zemlya" and "Vozrozhdeniye" [The Rebirth], decisions of the July (1978) CPSU CC Plenum and Comrade L. I. Brezhnev's report "On Further Development of USSR Agriculture." A thorough study

of these party documents and the USSR Constitution and implementation of their high demands and recommendations gives the fighting airmen wings and new strength in the struggle for complete, high-quality fulfillment of all assigned missions.

[Question] The exploits performed by the glorious eagles in defending the socialist homeland serve as an example of dedication to the party and the people. How is today's generation of aviators augmenting the combat traditions?

[Answer] The history of Soviet military aviation, as of other branches of our Armed Forces, is full of vivid heroic exploits and rich with grand traditions.

The military aviators realize full well that their strength lies not only in the new equipment, but also in the continuity of high combat and moral-political qualities and the remarkable heritage of the frontlinesmen. The experience of the battle heroes has become an organic part of the day to day life and training of air units. Commanders, political officers and party and Komsomol organizations have armed themselves with indoctrination of personnel using the veterans' exploits.

The grand combat traditions of the Air Force began to form from the first day of its organization. The great Lenin was at the source of the Air Force. Subunits of Red military pilots heroically fought the enemies of the young Republic of Soviets with Lenin's name at all fronts of the Civil War. There were 235 pilots and aerial observers decorated with the highest award of that time--the Order of Red Banner--for courage, valour and heroism, and 16 received this award twice, while I. Pavlov, S. Monastirev and M. Mezheraup received it three times.

In carrying out the party's call to fly farthest of all, fastest and highest, Soviet pilots brought glory to our Motherland in the prewar times with outstanding air records and brilliant distance flights.

Their participation in the Great Patriotic War was a most vivid page in the Air Force's history. The grand eagles of the homeland made a great contribution toward winning victory over fascism. Soviet aviation successfully screened its troops and industrial installations against air attacks, conducted air operations to defeat enemy troop groupings, performed reconnaissance and supported combat operations by partisans, destroyed enemy personnel and equipment, and neutralized military installations in the deep rear of fascist Germany. During the years of the past war our aviation made a total of around four million combat sorties and destroyed 57,000 German aircraft out of the 77,000 the Hitlerites lost at the Soviet-German Front.

Over 200,000 aviators were decorated with orders and medals for courage and valour in battle, 2,420 became Heroes of the Soviet Union, 65 of them received this high title twice, and A. Pokryshkin and I. Kozhedub received it three times. Hundreds of air formations and units were designated guards during the war years, received honorary designations or were awarded combat orders. We have many units which received three, four or even five high governmental awards for the personnel's exploits in battles against the enemy.

It was with a feeling of sincere pride that each military aviator read in "Malaya Zemlya" the lines in which Leonid Il'ich Brezhnev gave high praise to the operations and role of our Air Force in the years of the past war.

Not long ago I had occasion to visit the Triple Order Guards Fighter Regiment imeni Lenin Komsomol. I observed the flights in a supersonic missile platform by Gds Lt Col Ye. Belyakov and Gds Capt V. Petrov. Pilot Belyakov is well known in the Air Force as one of the aces. He has had more than one occasion to demonstrate his art of advanced flying in the most varied problems and exercises. Petrov is still a very young officer, but he too already has the makings of a mature aerial fighter. These aviators have the real Kozhedub stamp, and this is natural, for they serve in a regiment where the front and postwar fame of one of the renowned pilots of our times, Ivan Nikitovich Kozhedub, resounded.

And another example. A squadron of fighter-bombers commanded by military pilot 1st Class Maj N. Zaborovskiy distinguished itself in Exercise Berezina. The pilots of this squadron acted with exceptional precision, daring and boldness. Their strikes were irresistible.

Each combat training day for the Soviet pilots is a vivid confirmation of the succession of grand combat traditions of the Air Force. The winged defenders of the homeland's air borders are learning the art of defeating any enemy, following the example of their predecessors, the frontline heroes. Mass heroism, allegiance to the oath and the Combat Banner, love for their romantic profession, combat comradeship and mutual assistance--these and many other grand traditions of the frontlinesmen even now make up the firm foundation of high combat readiness of the Air Force.

[Question] This training year is a special one for Soviet military personnel. It is the year of the 60th Anniversary of our Armed Forces and the 60th Anniversary of the Lenin Komsomol. How are the military aviators fulfilling their socialist pledges made in honor of these banner dates?

[Answer] CPSU CC Politburo member and USSR Minister of Defense Mar SU D. F. Ustinov points out that Soviet soldiers are obligated to increase political vigilance and the combat readiness of units and ships constantly, viewing this as a most important factor restraining the imperialist aggressors.

Our combat readiness must constantly guarantee an immediate rebuff to any aggressor. All military aviators are working persistently to provide this.

Socialist competition is one of the most effective means for increasing the effectiveness and quality of the aviators' combat training and moral improvement. It has unique features in each military collective, but its essence is the same everywhere. It is precisely expressed in the words of Comrade L. I. Brezhnev: "The strength and effectiveness of socialist competition at the present stage does not lie in individual achievements or records, even the highest ones, but in the fact that each collective works without laggards, precisely and cohesively."

In the past training year--the jubilee year of Soviet power--Air Force personnel completely fulfilled all pledges in socialist competition and took a step forward in further increasing combat readiness.

There was successful accomplishment of the very important task of seeing that each combat aircraft is controlled by a military pilot having a high rating. The flight training plan was fully carried out. There was an increase in the overall flying hours, and most important, its quality indicators rose considerably. There was an increase in instrument flying time, in the number of firings against ground targets, in the number of bombings and so on. In short, we see an increase in the effectiveness of each sortie.

These results stem from the selfless labor of military councils, commands, political organs, staffs, all flight and engineer-technical personnel, communicators and rear services specialists of the Air Force.

We cannot help but be gratified, of course, by the specific positive results in air training and in mastery of contemporary combat equipment. But we cannot dwell on what has been achieved. The party teaches us to work better today than yesterday, and better tomorrow than today.

The present year is a banner one for all of us. Each military aviator deeply understands this. Not by chance were heightened socialist pledges made everywhere and widespread competition arose at the initiative of the Red Guards Order of Lenin Twice Red Banner Order of Kutuzov Guards Regiment imeni 50th Anniversary of the USSR.

Things are going well with the military aviators of the Red Banner Helicopter Regiment imeni V. I. Lenin. This renowned regiment is one of the oldest in the Air Force. Its personnel initiated the All-Army socialist competition in honor of the Centennial of the birth of Vladimir Il'ich Lenin. At that time the regiment became outstanding. Since then it has not lost its first place. Outstanding indicators are achieved here each year. And this year the helicopter personnel's results were high in all types of combat training and the regiment was awarded the USSR Minister of Defense Pennant for Courage and Military Valor.

The military aviators are working with a good mood and youthful fervor in the jubilee year. As always, the party members set the example in training and service and in fulfilling socialist pledges. The names of such comrades as military pilot-snipers lieutenant colonels Yu. Alekhin, V. Logvinov, I. Fedorov and O. Dotsenko and Maj Ye. Stepanov, military pilots 1st class lieutenant colonels B. Urmanov, V. Usachev, and Ye. Avedikov, Maj V. Bokach, Capt Yu. Chupakhin and many others are well known in the Air Force. Our youth and our Komsomol personnel strive to emulate them.

The cream of the crop were given the honor of representing the Air Force Komsomol at the 18th Komsomol Congress. Among them were aviation mechanics Pvt Yu. Zlat'yev, Gds Jr Sgt A. Andreyev, Driver Pvt A. Tereshchenko, senior aircraft radio operator WO S. Sergeyev, cadets V. Gorovenko, V. Lastovskiy and V. Lukin, aircraft technician Lt Tech Serv Yu. Izotov, junior pilots senior lieutenants V. Kochnev, L. Kuznetsov and L. Kulik and other comrades. All of them serve in exemplary fashion and lead the Komsomol members and youth in the struggle for high successes in military labor.

At the 9th Komsomol Congress back in 1931 the Komsomol took over sponsorship of the country's Air Force. Thousands of boys and girls fervently responded at that time to the call: "Komsomol member to the aircraft!" The Komsomol's sponsorship of the Air Force has been fruitful. The remarkable young people come into our military schools and troop units.

The widespread patriotic movement of personnel for a foremost formation became a good sign of socialist competition in the jubilee year. The military aviators are full of resolve to see to it that the formation in which they serve is the best in the Air Force and in the Soviet Armed Forces. There is one path to this goal--exemplary fulfillment of all pledges, firm discipline and outstanding air training.

Each time I meet with pilots and navigators, engineers and technicians, and with aviation specialists in troop units, I experience a sense of joy and pride in our remarkable officers, warrant officers, sergeants and privates--people with a high sense of duty who are full of desire to serve the Motherland as she was served by the frontline heroes, as our party teaches, and as commanded by the honorable civilian obligation written in the country's Basic Law, the USSR Constitution.

Commanders, political organs, staffs and party organizations now are directing the personnel's efforts toward further increasing troop combat readiness, improving air training, expertly mastering new aviation equipment and weaponry, fulfilling combat and political training tasks completely and with high quality, and strengthening military discipline. "Each missile, bomb and round into the given target with the first attack"--this rule of the aviators also became the motto of competition for high air training.

The chief emphasis in organizational and political work is placed on increasing the quality, effectiveness and productivity of military labor. This means, as Comrade Leonid Il'ich Brezhnev said at the 18th Congress of the Lenin Komsomol, "working not simply with discipline and diligence, but working conscientiously, skillfully and productively; and working beautifully so that the others respect you for your work, and you have respect in yourself."

Combat maturity ripens and the wings of courageous Soviet fighting airmen become stronger in the classrooms, at the airfields and in stratospheric flights. Brought up by the Communist Party and true to its Leninist banner, the military aviators vigilantly and reliably guard our Soviet skies.

Col Gen Moroz Interview

Moscow KRYL'YA RODINY in Russian No 8, Aug 78 pp 2-3

[Interview of Col Gen Avn I. M. Moroz, member of military council, chief of political directorate of Air Force, Hero of Soviet Union, by a correspondent of the journal KRYL'YA RODINY: "Constant Readiness, the Highest Training"]

[Text] [Question] This year the country is celebrating Aviation Day for the 45th time. In his speech at the 18th Congress of the Lenin Komsomol, CPSU CC General Secretary, Chairman of the Presidium of the USSR Supreme Soviet Comrade Leonid Il'ich Brezhnev gave high praise to our armed defenders of the Motherland, including the military aviators. Comrade General, what is most characteristic of the modern development of the Air Force?

[Answer] The Air Force is a component of all our Armed Forces. Together with the Army and Navy, it went down a heroic combat and military path and made a worthy contribution to the victory over the enemies of the socialist homeland. It continues exemplary performance of its honorable mission as assigned by the people, the Communist Party and the government of guarding the achievements of the Great October and the peaceful creative labor of the builders of communism. The aviators, as well as personnel of the other branches and arms of the USSR Armed Forces, are honing their combat readiness selflessly and with patriotic inspiration--a readiness guaranteeing, as demanded by the USSR Constitution, an immediate rebuff to any aggressor. The military aviators fully understand the primary and immutable truth--the more effective combat training is, the higher its quality and results and, consequently, the higher the combat readiness and combat effectiveness of the Air Force. Constant combat readiness forms from things large and small, from a multitude of elements. It is the fruit of strenuous military labor by commanders, political officers and all personnel. It also represents high ideological conditioning, real expertise in mastering sophisticated combat equipment, faultless military discipline, efficiency and the highest vigilance when performing service.

Combat readiness is forged on the airfields, in the classrooms and in the sky. The soldier constantly thinks about it in minutes of leisure as well.

What is typical of the present stage of development of the country's aviation, including the air force? Above all, wide use of the achievements of the scientific-technical revolution. Our Air Force possesses first-rate combat equipment--sophisticated aircraft and helicopters for the most diverse purposes; very precise radio-electronic sighting and navigation instruments; and sophisticated combat systems. In short, it possesses everything necessary to exert significant influence on the achievement of decisive success in defeating an aggressor. The excellent technical outfitting of Soviet aviation, which is at the level of requirements, and the highest combat training of pilots, navigators and all personnel permits accomplishing missions of any importance or complexity at any time of day, in any weather, both independently or in close coordination with other branches of the Armed Forces.

Modern, third-generation aircraft make up the basis of our Air Force combat might.

The continuous and qualitative development of Soviet aviation, as of all the Armed Forces, is the result of the day to day concern by the Communist Party, its Central Committee, the Politburo and personally of CPSU CC General Secretary, Chairman of the Presidium of the USSR Supreme Soviet, Comrade Leonid Il'ich Brezhnev in strengthening the Motherland's defensive might.

The Soviet Union is a peaceloving country, and it threatens no one. We are the most resolute enemies of wars and of the arms race. The party and government are doing everything to place a firm barrier once and for all in the path of the endless build-up of ever newer means of mass destruction. Together with the fraternal socialist states, the USSR tirelessly struggles for peace and detente and for friendship and businesslike cooperation among nations. The great Lenin bequeathed us this peaceloving policy. And if we are concerned for the growth and improvement in the country's and the armed forces' defensive potential, then we are forced to do this by the imperialist gentlemen themselves. It is they who are fanning tensions and developing plans for unleashing a new world war with the stubbornness of maniacs.

Speaking in the Pacific Fleet on 7 April 1978, Leonid Il'ich Brezhnev said: "We are improving our defenses for one purpose: to defend reliably the achievements of the Great October and to safeguard firmly the peaceful labor of Soviet citizens and of our friends and allies. Personnel of the Soviet Army and Navy serve this noble purpose."

[Question] Ivan Mikhaylovich, you belong to the generation of pilots and political officers who passed through the crucible of the Great Patriotic War. You wear on your uniform the stars of a Hero of the Soviet Union. Many books and memoirs have been written about the mass heroism, courage and expertise which Soviet pilots showed in fierce engagements with fascist invaders. But the young people are always greatly interested in tales by veterans about the heroic deeds of those who defended the freedom and independence of the Motherland and defeated a strong and crafty enemy. Could you also say a few words?

[Answer] Yes, a difficult and, I would say, an important fate befell our generation. We had to withstand a severe test of strength. And we are proud that we worthily performed our duty to the party, the people and our beloved Motherland. Soviet aviators, brought up by the Communist Party and the Lenin Komsomol, defeated the fascist aviation in stubborn and very fierce engagements. The victorious air battles of Soviet pilots at Moscow, in the skies of Stalingrad, over the Kuban' and the Orel-Kursk Bulge, over the Dnepr crossings and the Arctic and in the concluding battles of the spring of 1945 went down in the annals of the Great Patriotic War and in the immortal exploit of our people and the Armed Forces on unfading pages. Our pilots destroyed 57,000 enemy aircraft in the skies and on the airfields.

Together with my combat friends, I also went down the fiery road of the Great Patriotic War.

Soviet aviators showed their complete moral and combat superiority in battles against Hitler's air pirates. Leonid Il'ich Brezhnev told warmly and widely about the grand combat deeds of the courageous eagles of the socialist Soviet homeland in his book, "Malaya Zemlya."

Party and Komsomol members always set examples of valor, expertise, selflessness and steadfastness. They were first into battle and the last to emerge from it.

As a matter of fact, much has been written about the frontline pilots, but we still have many to tell about. The three Garam brothers--Mikhail, Nikolay and Viktor--studied flying expertise together with me at school. The three party members both trained and fought excellently. Mikhail was awarded the title of Hero of the Soviet Union. My countrymen, Grisha Voyna from Dnepropetrovsk and Muscovite Iosif Khrisanov, gave their lives for the Motherland. Lieutenants Chernyavskiy and Chubinidze repeated Gastello's exploit. The heroism and valor were on a mass scale. Each one strived to do his bit to defeat the enemy.

Well-arranged, purposeful party-political work played an enormous and invaluable role in mobilizing personnel to defeat the enemy and in bringing up aviators in a spirit of fiery Soviet patriotism and burning hatred for the invaders. Together with the commanders, party members and political officers cemented the combat ranks of aviators and inspired each one to heroic accomplishments in the name of the Motherland and her freedom and happiness. The political officers reinforced the fiery word to their combat comrades with personal exploits in battles in the flaming skies. Thousands of political officers were decorated with orders for the courage displayed in battles against Hitler's invaders and for skillfully arranged party-political work in a combat situation. Sixteen of the "winged commissars" were given the title Hero of the Soviet Union, among whom were V. Buyanov, S. Kunitsa, V. Matsiyevich, A. Sokolov, G. Taryanik and others. I also received this high title.

[Question] A new and remarkable generation of aviators grew up in the postwar years. What relates today's sentries of the Motherland's air borders with the veterans of past battles and what new qualities distinguish them from their predecessors?

[Answer] Aviators of the seventies are worthy successors of the combat traditions and heroic deeds of their fathers and grandfathers. The baton of courage, valor, expertise, high Soviet patriotism and socialist internationalism is in firm and reliable hands. I often have occasion to be among the pilots, engineers and technicians, chat with them and observe them in action and in work, as they say. What remarkable people they are! A feeling of pride comes over me because there are genuine masters of military affairs and ideologically persuaded, courageous and skilled fighting men in today's ranks of the Motherland's defenders.

Brought up by the Communist Party, the flight and engineer-technical cadres determine the appearance and chief might of modern Soviet aviation and of the Air Force. As those who laid the foundations for our aviation's might and combat glory, today's generation of the country's fighting airmen is ready at any instant to perform its patriotic military duty to the socialist homeland, and if necessary, to give what is most dear--their lives--for the sake of the life and happiness of the people. The country is very familiar with the exploits of Cadet P. Shklyaruk, and pilots B. Kapustin and Yu. Yanov. The patriots' hearts did not waver when each of them boldly and with full awareness headed for the supreme exploit--to death--in order to avert disaster for others.

Grandeur of spirit, communist conviction, patriotism and readiness to perform an exploit--all this merges the veterans and frontlinesmen as one and makes them inseparable with their present replacements.

But of course, today's masters of the mighty missile platforms, bombers and fighters have their own characteristic traits reflecting the times in which they perform service. It is not simply pilots or navigators who now come into Air Force units, but pilot-engineers and navigator-engineers. They receive high engineering knowledge simultaneously with flight training in higher military schools. The general educational and professional training of engineers, technicians, junior aviation specialists, rear services personnel, communications personnel and the personnel of other service subunits has been raised to a new level. Suffice it to say that first-term personnel and warrant officers of Air Force units and subunits all have a secondary education, and many have a secondary special or higher education. The historic socio-economic and cultural transformations which have occurred in the country under the leadership of the Communist Party during years of building a well-developed socialist society are graphically and convincingly portrayed in these distinctive features of the modern aviator.

[Question] Comrade General, what are the successes in combat and political training with which Air Force aviators come to the national holiday--USSR Aviation Day?

[Answer] Well, I will answer this question with great satisfaction. With their military labor, Air Force personnel are making a worthy contribution to accomplishing the tasks assigned by the 25th CPSU Congress for further strengthening and increasing the Motherland's might and defensive potential. Pilots, navigators, engineers, technicians and other specialists are persistently mastering the modern, sophisticated combat equipment entrusted to them. They are mastering the expertise of operating it on the ground and in the air and are learning to get everything out of the equipment which the design and workers' collectives put into its combat and flight specifications.

All personnel of our glorious Air Force are persistently and successfully mastering the most powerful weapon, which never rusts--Marxist-Leninist theory.

Socialist competition has been developed in units and subunits for increasing expertise and mastering combat equipment. As emphasized by USSR Minister of Defense Mar SU D. F. Ustinov, the steady increase in combat readiness of the Armed Forces is a permanent task for Soviet military personnel. As with all personnel of the Army and Navy, aviators regard accomplishment of this task and improvement of their combat expertise with deep understanding and a feeling of high responsibility.

Personnel are carrying out in practice the demand placed on combat training: each missile, bomb and round on the target! There is a steady growth in the number of outstanding subunits and units in the Air Force. Every other military aviator is an otlichnik of combat and political training. There are growing ranks of specialists with the highest qualification, of masters of combat application of aviation equipment and weapons, and of pilots and navigator-snipers. The technicians and junior aviation specialists also are persistently raising their class ratings. Many pilots, navigators, engineers and technicians have been decorated with orders and medals for mastering new equipment and for high achievements in combat training.

As always, the party and Komsomol members are on the right flank in the struggle for constant combat readiness and high training. I could name tens, hundreds or thousands of names. Pilots and party members G. Shchitov, Ye. Avedikov, V. Usachev, Yu. Chupakhin, I. Fedorov and many, many more are known in the Air Force for their art of combat application of aviation technology. The example of the leaders of combat and political training is followed and they are emulated. Party and Komsomol organizations give effective assistance to commanders in propagandizing and disseminating the experience of the right-flank personnel.

The summer training period now is in full swing. This is a time of intensive flying and tactical exercises. Aviators practice tactical techniques and methods of combat operations to the maximum extent. They delve more deeply into the secrets of flying expertise and of missile and bomb attacks against targets.

Party-political work is full of rich content. The memoirs of Comrade Leonid Il'ich Brezhnev, "Malaya Zemlya" and "Vozrozhdeniye" [The Rebirth] have become a powerful means for political and military indoctrination of personnel. These books are full of rich ideological content and the depth of the author's generalizations and reflections. They teach how one must serve his native people, the socialist homeland and the Communist Party, and how one must fulfill patriotic and international obligations in deed. The discussion of Leonid Il'ich's books, which literally became reference books for each aviator, was very enthusiastic in units, subunits and formations.

The Air Force is a young branch. Komsomol organizations make an important contribution to accomplishing tasks of combat training and indoctrination of military aviators. Their work was elevated to a new level and acquired even greater scope and effectiveness during preparations for the 60th Anniversary of the Komsomol.

[Question] What would you like to wish the readers of KRYL'YA RODINY and young people dreaming of the romantic and heroic profession of military pilot, navigator or aviation specialist on the eve of USSR Aviation Day?

[Answer] Your journal is a large-circulation aviation journal of the grand double-order Voluntary Defense Society--USSR DOSAAF. Aviators rightfully regard DOSAAF, as they did at one time Osoaviakhim [Society for Assistance to Defense and the Aviation-Chemical Industry], as their combat friend and assistant. Many soldiers who received initial military-technical or flight training in DOSAAF air clubs or training organizations serve and serve excellently in Air Force units. And in prewar years we pilots almost all received our ticket to the sky on the flying fields of air clubs. Every third pilot who is a hero of the Soviet Union trained in Osoaviakhim.

We are awaiting the young DOSAAF pupils who desire to link their fate with the blue expanses of the fifth ocean and who dream of becoming masters of winged, missile-carrying ships and sentries of the homeland's air borders, to join our combat ranks. They can successfully realize their dreams and desires in the higher aviation schools.

Congratulations on the holiday to you, young friends, journal readers!

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MOTORIZED RIFLE REGIMENT TRAINING RESULTS DESCRIBED

Moscow SOVETSKIY VOIN in Russian No 16, Aug 78 signed to press 28 Jul 78
pp 10-12

[Article by Capt A. Nekrylov: "With the Competition Initiators"]

[Text] Summer storms rumble in Transcarpathia and the sun burns mercilessly on good days. Soldier tunics become impregnated with sweat and salt. Soldier muscles become full of strength.

Back during the winter, motorized riflemen of the best regiment of the Iron Division sounded a call to personnel of the Ground Forces: Continue jubilee competition; make the year of the 60th Anniversary of the Soviet Armed Forces one of shock military labor; struggle even more persistently to implement decisions of the 25th CPSU Congress, for all possible increases in vigilance and combat readiness, for outstanding mastery of weapons and combat equipment and for mastery of the most effective methods of their combat employment."

It is still early to judge the final results of their struggle, but the military routine itself attests to how things are going with competition initiators. The voice of Komsomol initiative resounds at full strength on tactical exercise fields in the classrooms and in the motor pools.

By the Integrated Method

"Use training time with maximum effectiveness and focus primary attention on integrated accomplishment of field training problems and on assuring a uniformity of tactical, technical and weapons training and the high-quality accomplishment of all operational training missions."

This was after one tactical field fire exercise. Sr Sgt Voznyuk had returned from the firing line. He was known as an outstanding marksman, and so everyone was astounded by Yuriy's concern.

"Well, how did it go?" asked one of the young soldiers.

"Excellently. But here is what I was thinking, lads. It would be well for us to improve something in training. You yourselves notice that now when you come up to the prescribed distance from the target, time has already almost elapsed and the target is about to drop. And so you begin to hurry and become nervous. The submachinegun begins to tremble in your hands and what kind of accuracy can you expect?

Jr Sgt Oleg Karpenko asked:

"Just what are you proposing?"

Yuriy answered firmly.

"We have to increase the range of fire. The weapons permit it. On the other hand, it will be possible to aim well, which means to hit for sure." And he added: "And the 'enemy' also will have fewer chances to hit us."

This question was raised at the Komsomol meeting. They discussed it, calculated and reported to the company commander. Sr Lt Novgorodtsev supported the Komsomol members. They tried it out and results surpassed all expectations. The hit accuracy rose, ammunition expenditure dropped and there was a saving in firing time. This was especially important, for in real combat seconds could mean a life.

But now different and more rigid yardsticks were used for the rifleman. He had to learn to see the battlefield, fix targets with the help of his reference points and determine ranges to them. And of course, he had to have an outstanding knowledge of the weapon's capabilities and master it to perfection. In short, it was necessary to use the integrated method to join the soldier's tactical, technical and weapons training into one and teach him to think imaginatively in combat.

The commander was satisfied with his Komsomol assistants. At their initiative, weapons and technical training circles appeared in the subunit and they began to hold technical quizzes, evenings of questions and answers, and competitions for best knowledge of one's weapon and combat equipment. The company showed outstanding results in field training and took first place in the regiment. Now the neighbors are coming here for experience.

The Science of Winning

"Make the regiment a regiment of high class ratings and technical culture. Master weapons and combat equipment to perfection and provide a high fervor in competition for the title of best specialist and for best squad, crew, team, platoon and company. Surpass norms in working with equipment by 15-20 percent."

They say that at one time, a half century ago, an infantryman's training was determined by the degree of his physical endurance and accuracy of firing, and that's all. Well, perhaps there was such a time. Now it is different. For example, one can't fight a great deal today without technical preparedness. Without knowledge of the capabilities of combat vehicles or all the company's weapons, you can't fight a battle. This is axiomatic.

Today motorized riflemen's technical training is at the same level as their weapons training. They study the combat vehicle and weapons in classes, in technical circles and during servicing in the motor pool. And they do it according to how a soldier or the squad as a whole will act in a completely specific combat situation. Each soldier learns to know and understand his maneuver. But this maneuver is very complicated and requires the soldier to perform broad tactical thinking and to have an ability to act quickly, competently, imaginatively and with initiative. The science of winning acquires broad meaning.

Socialist competition for one hundred percent class ratings has begun in the subunit commanded by Sr Lt Viktor Kiyko. Three-fourths of the soldiers pledged to become first or second class specialists.

The class rating indicator is not an impressive figure for an accounting document. It is a specific expression of a soldier's expertise and his ability to win in battle, for the combat effectiveness of the subunit as a whole is formed from the individual training of soldiers.

But what could be done here? The Komsomol members thought a great deal and consulted with the officers. A solution was found: to uplift the role of crew commanders even higher in training the privates. Today's NCO is a highly qualified specialist who has received good knowledge and skills in the training subunit. Now he must be helped to pass on his expertise to subordinates and to rally his crew into a little cohesive combat family.

Sr Lt Kiyko did not feel the Komsomol members' support all at once. Today he is satisfied with his junior commanders. All of them are first-class specialists and have a technical education. And Kiyko even believes that he was a bit lucky.

"All our NCO's are experts in their jobs. Moreover, they are Komsomol activists and work with vigor! You can move mountains with such people. Take our Yuriy Lamentov. Pvt Mitrofanov's firing was not going well, and so he conducted a real investigation until he got to the deep causes. And when he did, he developed an individual training method which was most effective and which considered the soldier's character and will. That is what today's NCO is like!"

It is not hard to understand the commander's joy and pride. But it is also true that such "luck" is a typical feature of our times.

With A Measure of Responsibility

"Each one must take a thrifty businesslike attitude toward military and people's property."

Regimental Komsomol members long ago became convinced that it is not enough to have an outstanding knowledge of weapons and combat equipment and be able to operate it correctly in practice. They have to add awareness and a high measure of responsibility for an assigned job to the knowledge and professional skills, and they instill this sense of responsibility in the most effective manner. For a person of 19 or 20 must understand that he cannot play around with weapons or the combat vehicle.

Private G. Korchevskiy was considered an excellent driver. He knew his business, and it was not everyone who could compete with him. But fame is a delicate thing which must be handled skillfully. People began to notice that the lad's head had been turned by the praise. For this reason his vehicle had to be repaired more often than others, and the overexpenditure of fuel began to grow.

The Komsomol members fussed a great deal with him, but it seemed to be in vain. Then they decided on an extreme measure. At a Komsomol meeting they raised the question pointblank: Could Private Korchevskiy be entrusted with combat equipment further? Many expressed doubt. They suggested asking the commander to place another specialist at the vehicle's controls.

And later, when much time already had passed after this incident, Korchevskiy once admitted to his comrades: "When I was faced with the possibility of losing the APC, I felt for the first time in my life the burden of my comrades' mistrust. It was very painful. I wanted to prove by all means that I could be trusted. And so I took to working for two."

The field of Komsomol concerns. It is broad and boundless. It is troublesome and laborious. But it always calls and beckons fervent hearts because military expertise so necessary for combat readiness is maturing here.

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ACTIVITIES IN THE L'VOV HIGHER MILITARY-POLITICAL SCHOOL

Moscow SOVETSKIY VOIN in Russian No 16, Aug 78 signed to press 28 Jul 78
pp 24-25

[Article by Col N. Stasenko: "L'vov Higher Military-Political"]

[Text] A Difficult and Honorable Matter

The Higher Military-Political School is situated in a picturesque part of the city of L'vov, near the Park imeni Bogdan Khmel'nitskiy. The stern outlines of the main building--a monument of architecture carefully safeguarded by the new generations of its inhabitants--blend well into the overall ensemble of modern structures.

This school with rich combat traditions can be called a school of moral mentors of the Army and Navy youth. Military journalists and cultural enlightenment workers are trained here. After completing higher education and receiving the necessary practical skills in organizational work, the young club chiefs and military newspaper correspondents carry along the inspirational party word and our socialist culture and morals into the broad masses of soldiers.

Frankly speaking, it is not an easy burden, but it is honorable and very important. For "nothing so elevates the individual as an active position in life and an aware attitude toward social obligation, when the unity of word and deed becomes the daily norm of behavior. To develop such a position is a task of moral indoctrination." This task, outlined by the 25th Party Congress, comprises along with the ideological-political and labor indoctrination, the backbone of the entire diverse training of the builder of communism.

And the zealous care by the command element and entire school collective for its graduates becomes understandable. I recently had occasion to observe it with my own eyes: "How are they doing there in their places? Are they coping with matters? Is everything all right with them?" Recently Col Aleksandr Sergeyevich Vinogradov, chief of the political department, was briefing an instructor leaving for on-the-job-training in a troop unit. He repeated his last parting words twice:

"Definitely meet with our graduates and their supervisors. Have a very thoughtful talk. Report the results in much detail, especially if they wish something from us."

Just what causes such concern? Why doesn't it end with those four years during which each commander, political officer and instructor gives his knowledge, his heart and his nerves to his curious and energetic students? Maj Gen Vasiliy Konstantinovich Zinov'yev, head of the school, explained this as follows:

"The very process of moral indoctrination, as you understand, is very complicated. And moreover, we prepare people not only who are personally educated--ideologically conditioned, highly cultured, competent and efficient--but also who are able to give fully to the soldiers that which they themselves received in school. Don't forget that our cadets are yesterday's pupils and first-term soldiers. They must be made into highly qualified specialists with good organizational qualities. For to make people enthusiastic and really arrange their leisure time is not a matter of which everyone is capable. Therefore our commanders, political officers and faculty naturally take care in developing the cadets' individual features in close connection with accomplishment of the main task--scientific substantiation and practical working of programs and training methodology, and investigating the work experience of our graduates in units and aboard ships. And so we keep our fingers on the pulse of life. We have a close look at our graduates at every convenient opportunity, and we listen well to them. Last year we requested the appropriate supervisors in districts to give them their next leave in September and we assembled as many as we could here at school. You know what kind of a practical science conference we had? Priceless! For many of our graduates have become heads of officers' clubs and instructors of mass cultural work--they have something to tell."

The character and meaning of all training and indoctrination work became especially clearer after Col Aleksey Avtonomovich Marchenko, head of the training department, showed a cross-section of the school and interpreted in detail what it meant. It was impossible for me as a veteran of the school who received a ticket to the troublesome but desired officer life back in the war year of 1944, not to be happy to see how far everything had progressed!

Modern training programs are very efficiently planned. It would simply have been impossible for the cadet to master them without such assistance as electronics and automatics, the film-radio-recorder gear, and excellent textbooks and visual aids. Today they are in abundance here for each subject. And the important thing is that all these marvels of modern technology and mechanics which make the training and indoctrination process easier--displays, posters and diagrams--were made by the cadets themselves under the direction of instructors. They themselves draw, write, publish the school's newspaper, POLITRABOTNIK, wall newspapers,

operational newssheets and express bulletins. They themselves arrange concerts and create such ensembles that "they even performed in the Kremlin Palace of Congresses." They themselves give lectures and briefings to city workers and oblast kolkhoz members, and they take part in joint seminars on training programs with students of civilian universities. In short, they do everything themselves. Cadets acquire that very practical (military-labor) experience which young officers sometimes lack.

Here they are rightfully proud of the widely developed scientific work. In just the last four years, 30 persons defended candidate and doctoral dissertations. And today many instructors are preparing to defend them. In particular, among them is a recent graduate, Capt Grigoriy Krivosheya, who has managed to work a bit and gain experience among the troops.

What is gratifying is that not only the instructors are carried away with scientific work. Last year the cadets submitted tens of their own projects to the first elimination round of the All-Union Contest of Student Scientific Projects on a Sociopolitical Topic! In general, though, it is not just a matter of figures. The important thing is that each cadet thus learns to observe life, to choose and generalize facts and draw practical scientific conclusions.

One of Many

Meet MSgt Sasha Tereverko. He is a delegate to the Komsomol Congress--not a bad "visiting card."

Sasha, an officer's son, is a continuer of family tradition. He felt drawn to the printed word while still a private--he wrote his first paragraph for a newspaper in his life about his sergeant, "because I could not help but write about this real friend, comrade and commander." Clearly, if a person cannot help but write, if his heartstrings respond to real life, that is a direct road for him to this school.

As a delegate who has just returned from Moscow, he is invited by the school's subunits, the garrison unit, the Polygraphic Institute, with whose students the cadets have a traditional brotherhood, and by plants. There is a great interest in the congress and in the capital. Moreover, Sasha is an intelligent, erudite and pleasant companion.

We already have been talking with him for several hours in a row about Komsomol initiative in the moral indoctrination of cadets. Sasha strokes his hair and squints his attentive eyes. He is large and sinewy, and entirely focused on the topic of conversation.

"You know, in the first course I and the cultural enlightenment lads often jokingly tried to prove to each other whose work was more important and necessary. As years went by we became wiser and this 'object' of debate

disappeared on its own. We gradually became convinced that with the external difference in our future professions, they have something related and in common. For example, their training program is very interesting: in addition to sociopolitical and military disciplines, there also is painting, architecture, the theater and music. Such knowledge also would not hurt us future newspaper people. I once asked the question at a Komsomol committee: Couldn't we at least work with electives? I was supported. The lads from the cultural enlightenment work department did not remain aloof. They generously helped: some with lesson plans, some with talks and some by organizing meetings with actors, artists and film workers. And without us, they were a bit hard up with wall newspapers and operational newssheets--something we typically have. The mutual help brought the lads of both departments together, the ice of childish alienation melted away without a trace, and we are living as a single school family.

"Now about the moral climate in the collective," continued Sasha after a minute's reflection. "We ourselves first of all have to learn to live side by side with comrades so that later, having become political officers, we can teach this to the privates and seamen. It is no secret that in the first courses one sometimes sees in the lads a dogmatism, moral deafness toward their comrades and conceit. Later in the senior courses all this gradually smooths out, but this is later. And so we Komsomol members work on this. There are talks and briefings on military ethics and the school newspaper POLITRABOTNIK. If that doesn't help, the BOKS goes to work. You don't understand? It is an abbreviation of "Combat Organ of Komsomol Satire. Caricatures, satirical articles, and folk verse. And so you have a new form of moral indoctrination. By the way, as they say, something new is something old which has been completely forgotten."

Sasha is in the third year. Therefore he uses concepts of psychology and pedagogics quite freely and easily, and his speech is persuasive and logical, without external embellishments. By the way, this also is an indicator of culture and indoctrination.

"We cadets also try to use the following method of moral indoctrination. The starting point is that all of us are Komsomol members! In the third and fourth course party members make up a good half or even more. So, as future political workers, let's present our misdeeds for the comrades' discussion. Let's analyze before our comrades the incentives, the essence, consequences and moral expenses. In other words, perform a thorough moral self-analysis according to all rules of our ethics and according to the laws of party conscience. A surprising effect resulted. So much so that we were supported in this initiative by the school's command element, and the training department legalized it as a method."

Sasha was lost in contemplation of the open window.

"Look how beautiful it is! Here is what we think about ethics. Gor'kiy said that esthetics is the ethics of the future. In our school we try to see that this future arrives, at least tomorrow. Can military service be beautiful? And how! The chief purpose of a Soviet soldier is to defend peace with weapons in hand. What could be nobler than that mission! From this comes the moral coloring of military labor."

Sasha speaks with enormous strength of inner conviction. And one senses that he lives it! His convictions are transformed into action. He is an otlichnik and an activist, and in general they say he is a man of duty.

"When we go through the city in formation and sing songs, believe it or not, the passers-by stop and applaud us. Honestly! When we drive out to the field for tactics we try to ensure that the hardships and deprivations of the combat situation do not conceal a person's dignity, and that he washes, shaves and puts his clothing in order on time--this also is a condition of combat success of no small importance! Isn't that so? For the mobile reading room to be attractive in appearance and the operational newssheets not only meaningful, but also externally pleasing. We will begin to teach the soldiers this! Learn esthetics."

We speak a long while yet about the depths of the human soul, about the approach to people and the ability to influence them. And how pleasant it is for us veterans to realize that the new generations understand and accept their new tasks just as thoroughly. They are of our blood, and for this reason they carry the fathers' baton forward confidently.

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INFANTRY ALPINE TRAINING EXERCISE DESCRIBED

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[Article by Engr-Lt Col V. Chepiga, special correspondent of SOVETSKIY VOIN, from the Red Banner Transcaucasus Military District: "If the Mountains Could Only Talk"]

[Text] Toward evening the infantry vehicles moved up to the pass. Now, with the intricate hairpin turns, chasms and benches behind them, how many times have they hurried to take a break, to admire the mountains and to share impressions. But, as is the rule in exercises, new concerns arose: They had to inspect and shelter the vehicles before the onset of darkness, prepare weapons for tomorrow's battle, and finally, set up camp. The cold was already coming from the mountains.

Company commander Lt Rostislav Yakimchuk also took advantage of the remainder of daylight for ground reconnaissance. He set the assembly of platoon commanders in the tent--the "high-mountain headquarters," as the soldiers jokingly called it.

The messengers found Sr Lt Georgiy Sukhomlinov on a rocky shelf where his platoon was situated. Giving instructions to the squad commanders on the move, the senior lieutenant easily clambered upward over the rocks. He almost bumped into officers Rauf Gabdeyev and Viktor Pyatkovskiy on a little spot in front of the tent, and he could not refrain from an exclamation:

"From here you can see the entire disposition as if on the palm of your hand!"

The map helped clear up the tight knot of ridges in the vicinity of the upcoming operational training actions. Then they looked for the most vulnerable places in the "enemy" defenses and... didn't find them. All possible passages--the pass, the river, squeezed by a canyon, and the barely noticeable paths--everything was covered by fire, mined or blocked by obstructions. As Gabdeyev rightfully noted, "an inaccessible fort created by nature and man."

"The mountains will help us," concluded the company commander. The 'enemy' is not expecting an attack, say, on this side. As you can see, there is a vertical wall here."

The company commander's concept was daring and required risk.

"And why not take a risk!" said Sukhomlinov. If Chernov, Yakovenko and Mohammed will do it in the tales, then ..."

"Reliable lads," nodded Yakimchuk. "But we will send two squads with climbing grapplers here," he said, outlining the little blue tongue of the glacier on the map. "They will move over the ice and snow into the 'dead zone' under the very peak and at the necessary moment will support the cliff-scalers by flanking fire."

He ordered Sr Lt Pyatkovskiy:

"Appoint your deputy, Sgt Pakhno, as senior man of the group. You be in my reserve with a squad, take up a position behind this cliff and await the order. Sr Lt Gabdeyev's platoon is to attack on ICV's [infantry combat vehicles]. I will assign the signals."

After releasing the officers, Yakimchuk still studied carefully for some time the approaches to the pass through the binoculars and gazed at the stern towers of the "fort." There was no movement on its peak. He tried to find weapons emplacements, but a cloud which came from who knows where clung to the peak and seemed to be settled there until morning. For some time it was golden in the rays of the setting sun, then gradually faded and became gray and almost leaden. The mist splashed from the valleys and filled the mountains to the very tops. Only the very highest mountain still streamed with transparent light for a long while.

Rostislav Yakimchuk thinks that he has been lucky in service. Not because he commanded a company just two years after completing school--this was achieved by work--but because he ended up in a remarkable mountainous area. He previously had not even thought about the mountains. And suddenly after completing school he was sent to the Red Banner Transcaucasus Military District.

The mountains immediately suited him, and what young, bold person could remain indifferent to the peaks which just by their very existence seemingly cast a challenge to man! And still Rostislav was not so much fascinated by the sporting glory: here he is learning to fight and defend the Motherland under very difficult natural conditions. The soldiers are secretly proud of their commander, who has a sports ranking in alpinism and goes with Maj Vardanyan himself in ascents.

Everyone in the district who is connected with the mountains in one way or another knows Garnik Gigamovich Vardanyan, a USSR master of sport in alpinism. A champion of the Armed Forces and the Soviet Union, he heads the composite district alpinism team. How many district soldiers are obligated to him for their first acquaintance with the mountains and with the techniques of crossing cliffs, snows, canyons and mountain rivers! Everything needed for combat.

And now, in sending off his wards prior to the beginning of the tactical exercise, he said: "It is not in vain that the mountaineers have a saying: In the mountains the one closest to the sky wins. Always try to be above the enemy. In expertise, in ability and in strength of spirit."

Anatoliy Yakovenko sensed through his sleep that someone was shaking him by the shoulder: "Reveille!" But the customary command was given in a whisper and he could not unglue his eyelids all at once. After finally opening his eyes, he saw Vasiliy Chernov, who made an impatient gesture: "Get up. It's time." Anatoliy managed to get out of his sleeping bag, dressed quickly, gathered together the gear and weapon prepared the evening before, and crawled out of the tent. Night still reigned in the gorge. Mountains, constrained by the cold, were still silent. The river, which yesterday had roared and throbbed in the depth of the gorge, had become shallow overnight and now was a thin, bubbling stream. Soldiers assigned to the enveloping detachments were assembling in front of the tents. Shivering from the cold and nervous excitement and joking in undertones, they adjusted each other's safety belts. And here, Sr Lt Sukhomlinov checked reliability of knots. After completing preparations they waited about ten minutes until it became light.

Finally the company commander silently shook Sukhomlinov's hand, looked over the formation carefully and saluted. A quiet command sounded and the area was empty. It began to become light when the detachment moved up to the crest.

It was the first time that Anatoliy Yakovenko and the majority of his comrades in the company had been in such large mountains, and here discoveries awaited them at every step. Well, aren't at least these blue shadows on the mountains and rosy patches of light from the still invisible sun and this pale green sky marvelous?

And how many stories and unsolved mysteries the mountains protect! A front line beyond the clouds passed somewhere near here during the war years. Anatoliy suddenly was struck by the thought that even then, over 35 years ago, there were the very same dawns and these mountains, which had not changed their outlines an iota, heard the voices of fighting men heading to defend the passes of the Caucasus. He carefully gazed at the crest heading for the peak and thought: "Is it here that that very grenade rests?" He caught himself on what he would be repeating over and over in his mind all morning:

Remember, comrade, the white snows,
The graceful forest of Baksan and
the enemy emplacements?
Remember the grenade on the rock crest
And the note in it for the coming days?

It was a pity that Maj Vardanyan was not with them. He probably would know the pass on which the alpine scouts had left the grenade. Perhaps not in this area at all. They said, though, that that detachment had fought in the area around El'brus. There, in February 1943, performing an assignment of the command element of the Transcaucasus Front, they had cleared El'brus of the fascist standards and planted our Soviet flags on its peaks.

The legendary events of those years had become history. One is reminded of them by monuments in the valleys and in the passes and by traces of battles on the mountain slopes. Somewhere on the crest lies a grenade in which, in place of a fuse, the Komsomol scouts inserted a letter to the descendants for whose happiness they were fighting. And a song lives as a memory of those menacing days. There are now few who know that its tune, written even before the war by composer Boris Terent'yev, belonged to another song. Those words were forgotten, but the "Baksanskaya" continues to excite many generations of alpinists.

Prior to the exercise it was heard near the campfire where Lt Yakimchuk's company was situated. The improvised evening began with a contest of operational newssheets dedicated to control problems in scaling cliffs, which largely determined the course of competition in honor of the 60th Anniversary of the Lenin Komsomol. The jury, made up of the entire company, gave the laurel wreath to Nazyr Karimov. In his edition, the editor told warmly about how the comrades helped young soldier Luksen Martirosyan get rid of fear of heights. In the problems Luksen finally covered the entire route as first person in the group. That was a moral victory for the entire platoon.

They began talking about what the mountains give toward instilling boldness and decisiveness. Maj Vardanyan went up to the fire and recalled a few episodes from his alpine practice. The conversation unnoticeably shifted into the wartime past, rich in convincing examples. It was then that Anatoliy Yakovenko heard about the story of creation of the "Baksanskaya," which they in the company had known and loved for a long time. And now, as soon as Viktor Polyakov and Guram Rachvilishvili began to sing to the strumming of guitars, they picked it up in unison: "There where the snow sweeps the paths, where menacing avalanches roar..."

Anatoliy's reminiscences were interrupted by the command "Attention!" The detachment had come up to the most difficult sector. The sun already had risen above the peaks and soon it would illuminate the top of the wall. Then the ascent would become especially dangerous because of possible rockfalls. They had to climb without pitons: They couldn't make noise at the "enemy's" side. They were relying only on the expertise of those in front.

Later the rest would climb up on the suspended ropes. They decided to go in several groups for speed.

The senior lieutenant once again cautioned about observing safety measures.

"Use only rock belays," he added: "And don't engage in unnecessary races. The speed has to be intelligent and sure."

Anatoliy climbed together with Magomed Magomedov. It was not the first time that they had assaulted a height this way in the same group, and they already had studied each other's way of operating well. Now it was so important to achieve automatic coordination, for it was prohibited even to talk--the "enemy" could be behind every cliff.

Anatoliy felt for an appropriate hook and again looked ahead. He didn't look back, for he knew that Magomed was carefully watching his every movement. He was always calm with him and was used to trusting him from the very first days of their acquaintance. Anatoliy was born and grew up in Belaya Tserkov', where there is not a trace of mountains, while Magomed grew up in Makhachkala, still of the Caucasus, which means he was at home in the mountains. And as a matter of fact this black-haired lad confidently learned the wisdom of mountain sciences and served as an example for Anatoliy. And when the latter developed his own techniques, their joint exercises began more to resemble competition. By the way, everyone competed. The competition was distinguished by great fervor and it gripped everyone. The passionate Magomedov, "Company Terkin" Chernov, and the thorough Bogach, a countryman of Anatoliy's. All of them competed and became sincere friends, as they say.

And Bogach--there he was, a rope's distance away, in the words of the alpinists. He was in the same group as Sr Lt Sukhomlinov. The ICV crew headed by Sgt Gasanomzade was on the other side of Anatoliy at full strength. A feeling of warmth rose in Anatoliy's breast: true, reliable comrades were nearby.

But the slopes were becoming steeper. Anatoliy spotted a suitable projection and threw the rope over it. If these had been ordinary exercises, Magomed would have asked loudly: "Is the belay ready?" and after awaiting an answer, he would move confidently forward. But now they conversed with the gestures. Taking in the rope, Anatoliy kept watch on the neighbors out of the corner of his eye. Sukhomlinov and Bogach were crawling up a "chimney"--a narrow vertical fissure. Observing how the officer was seeking a firm ledge to fasten the rope, Anatoliy had the thought that under other circumstances it would be the very time to pound in a piton: the cliffs were badly deteriorated here. Now it was prohibited--they could not make noise. And when he saw that Sr Lt Sukhomlinov gave the sign to Bogach to ascend, he sighed in relief.

But what happened in the next second forced him to stand stock-still. A large slab suddenly began to move at the level of the officer's shoulders--a "suitcase," as the lads would have said--and it began to tilt slowly. Had there been no one below, Sukhomlinov simply would have moved to one side and let the rock go, and the latter would have picked up speed and shattered against the cliffs, rushing downward with a roar. And the echo would not have died down for a long while in the mountains. But the unsuspecting sergeant was continuing to ascend the rope under him. Anatoliy saw Sukhomlinov try first to hold the slab back with one hand, but, split from the monolith perhaps hundreds of years ago, it inexorably inclined its entire mass toward the precipice. Not able to help his commander in any way, Anatoliy was almost ready to shout to the sergeant below: "Rock!" but he realized that the sergeant still had nowhere to go. Then Sukhomlinov moved his other hand to take the rock on his chest. Anatoliy didn't believe his eyes: The officer was holding to the rope with his teeth! "What luck that it is fastened down," thought Anatoliy and he began to signal to Bogach. But the latter himself already sensed something wrong and clambered to his climbing partner like a cat and nodded to him gratefully. A few seconds later, no longer formidable to anyone, the rock rumbled down the "chimney." It was as if the mountains had awaited this: A rockfall rumbled on the next peak, and after it came the thunder of an ice avalanche.

The day had come of age.

Later came the attack. The furious rattle of submachineguns, augmented many times over by the echo, and deafening bursts of grenades. The mountain battle was brief-lived. Everything is decided by the suddenness of the attack and the attacker's daring. Sgt Pakhno's group precisely determined the moment when the defenders were bending all their efforts against the enveloping detachment, and struck from the direction of the glacier.

Lt Yakimchuk saw the crimson banner flutter over the cliffs of the "fort," and he sent off a flare. Then the ICV's moved toward the pass over the road, which had been cleared of mines. The way into the next valley was clear.

Some time later a helicopter hovered over the high-mountain headquarters and the pilot threw down a streamer. Yakimchuk unfolded the note. There were only two words there: "Good lads!" and the signature "Vardanyan."

And the mountains, as before, were silent. If they could only speak, then probably toward evening, when the sun gilded their sharp-tipped peaks, they probably would have sung with satisfaction with the soldiers warming themselves at the campfires:

If necessary, they'll again take up the grenade,
The knife, pistol and submachinegun,
If necessary, they'll again cross the Carpathians
This combat detachment of alpinists.

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FLIGHT SUPPORT TASKS AND CAPABILITIES DISCUSSED

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31 May 78 pp 1-3

[Article by Maj Gen Avn A. Kondioglo: "Aviation Rear Services and Combat Readiness"]

[Text] The summer training period is in full swing. Aviation personnel, just as all Soviet Armed Forces personnel, carrying out their sacred duty defined by the new USSR Constitution, are vigilantly standing guard over the beloved homeland, are tirelessly improving their combat skills, and are increasing the combat readiness of subunits and units.

For the men of the aviation rear services combat readiness is a concrete term. It specifies first and foremost on-schedule performance of complex and diversified tasks pertaining to supply, ground technical services, transport and other types of air combat training support, for today flight training is conducted all year, day and night, in shifts, by subunits and separate groups. Consequently combat readiness of aviation rear services should not only correspond to the combat readiness of flying units but should also promote its further increase.

Large and responsible tasks connected with mastering new, complex aircraft and adoption of effective modes of its combat employment impose increasingly higher demands on the entire rear services support complex of the Air Force, on training and indoctrination of rear services personnel as well as on organization of their life off duty. This is well understood by commanders, political workers, staff officers, party and Komsomol activists of rear services units and subunits. They are doing everything to ensure that in the course of tactical flight and airfield-rear services exercises and in daily combat training enlisted personnel, noncommissioned officers, warrant officers and officers work persistently to improve skills in uninterrupted support of flight operations. And it is not surprising that the majority of tactical flight training exercises in the first period of training were of high quality. A complex and instructive situation was established at these exercises, which demanded of rear services specialists a high level of morale, outstanding skill and enormous physical effort.

These tasks were accomplished most successfully by the personnel of the Independent Airfield Technical Support Battalion under the command of Lt Col V. Ryzhkov. The men of this unit demonstrated excellent march training, skill in fast deployment of subunits and services at another field, and preparedness to begin on schedule aviator combat training support activities. These results were achieved due to adoption of amassed know-how in the process of training and indoctrination of personnel, to effective utilization of socialist competition, as well as to maintenance and observance of strict procedure laid down by regulations in the vehicle areas and on the airfield, a high degree of organization and discipline.

During the present training year much attention in rear services units is being focused on high-quality support of flight operations, without preconditions for air mishaps. An important role in accomplishing this task is played by maintaining runways and other facilities in continuous operating condition, for third-generation aircraft impose higher demands on airfield paved surfaces. One must also bear in mind that the modern airfield is a complex engineering system which contains a flight operations zone, buildings and structures for aircraft preparation and air traffic control, classrooms and simulators for training aircrews, power generating and supply systems, and various surface lines.

Today rear services subunits have at their disposal equipment which makes it possible to ready airfields for flight operations promptly and with excellent quality in all climate zones. In recent years a number of new materials have been developed for minor repairs to runway surfaces. Their service life, durability and strength, however, depend in large measure on organization of airfield maintenance operations and the degree of care and good management shown by all officials.

Keeping runway and taxiway surfaces in good condition is a guarantee of flight operations safety. Therefore exemplary maintenance of these surfaces is a current task which can be formulated as follows: each succeeding flight operations shift should receive an excellently-prepared airfield.

The men of the unit under the command of officer K. Chesnochenko have a solicitous attitude toward airfield maintenance. They continuously change the runway takeoff point and promptly identify areas where damage to the runway surface may occur. Inspecting the runway prior to beginning flight operations, specialists always have repair materials ready at hand and, when necessary, can repair chipping and surface peeling.

The commander of the Independent Airfield Technical Support Battalion and party activists focus the attention of personnel toward ensuring continuous airfield readiness and explain the importance of successful accomplishment of this task. Socialist competition for an excellent performance result every training day is well organized in this battalion. And of course they never forget to commend the top performers. All this increases personnel initiative and creates an atmosphere of businesslike competitiveness at training classes and practice drills. For a number of years now there have

been no preconditions at this airfield for aircraft mishaps due to poor-quality runway preparation for flight operations. The subunit bears the lofty title of excellent.

Such examples are not isolated. The subunit under the command of Capt D. Rakhmatulin is famed for stable results in flight operations support. For a number of years now it has borne the title of excellent. Under difficult weather and climatic conditions the subunit's personnel maintain continuous airfield operations readiness. Considerable credit for this goes to the party and Komsomol organizations, and here is why. They employ a comprehensive approach to personnel training and indoctrination. Following each day of flight operations the commanding officer presents a detailed critique, specifies the socialist competition leaders, reveals shortcomings and points out ways to correct them. The regimental command also gives considerable assistance to the men of the independent airfield technical support battalion in airfield maintenance operations.

One of the principal elements of the combat efficiency of aviation rear services is the daily readiness of special vehicles for flight operations support. The specialists of the motor transport companies under the command of V. Obukhov and N. Kolosov provide high-quality support to flight operations shifts. This is unquestionably promoted by skillful organization of socialist competition and rigorous verification of advance preparation of drivers and special vehicles.

The experience of leading performers indicates that success is determined by selfless and hard work, a high degree of organization and efficiency. And the road to achievement of new performance highs in military labor lies first and foremost through improvement of methods of ideological-political indoctrination of personnel, increase in the awareness and responsibility of all aviation rear services personnel for carrying out their service duty to the homeland.

Of course the state of trucks, tractors and special vehicles is fully dependent on the officers, warrant officers, noncommissioned officers and enlisted personnel who operate and maintain them. In order to ensure that they are in proper operating condition and ready for use, it is essential correctly to perform servicing and routine maintenance. Delayed and poor-quality performance of these operations, particularly on special motor transport vehicles, leads to reduced combat readiness, and during flight operations support -- to motor vehicle breakdowns. Commanders, political workers, party and Komsomol organizations should devote even more attention to prevention of motor vehicle accidents, skilled breaking in of young drivers, and absolute observance of motor vehicle operation and traffic rules.

One must constantly bear in mind that servicing and maintenance is a preventive measure performed in a planned and scheduled manner, not simply after the need for repairs occurs. In order to support flight operations with

excellent quality it is necessary to maintain motor transport and special vehicles in an exemplary manner. This is why it is so important for commanders to be concerned with motor vehicle area services and facilities.

A competition held last year for the best motor pool in the Air Force promoted improvement in facilities and maintenance of ground support equipment for flight operations in continuous operational readiness. During this period personnel performed a large volume of work on motor vehicle facility renovation and updating of visual aids. The best results in the review-competition were achieved by the units in which officers S. Nepomnyashchiy and V. Ryzhkov serve.

Equipping of air-force units with modern combat aircraft is accompanied by an increase in thrust-to-weight ratio and consequently increased fuel consumption. And this dictates the necessity of further improvement in the means and methods of fuel transport, loading, transfer, storage, and fuel quality control. In recent years the equipment and facilities of the fuel and lubricants service have experienced radical changes. A considerable amount of work has been performed to improve centralized systems and pipelines: increasing productivity and rate of fueling fixed-wing and rotary-wing aircraft.

Fuel supply service specialists must keep a close watch on the condition of fuel in fueling aircraft, focusing particular attention on ensuring clean and exemplary maintenance of fuel receiving and dispensing equipment. This responsible task is being successfully accomplished by the men of Capt V. Usin, Sr Lt V. Stepanenko and Capt V. Dundukov. All requisite conditions have been created for correct receiving and dispensing of fuel, the requirements specified in the manual are being fully met, there are no deficiencies in organization of fuel quality control, and fuel storage has been well organized.

The housekeeping services play an important role in flight operations support. Flight operations support is a large and complex aggregate of jobs by all personnel. Hence it is understandable why organization of labor, off-duty time, billeting and feeding of aircrews, engineer-technician personnel and rear services personnel becomes so important.

Flight operations involving modern aircraft demand of aircrews considerable moral-psychological and physical exertion. Therefore special care should be devoted to feeding, prompt and complete supply of clothing and special gear for flight crews and technical personnel, as well as airman living conditions and recreation. Much has been accomplished in recent years. Military posts are becoming transformed, the housing problem is being more successfully resolved, personal services combines are being built, and new mess halls, PX stores and other facilities are going into service. Money and materials are being more rationally and economically expended in the units. Economic work plans are being successfully implemented.

Development and improvement of military housekeeping activities is a responsible task which demands constant attention and innovative activity on the part of commanders, political agencies, staffs, party and Komsomol organizations as well as all personnel. The review-competition held last year in honor of the glorious jubilee of the Great October Socialist Revolution was of great importance for improving unit administration and services. Within a comparatively short period of time personnel of the units and subunits accomplished a large volume of work on planting greenery and improving the appearance of military posts. Commanders, political workers, party and Komsomol organizations sought ways to achieve further improvement in the off-duty lives of airmen and new reserve potential in the development of unit administration and services. However, not all air bases and facilities have yet become exemplary. Some commanders and administrators show little concern about the conditions under which personnel are living. This applies particularly to organization of feeding of enlisted personnel and noncommissioned officers, establishment of exemplary order in enlisted personnel mess halls, bath-laundry services, PX and personal services.

Socialist competition plays an enormous role in the campaign to increase the combat readiness of air units, smooth and coordinated performance by all rear services elements, and for efficiency and high quality of the training and indoctrination process. Its forms change, but its essence remains unchanged, as expressed in a statement by Comrade L. I. Brezhnev: "Today work better than yesterday, tomorrow work better than today.... Better means emphasis on quality, on efficiency...." These points apply in full measure to the activities of aviation rear services subunits.

One of the principal reserve potentials for increasing the efficiency of their work is careful storage and rational utilization of supplies and equipment allocated for support of aviator combat training. Skillful utilization of this reserve potential is a most important task of aviation rear services specialists. It is also necessary to devote the most serious attention to economizing in fuel, motor vehicle use, flight operations ground support facilities, fuel and electricity, as well as a sharp decrease in railroad car idle time for unloading, and proper utilization of buildings and equipment.

All personnel of air units have an interest in successfully accomplishing the complex and responsible tasks of the aviation rear services. Their combat readiness depends on uninterrupted support of combat training on the ground and in the air. In order continuously to improve coordinated action between air and rear services subunits it is necessary to hold exercises, teaching-methods conferences and training classes directly at facilities and airfields.

In the glorious year of the 60th anniversary of the Soviet Armed Forces, the men of the rear services units and establishments of the Air Force will do everything possible to improve the quality of support of flight operations and to improve airman living conditions and services. Consolidating achieved

success in socialist competition, they are fully resolved to complete the training year in a worthy manner, fully to accomplish all tasks and to raise to an even higher level the combat readiness and mobility of aviation rear services subunits.

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ADVANCE FLIGHT TRAINING: DEFINITION AND PURPOSE

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[Article by Maj Gen Avn L. Klochikhin, Honored Military Pilot USSR: "In Advance and Looking to the Future"]

[Text] Ground preflight training occupies a special place within the system of training of air warriors and contains several traditional categories. Recently an additional category began to be adopted in the units -- advance training. We must state that initially the attitude of flight personnel and many leader personnel toward this training category was prejudiced. But time passed, and experience in organization and conduct of this training was amassed.

Modern aircraft and the complexity of flight missions impose high demands on aviator preparedness successfully to accomplish assigned tasks. Frequently they do not have adequate time allocated for preliminary training in order fully to prepare for a flight assignment involving a new drill exercise. Of course the methodology of its conduct is determined primarily by guideline documents. Various objective conditions, however, such as level of preparation of flight personnel, state of training facilities, and experience of aviation commanders, make an imprint.

In addition it frequently happens that each individual interprets in his own way, although the difference is only slight, even a rigidly-regulated action or measure. Obviously for this reason it is very difficult to give rigorously defined recommendations, recipes and advice on organization and conduct of advance training. But it presupposes first and foremost conscious discipline and activeness on the part of commanders, their innovative sharpness and broad latitude for initiative.

In our opinion there is much of interest in the subunits of the unit under the command of sharpshooter pilot Lt Col K. Chesnochenko. Guided in his work by the Leninist thesis that new socialist discipline is "...comradely discipline... discipline of independence and initiative in struggle," he devotes much energy and effort toward ensuring that advance training becomes an inseparable part of ground training of flight personnel and contains a maximum cognitive element.

Advance training in this regiment is subdivided into two stages: first -- preparatory and planning, and second -- training proper. The first stage begins 7 to 10 days prior to the beginning of the new month. The commanding officer assigns a task to his deputy commanders, staff officers and squadron commanders. Commanders of supporting units and the chief of the technical maintenance unit are frequently present when the task is presented, in order to know how and to what extent to ready training facilities for training activities and in what activities they or their subordinates will be directly participating. Thus squadron commanders, headquarters staff and services chiefs receive a precise picture of the character of pilot training.

As in all else, a determining role in organization of advance training is played by the commander. The effectiveness of training classes depends on how purposefully tasks are assigned and how precisely methods of accomplishing the most complex tasks are specified. The following rule has been adopted in the unit: two or three days prior to initiation of advance training, the commander checks readiness of training facilities and approves the instructors' class schedule-outlines. In spite of the fact that Lt Col Chesnochenko specifies when stating the task the purpose, volume and content of advance training for each squadron, he himself conducts classes on the most difficult flight assignments, group exercises or elements being performed for the first time.

The regimental chief of staff works up, together with control pilots, squadron commanders and chiefs of services, a schedule of activities on advance training days, which are incorporated into the unit's monthly calendar plan. Two separate days in succession are scheduled for advance training. The commander and his staff officers are firmly convinced that these are not lost days. When a pilot knows in advance his own mission, those of the aircraft pair, flight, squadron, and unit for the coming month, he has a precise picture of what he will be doing and in what sequence on the next flight operations day and week, and he will prepare purposefully and with interest. The principal goal of advance training is thorough comprehension of forthcoming activities and study of new exercises and points of theory connected with them.

In the unit under discussion, advance training is always conducted following summarization of results, where work accomplished during the past month is analyzed and tasks for the following month are assigned. Thus flight personnel already know in general terms what is to be accomplished. Pilots study concrete tasks and exercises in the course of advance training. On the performance summarization day, in addition to traditional measures, special flight operations safety classes are held. The regimental commander himself spends one hour explaining to the pilots the method of execution of one or two exercises, tactical devices or methods of utilization of the navigation-aiming system for performing some complex task.

Specially-planned advance training days are usually conducted according to the following scheme. On the first day the squadron commander conducts a 2-hour class. He specifies training activities for the coming month for each

pilot. These activities are reflected in the squadron's overall schedule and separately in methods outlines. The commander then discusses how flight activities are to be executed for two or three exercises, which the majority of pilots will be performing for the first time or which may present the greatest difficulty. At these instruction-methods classes the squadron commander, taking his personnel into consideration, states how to perform the flight activity, making extensive use of the blackboard, working-model displays and portable simulators, aircraft and cockpit mock-ups.

We should note that recently some young commanders have formed the opinion that pilots should take down everything in their notebook and draw graphs, as many as possible. Unquestionably it is necessary to draw graphs, to make calculations and take notes. But there should be a rigorous system involved. And this is not the main thing during advance training. The main thing is to form a graphic picture of that which is to be performed, to study, to predict at which stage difficulties may occur and to take measures in advance to deepen one's knowledge and to get set up for a specific job. In this case a briefing by an experienced commander-methods specialist and instructor arouses interest in personnel in the forthcoming flight activities. Graphs, notes and calculations concretize and systematize that which the pilot will be doing directly during training flights. The briefing plays a decisive role in advance training.

Then the flight leaders spend an hour in the same classroom giving individual methods instructions to their pilots, specify requisite literature for preparing for a concrete exercise and give them a schedule of drill activities on the simulator and in the aircraft applicable to each flight assignment. We shall note that in this segment flight leaders tell their subordinates what moral-political and psychological training devices will be utilized in the coming months. As a rule these are special and specific-purpose types of training. Unfortunately this practice is not yet being followed everywhere.

During the time remaining lectures are given for pilots, by squadrons or combined, depending on the situation, group classes are organized, as well as consultation sessions on equipment, aerodynamics, and combat employment, covering the scope of training exercises scheduled for the month. These activities are held in classrooms, on flight lines or in the technical maintenance unit, at communications and rear services facilities. Participants include specialists from the regiment and support units, officers of higher-echelon headquarters and services.

The second day is a day of pilot independent preparation. In the squadron under the command of Military Pilot 1st Class Maj A. Avdeyev, this day is usually scheduled as follows. Pilots study independently for 4 hours. According to the schedule, one flight is in the simulator classroom. The flight leader supervises "flights" and specifies scenario. When one pilot is "flying," the other pilots remain in their seats, continuing independent study. Then the flights change places. Classes on theory are also held on

this day, but as a rule on problems specific to the squadron, that is, depending on what the subunit's pilots will be specifically doing. Major Avdeyev and his deputy, sharpshooter pilot Yu. Voyevodin, are of the opinion that pilots assimilate the material better due to the active form of independent preparation.

We should note that some commanders believe that there is nothing simpler than to organize independent preparation, that all one needs to do is put pilots in a classroom and supply them with literature, teaching aids and diagrams. But that is how personnel study during off-duty hours, on a personal study schedule. Pilot independent preparation is a controlled process. The flight leaders, the squadron commander and his deputy commander actively intervene in the training of their subordinates, Major Voyevodin, for example, helps discuss the operating principle of an aircraft's control system and helps comprehend the logic of combat maneuvers. And at the cockpit mock-up, flight leader Capt A. Popov discusses with the pilots the procedure of distribution of attention by flight mission stages.

The pilots of Capt I. Belov's flight study at other tables. The flight leader constantly gives consultations and monitors the officer's conclusions.

The flight leaders, in individual or group discussions with the pilots, toward the end of independent study verify mastery of the study material. The regimental commander, his staff officers and party political edifice officers continuously monitor advance training.

In the schedule of classes for the second day an hour is specially assigned for checking whether the pilots have mastered the study topics, what practical training they have received on simulators, working-model displays, and in the aircraft cockpit. The regimental commander, his deputy commander, engineers and other specialists take active part in verification according to the unit headquarters plan. Usually they either interview each pilot or ask questions of all of them, as well as checking their note-taking.

Officer-political workers in turn are concerned at the preparatory stage with a high ideological content of classes. For example, at those classes which are devoted to foreign military hardware, the objectives of the military preparations of the imperialist countries and the policy of arms race and increasing military tension are persuasively revealed.

The classes conducted by officers G. Istratov, V. Lupeta, N. Kupriyenko, A. Vasil'yev and others are distinguished by a high degree of party-mindedness, fervent intensity, are well-received by the men and consequently promote an increase in political vigilance and combat readiness.

The experience of this and other units suggests the conclusion that it is advisable to conduct advance training in the last week of the month and definitely 2 days in a row. Of course this is difficult with the existing system of distribution of flight operations days and nights. But Lieutenant Colonel Chesnochenko believes that time can be more intensively utilized

through maximum use of specific-purpose flight operations days. And if it is advisable to observe cyclicity, flight personnel performance skills can be continuously maintained at a high level.

Specific-purpose days presuppose preparing pilots for some one type of training, such as low-level flying or bomb release with a specific type of maneuver. Commanders must bear in mind thereby, particularly young commanders, that advance training cannot be all-encompassing, and preparation of pilots for flight operations does not end with this. It is no substitute for organized pilot independent preparation which is regularly conducted on the basis of personal schedules. Advance training merely promotes a precise understanding of the long-range assignment for the month and establishment of a foundation for accomplishing this assignment, and evokes a need in individuals to prepare persistently and thoroughly for flight activities in the following month. Independent preparation has been and remains the principal type of all pilot preparation for flight activities.

As experience indicates, advance training demands of the regimental commander and his staff exceptionally precise planning, economical and efficient utilization of training time.

In the unit under discussion matters pertaining to improving organization of advance training have been examined time and again in party organizations and at methods council meetings. Sensible suggestions were made in discussion of organization and conduct of advance training of experts in combat utilization. This resulted in valuable recommendations. The party bureau of the squadron in which Capt A. Popov serves as secretary discusses the question of flight leader activeness in improving the quality and effectiveness of pilot independent work in the course of advance training. The regimental commander attended the bureau meeting. After hearing the party members out, he recommended that this matter be brought up at a meeting of the methods council.

The training process is constantly being improved in the subunits of this unit. Commanders and political workers, headquarters staff and directorate officers, Communists and Komsomol members are doing everything they can to consolidate the success achieved in the first period of the jubilee year and to make their contribution toward improving the flying and weapon proficiency of air warriors.

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PROBLEMS IN TRAINING FOR GROUP FLIGHTS DISCUSSED

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[Article by Lt Col V. Dadonov, Military Pilot 1st Class: "Transitioning to Group Flights"]

[Text] Verification of quality of performance of flight activities with the aid of airborne and ground recording equipment has become an inseparable part of pilot flight training. Utilizing objective monitoring means, instructors can spot latent mistakes and errors by pilots in flight, analyze them and elaborate effective preventive measures.

There is an old saying that we should learn from our mistakes. We should learn not only from our mistakes but also from the mistakes of others. It would be even better if there were no mistakes at all. Obviously this should be the principal task for us fliers in the campaign for excellent air proficiency and flight operations safety. But in one way or another errors and mistakes still occur in piloting, navigation, and utilization of aiming-navigation systems. In order that they not be repeated, instructors discuss them with all subunit personnel. And they are correct in doing so, for the cost of a mistake repeated when adverse circumstances converge may be too great. Thus an instructively-conducted critique is a fine school of indoctrination and prevention.

But a mistake made by one pilot in the air does not always become known to others. There are various possible reasons for this: concern for pretense that all is well, a pretense of authority, false embarrassment, etc. But it is precisely these factors which attest first and foremost to the degree of people's awareness of responsibility for a happy outcome to a flight, their degree of mobilization and moral-psychological preparedness to perform tasks with excellent quality and efficiency, without producing conditions ripe for air mishaps. This is why our unit's command and instructor personnel continuously and purposefully instill in the men honesty and truthfulness and a self-critical attitude toward their actions and deeds, successes and shortcomings.

I shall note that on crew-operated heavy aircraft deviations from specified flight conditions are less frequently noted on the ground and in the air, since a crew is involved. Nevertheless such examples do occur.

Once the crews of Sr Lt V. Vasil'yev and A. Drozhalov were taking turns on the same aircraft, flying in the vicinity of the field. The pilots noted that prior to takeoff, takeoff rpm was above normal. They should have immediately reported this abnormality to the controller, taxied back to the ramp and determined the cause of the problem. The pilots, however, made several flights with this aircraft, each time only informing each other about the engine's behavior. Not a word was said to the aircraft's senior technician. It was finally the deciphered MSRP [expansion unknown] tape which showed that the aircraft had taken off with excessive engine rpm. They found the cause immediately. It seems the maximum power button had failed, as a result of which rpm exceeded maximum allowable. The pilots had clearly violated flight operations discipline. This was followed by a serious discussion of honesty and truthfulness, high principles and self-monitoring, and on a solicitous attitude toward equipment being utilized. The young pilots realized that they were at fault. The other aircrews also received a good lesson.

But while a mistake made by a pilot on a single-aircraft flight threatens the safety of only one aircrew, in a group flight it threatens others as well. We must state that flight activities aimed at group precision in the combat formations of various groups constitute one of the most complex types of training for pilots of heavy aircraft.

Maintaining position in formation on a flight lasting several hours, and particularly at night and during maneuvering, requires of the officer piloting the aircraft, as well as all members of the aircrew, constant composure, maximum intensity of mental and physical effort, endurance, a sense of position and fine coordination of movements, in other words all those requisite qualities without which it is impossible successfully to execute a flying mission. And of course the individual features of the crew members, the cohesion of the crew, the ability to understand each other at a single word or gesture -- so-called psychological compatibility -- are clearly manifested in this type of flight training. As experience shows, psychological compatibility plays a role in unifying a fighting unit, in preventing errors and improving flying proficiency.

Many years have passed, but I still recall an incident which took place in our squadron. At a tactical air exercise the crews were assigned the mission of delivering a night attack on a target located at quite some distance from the home field and protected by strong air defense. The bombers took off on schedule, assembled and established a close formation. On this flight, which lasted several hours, it was necessary to change heading and altitude as a group and to fly for an extended time at low altitude. The pilots were compelled to expend considerable energy. The mission was successfully accomplished, however. All aircraft bombed the target precisely.

On approaching the home field at high altitude, the mission leader ordered the formation to break up and initiate landing approach. But the maneuver was executed under difficult conditions of decreasing visibility. And I must state that one very important factor was ignored on the ground when they were organizing the mission -- the fact that the crews would be somewhat in a state of relaxed fatigue following successful accomplishment of the mission.

Maj G. Churilov, for example, flying in formation, failed to notice that the gap and distance had increased between his aircraft and that of the leader. The pilot, correcting his error, increased the angle of bank toward the leader, failed to consider the aircraft's inertia and ended in a different echelon. The leader knew that Churilov was well prepared for formation flight and therefore permitted him to take his position. The unexpected occurred, however, during adjustment to the right echelon. The commander suddenly saw that the wingman's navigation lights were rapidly becoming brighter, and at the same altitude. He sharply pushed the control yoke forward in order to avoid a collision. The crew members were forced against their seat belts. A collision was averted, but the men were left for quite some time with an unpleasant aftertaste.

It was elucidated at the postmission critique that the members of Major Churilov's crew had been reporting to the pilot on the aircraft's position. The pilot frankly admitted that he had become tired during the flight and that in the final stages his reactions had slowed. But his pride and the desire to do everything himself had proven to be greater than his prudence and greater than his sense of responsibility for mission safety.

Such factors as fatigue and pride are sometimes ignored in ground planning an air mission. Although every commander knows that it is necessary to think through everything extremely thoroughly and to consider everything which can have an adverse effect on accomplishment of the assigned mission in the air. Of course it would be wrong to castigate the pilot in this instance and to punish him for lack of discipline or negligence. That is not at all the point. A much better effect is achieved when a pilot's actions are discussed in detail in a calm, businesslike atmosphere, elucidating the actual reasons for errors (they may be of a combined objective and subjective character), and elaborating appropriate measures. A pilot who has committed an error must be kept away from flights involved in this type of training for some time, so that he can settle down and draw correct conclusions from what has happened.

It is a complex matter to teach young pilots to fly in formation in a group of varying density, at different altitudes and at different times of day and night, and this requires certain organizational measures. It seems to us that when training group flying coordination pilots should be brought together into a single group or squadron. It is expedient to train them by the "conference" method. The best-prepared instructors should be chosen for this training, capable of teaching in a methodologically correct manner young

pilots group flying skills. In order to elaborate a uniform method of group flying precision it is best to organize exchange of experience and know-how among instructors, to refine recommendations at a meeting of the methods council and to implement them on commander training flights. It is essential that instructors as a preliminary fly in formation from the left and right seats.

Advance training of young pilots can be very helpful. They must be flawless in their knowledge of piloting procedures in group flight, the features of control during change of formation, safety measures in close and open formations, and they must thoroughly study the requirements of the documents regulating this type of combat training.

During this period the efforts of party-political activists should be aimed at instilling in pilots and other crew members self-discipline and a strong feeling of responsibility for each and every action and for a safe flight, toward creating an attitude of intolerance toward manifestations of carelessness, lack of discipline and all violations of flight regulations. Exchange of know-how produces good results. What is related by a veteran pilot in a calm, relaxed environment, illustrated by examples from his own practical experience, is sometimes remembered better than dry instructions. In addition, pilots respond very strongly to the importance an instructor attaches to a given item, and they correspondingly have the same attitude toward it.

The instructor in turn must know the individual qualities of his subordinates, their habits and proclivities which may be manifested in a group flight. Of course one can thoroughly study one's pupils only in close contact with them, in an atmosphere of mutual understanding, trust and a respectful attitude toward one another.

Practical experience indicates that crew practice drills directly on board their aircraft, at the proper spacings and intervals, are of enormous importance for formation flying. This is definitely a demanding and time-consuming business, but crew members memorize well the mutual placement of parts of the aircraft, projection of the lead aircraft at various intervals and spacings, and assimilate many specific details. Thanks to such training drills our young pilots Sr Lts V. Demidenko, V. Naymushin, V. Malashitskiy, and N. Olenberg comparatively rapidly mastered this category of flight training and are now successfully flying night missions in formation.

Detachment commanders Majors G. Mel'chayev, A. Misnik, A. Alfeyev, and V. S. Shamrov, correctly combining theoretical training with regular practice drills in the air, have succeeded in ensuring that the pilots not only know precisely how an aircraft responds to various control actions but also possess appropriate aircraft control skills. The expended labor has not been in vain. Flight personnel are confidently advancing through the training program and are successfully meeting the socialist pledges made during the year of the glorious jubilee of the Armed Forces.

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FLIGHT TRAINING ON BOARD THE 'KIEV'

Moscow AVIATSIYA I KOSMONAVTIKA in Russian No 7, Jul 78 signed to press
31 May 78 pp 28-29.

[Article by Col A. Khorobrykh: "Vertical Takeoff"]

[Text] The horizon was obscured. It seemed that somewhere out there, in a blue haze with an iridescent dark-green underlayer, the sea and sky merged, and immediately after passing over the shoreline we were suddenly inside an enormous sphere pierced through by the sun's rays. I commented on this visual effect to the man sitting next to me in the helicopter, Honored Military Pilot USSR Maj Gen Avn P. I. Serapionov.

"The boundary between sea and sky," he smiled with meaning, "is situated on the deck of the cruiser 'Kiev.' VTOL aircraft take off from that deck. Today they are having routine training flights."

The "Kiev" greeted us with a dissonance of loudspeaker communications and the measured rhythm of an established routine. I was struck by the following detail: the pilots were wearing dark submariner's service caps.

"A specific feature of service on board ship," they explained to me. "The peaked service cap would be overboard in a minute. Another essential item is special sound-muffling ear protectors...."

They were in the midst of preparations for a vertical takeoff. A low-slung yellow tractor was towing a dark-green aircraft along the spacious deck. Several other aircraft were standing alongside. If it had not been for the foamy wake extending from the cruiser's stern, one might think that all this was taking place not at sea but on a hard-surface airfield on land. But a different observation point had been selected -- practically over the center of the runway.

I scrutinized the aircraft for the umpteenth time. It was an ordinary airplane: fuselage, wings, tail, tricycle landing gear.... Ordnance mounts slung under the wings. But the aircraft possesses unusual performance characteristics: it can take off and land on a helicopter-size pad, but it flies at quite a decent speed for a modern jet aircraft. And all this at full gross weight.

The "Kiev" turned to a new heading.

"No 15 -- start your engines!" the controller commanded.

"Engines on!" the pilot replied.

The engine began thundering its rumbling bass song. It kept increasing in volume, and then abated somewhat. Another few seconds, and a piercing whistle rent the air.

Even from the vantage point of the control room we could see the aircraft begin shaking impatiently. I remember what a pilot told me about what he felt and did during these moments.

The roar of the engines reached a maximum. The aircraft nose raised up slightly and, without rolling forward even a single meter, the aircraft began to climb.

"This one is full profile," said General Serapionov.

"What does that mean?" I asked.

"Full utilization of all combat capabilities," replied Pavel Ivanovich. "The pilots begin with hovering, and not on board ship but on land. Without thorough mastery of this maneuver it is impossible to develop the transition conditions from hovering to horizontal flight."

I recall the history of development of VTOL aircraft. Honored Test Pilot Hero of the Soviet Union Yuriy Garnayev flew this country's first aircraft without wings and rotor (turbolet).

"But the flying capabilities of a VTOL aircraft," stated the general, "were demonstrated at an airshow at Domodedovo by Honored Test Pilot USSR Hero of the Soviet Union Valentin Mukhin."

"No 15, departure...." the operator's voice intruded into our conversation.

The next pilot, having completed his mission, was coming in for a landing. He was precisely maintaining the proper glide angle and rate of descent and was carefully watching heading. Only the ship's deck lay ahead of the aircraft.

The pilot reduced the aircraft's forward speed almost to zero and hovered above the stern. I glanced at the cruiser's speed indication. It had not changed one iota. A high degree of skill is needed in order to land an aircraft weighing several tons onto a moving landing area of limited size!

"Move ahead a little!" the controller ordered. "Cleared to land."

The hovering aircraft confidently moved forward, toward the superstructure where we were standing, rocked its wings and dropped smoothly onto the deck.

PHOTO CAPTIONS

1. p 28. Lts A. Logvinenko (left) and S. Bivzyuk, pilots from the cruiser "Kiev."
2. p 29. Having completed its mission, an aircraft comes in for a landing.

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CIVILIAN DEFENSE TRAINING AND RELATED ACTIVITIES

Decontamination Training in the Ukrainian SSR

Moscow VOYENNNYYE ZNANIYA in Russian No 8, Aug 78 signed to press 7 Jul 78
pp 26-27

[Article by M. Gurvich, CD chief of staff of a motor transport management, city of Chernigov: "Decontamination Team in Operation"]

[Text] The Chernigovkommuntrans Motor Transport Management held a demonstration practical problem for heads of CD courses of a number of oblasts in the Ukraine, practicing the topic "Means and Methods of Decontaminating Terrain, Structures and Equipment and Personal Cleansing." Prior to this activity there was a one-day course for command-supervisory personnel including team commanders held at the facility of rayon CD courses.

I. Mariyenko, director of Chernigovkommuntrans and installation CD chief, directed preparations for the practical problem, as well as the entire training process throughout the year.

Decontamination team personnel were fully equipped with authorized gear: protective masks, respirators, L-1 protective suits, individual chemical defense kits, radiation and chemical survey instruments and exposure monitoring instruments. Four stations for practicing all training problems were set up in a full-scale sector. During the preparatory period an area was especially outfitted for preparation of decontamination solutions and for subsequent draining into a dug-in reservoir. Later elements of the solution preparation station were made in miniature by experts of the motor transport management as an exhibit for the civil defense museum in Kiev.

During the demonstration problem the comrades invited to attend it took pictures of the area so as to set up similar ones at their own installations.

Attention was drawn by the precise organization of the practical demonstration. Before beginning work on the problems, each trainee was placed in specific conditions and knew what he had to do. Thus, the first

decontamination group headed by I. Avdey assembled at the wash area after it performed the task of gas decontamination of the terrain, in readiness to perform the next assignment--decontamination of motor transport. For this purpose supplementary gear was made ahead of time at the repair shops of the motor transport management for all the spraying and washing vehicles--adaptors and collectors for attachment to hoses with nozzles.

Decontamination of the motor transport was conducted in the following order. First the supplementary gear was hooked to the PM-130 spraying and washing vehicles. Then the decontamination solution preparation and delivery group loaded these vehicles and teams began first of all to treat the outer surfaces of motor transport which had been contaminated. The inside of cabs were wiped with rags soaked in decontamination solution.

The techniques and sequence of personal cleansing were demonstrated at the conclusion of the practical problem at a specially equipped area of the full-scale sector.

Each of the four training stations had its own instructor who was trained ahead of time and who had a brief, precise summary of training questions. Trainees were asked to give special attention to observance of safety measures.

Maj Gen Ye. Kuz'menko, deputy CD chief of staff for the Ukraine, critiqued the practical demonstration. He commended problem participants--all personnel of the decontamination team--and especially emphasized the fact that when an installation CD chief takes a state approach to training his formations, then results of their training also are good.

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Medical Aid Team Training

Moscow VOYENNYE ZNANIYA in Russian No 8, Aug 78 signed to press 7 Jul 78
pp 26-27

[Article by Col Med Serv R. Gulyanskiy and I. Shvartsburg, Riga: "With Consideration of the Specific Nature of Installations"]

[Text] Specific experience in training medical aid team members under the new program has been gained in the Latvian SSR. As practice shows, this program is a good basis for general, special and tactical-special training of personnel. It is also well that the program does not shackle initiative. It is an "example." This allows CD medical service staffs to provide supplementary recommendations on the spot to class leaders and installation CD chiefs of staff.

In drawing up a schedule and plans, we recommend giving consideration to the level of preparedness of each medical aid team, its specific purpose or its attachment to the other CD formations. Thus we prepare medical aid teams which are part of composite or rescue detachments or crews primarily to give

first aid in emergencies, accidents or natural disasters, which are most probable under Baltic conditions, as well as to work in centers of mass destruction in coordination with other nonmilitarized formations. The medical aid teams attached to special medical formations--first aid detachments, mobile anti-epidemic detachments or to hospitals, first aid stations or blood transfusion stations--are prepared to operate as part of the corresponding functional subunits.

CD courses of various levels do not remain aloof from training medical aid teams right at the installations. They are concerned with providing medical workers and committees of the Red Cross Society the training methodology depending on the specific nature of installations. For example, there are specific features in the work of medical aid teams at rail and water transport installations, as well as those attached to motorized medical columns or medical evacuation trains. The methodology of giving medical assistance during the evacuation of sick and injured must be worked out in detail for them. Or take the teams which are part of radiation and chemical defense detachments, mobile anti-epidemic detachments or composite detachments. They first of all have to master techniques of assisting with injuries from the strong poisonous substances often used in production.

We do not introduce this differentiated training of medical aid teams all at once, but only after the first year of training. In the second year we make use of time allocated by the program for certain theoretical topics. The program gives us the right to reallocate hours within the limits of one or two topics. For example, we became convinced that if classes under the topic "First Aid for Wounds, Bleeding and Burns" are organized in a methodologically correct manner, then five hours will be required instead of three. Techniques of applying all types of bandages must be studied with special care. This includes the instructor's demonstration of the technique and subsequent practice by medical aid team members. They master ordinary, triangular, Mashtafarov, sling-type, immobilizing and contour bandages, bandages using "retilast" type material and tubular tricot bandages. They examine rules for applying bandages to thermal, radiation and chemical burns and for penetrating wounds of the thorax and stomach. They practice skills of halting bleeding from arteries, veins and capillaries. At the same time we believe that extra hours should not be spent on study of internal bleeding, as provided by the program, since its diagnosis is complicated and there are no means for giving appropriate assistance in the medical bags of the team members. We also increase the time for study of the topic "First Aid for Contusions, Dislocations and Breaks" (three hours instead of two).

The maneuvering of time allows us to examine a number of important issues in more detail than provided by the program, such as: permissible doses of radioactive irradiation; the body's resistance to the effects of radiation; procedure for use and effectiveness of preventive means. Maneuvering of time also gives us an opportunity for supplementary practices. For example, the medical aid team members check the serviceability and fit of protective

masks in a tent gas chamber. While reducing certain theoretical problems somewhat in the second year of training, we increase the time taken to acquire practical skills. For example, students mastered the donning and removal of the special suit, which is omitted in the program.

There has now been an increase in the role of tactical-special training of medical aid teams and stations. An annual tactical-special exercise with each team has become obligatory. Here the entire range of tasks is practiced. Its goal is to assist commanders to increase their tactical competence, and to assist each team member to find his place in practical fulfillment of CD measures with consideration of the specific features of the installation. Unfortunately, in a number of cases this requirement is not being fulfilled in outlying areas, chiefly because specific recommendations for practical workers are lacking in the program and exercise topics are merely enumerated.

As a matter of fact, each exercise conducted outside the integrated installation exercise has to have its own concept and plan worked up and the situation, narrative problems, simulation and logistical support has to be thought through. It is not easy for the physician, let alone the average medical worker acting for the first time as an exercise director, to fulfill all this. Therefore the republic CD staff and courses have developed a textbook on preparing and conducting a tactical-special exercise with a medical aid team. It examines the goals and tasks of each exercise phase and duties of responsible personnel, and it provides specific variants of exercise plans.

In our view, the very purpose of the medical aid team is decisive in selecting an exercise topic. If the team is part of some CD formation (general or special purpose), it is obligated to exercise together with it. Exercises are conducted on the appropriate topic without fail at installations using explosive (flammable) or strong poisonous substances in the technological process. For the rest of the teams we plan the first three topics, making the sequence of their practice in exercises dependent on the actual readiness of the personnel.

The training year concludes with competitions. Demands placed on them now have increased. We approve of the number of guideline articles published in the journal VOYENNYE ZNANIYA in this regard, and wish to see the presently existing "Statute on Competitions of Medical Aid Teams" revised and placed in full conformity with the new program.

There has been a wide practice in the process of training medical aid teams in recent years of using training equipment rather than authorized equipment, and this must be encouraged. But a team must arrive for competition fully equipped and outfitted with authorized gear, and must show the ability to handle it in a check. While supporting the proposal for centralized manufacture of simulation sets for competitions, we believe that for now it is possible, as we do it, to use colored pictures in place of using textual

symptomatology of injuries. This will save time in reading cards and will make it easier to develop skills of confident identification of typical injuries from their external appearance. It is desirable that combined injuries predominate, which will permit training personnel in preliminary medical sorting and the sequence of giving assistance and transporting the injured. It is very important that there be at least 20 actors per medical aid team in each center, of which the greater part are "seriously injured."

In our view, the control time norms must be used considerably more often than as prescribed by the presently existing statute on competitions. To give first aid efficiently means to give it not only with high quality, but also in a timely manner. Such norms have been introduced in our republic for literally every action performed by a team or an individual team member. An overexpenditure of time is punished by penalty points. The very absence of these penalty points is an incentive for swift actions.

High exactingness on the quality of training team members can be maintained to the end only with good methods training of the instructors themselves as well as broad propaganda of uniform views on organizational forms, techniques and methods of giving first aid. To this end the organizers of training for medical aid team members and their commanders must be trained at a well-equipped training facility. In Latvia such a facility has been created at the republic CD courses. Chairmen of the Red Cross Society committees, physician-methodologists, chief and senior judges of competitions and all commanders of medical aid teams have trained here. In addition, special two-day courses are held annually at this facility with physician-methodologists and judges. The department of medical defense work of the CC of the republic Red Cross Society staffs these training groups for the courses.

A special training room at the courses contains materials on organizing medical protection of the populace and textbooks on all sections of the new program. There are full-size modern means of individual medical aid, preventive medicine and treatment, and items of authorized and improvised gear. The equipment of medical aid team members is demonstrated on dummies. A sufficient stockpile of medical training gear has been set up.

Base installations assigned to the courses are used for practical problems in individual topics: the Republic Clinical Hospital imeni P. Stradin' and the Republic Medical-Epidemiological Station. A tactical-special exercise is held in the training compound. A quiz is given by a commission which includes the training group leader and chiefs of the corresponding departments of the republic CD staff and CC of the Red Cross Society of Latvian SSR.

This arrangement allows us to steadily increase the quality of training of medical aid team members.

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Instructions for Evacuation Training

Moscow VOYENNNYYE ZNANIYA in Russian No 8, Aug 78 signed to press 7 Jul 78 p 28

[Article by Col A. Zaytsev: "For Those Who Teach: An Important Method of Protection"]

[Text] Under the program for the topic "Evacuation, Admission and Accommodation of Evacuees," there are training problems for the urban and rural populace separately in addition to those common to both. For example, it is important for city residents to study rules of behavior at an evacuation assembly point, en route and on arrival at the place of accommodation; and to determine what has to be taken along (seasonal clothing and footwear, personal articles, documents, food products); procedures for evacuation of children (with preschool establishments, with schools or with parents); and duties of adults.

Rural residents perform practical study of their duties involving reception and accommodation of city-dwellers being evacuated or dispersed, the procedure for meeting them at the point of destination and at the evacuation receiving point, procedures for putting up arrivals in homes, and for organizing radiation shelters for them. Problems of arranging for schooling of urban pupils at the new location and arranging jobs for adults must be highlighted in particular.

Such a differentiated distribution of training problems assists class leaders in more purposeful planning of their practice.

It is desirable to make wider use of various forms of propaganda such as lectures, discussions and the showing of movies and slide films for going over common problems with both categories of trainees (evacuation and dispersal as one of the methods of defense against mass destruction weapons; features of evacuation on foot and by all means of transportation). As self-training for the class, each trainee can carefully study corresponding sections of the pamphlet "Each Person Must Know and be Capable of This" (pp 30, 38-40). Then a great deal of time will not be required for explanations during the class itself. The director will focus primary attention on practicing trainee actions. Two or three assistants from among them should be prepared for this ahead of time. One will bring in and show documents which must be taken along, another will show gear and personal articles and a third will show the selection of food products. It is particularly important to show the gear, personal articles and selection of food products for parents traveling to the evacuation point with children.

In preparing the class it is recommended that visual training aids be acquired and that a sketch be made of the evacuation assembly point (SEP), the evacuation route and the suburban accommodation point.

After being convinced that all trainees have studied the recommended sections of the pamphlet and know the general principles of evacuation and dispersal, the director explains that the populace not engaged in production or the sphere of services is evacuated according to the territorial principle, i.e., according to place of residence or together with other members of the family.

Using the sketch, he shows where the SEP might be deployed; where and by what time those living in apartments of a given housing-maintenance office (apartment management) are to arrive in case an evacuation is announced; and where they will travel to (to which suburban populated point). The evacuation route is shown at the same time.

As a rule, the locations of evacuation assembly points are chosen near railroad depots and stations, sea and river ports and landings, and major highways.

The evacuation is preceded by notification. Those at work are notified by the administration while the nonworking populace is notified through the housing-maintenance offices and apartment managements.

"Having received instructions for evacuation, you must prepare everything needed for the trip," continues the director, and he asks his assistant to show what personal documents must be taken along (passport, diploma showing completion of a training institution, pension certificate or workbook, certificates of marriage and birth of children). It is also necessary to take money, individual means of protection for respiratory organs and a first aid kit with necessary medicines.

The second assistant demonstrates a suitcase with personal articles. Just what should one take, depending on the method of evacuation and season of year and how are articles best packed? It is very helpful if everyone makes a sample list of necessary articles for himself. A tag is attached to each suitcase (pack) showing the last name and initials of the evacuee, his permanent residence and final evacuation point.

A card showing first name, patronymic and last name, year of birth, place of residence and place of father's or mother's work is placed in the inner pocket of clothing which children are wearing. It is even better to write this information on a piece of white material and sew it to the inside of clothing under the collar. This will help parents quickly find the child in case he has been lost.

A small supply of food products for two or three days should be taken for the trip. It is also desirable to take food products which will not spoil, which occupy little space and which require no special preparation (canned foods, concentrates, dry biscuits, evaporated milk and so on) and a canteen or bottle of water without fail. It is also well to have a pocket knife, matches and flashlight.

The class leader accompanies all this with a demonstration. Then he says that before leaving the apartment it is necessary to shut off the gas and electricity, close water faucets and close the windows and doors.

Evacuees are registered at the evacuation assembly point. Here they are allocated to trains, cars, vehicles and pedestrian columns and are given the time of loading for proceeding to the suburban area.

Then the director explains the procedure for boarding transportation and rules of conduct en route. He points out that it is necessary to help the very old, invalids, sick and parents with children in boarding. Boarding is arranged by senior persons of train cars and vehicles.

Everyone is obligated to observe strictly the established rules en route and to maintain discipline and order. It is not permitted to leave the train car or bus (vehicle) without the knowledge of the senior person.

On arrival at the final destination, debarkation begins only at the command of the train (column) chief. Everyone proceeds to the evacuation receiving point. From here they are sent to resettlement locations.

Evacuees cannot take all articles along. The greater part must be left in the city. People naturally will at first need such necessary items as dishes and articles for sleeping. Here the local residents will help them.

On arriving at the suburban point and having been accommodated in assigned homes, the evacuees immediately begin work of creating radiation shelters and reinforcing their protective features.

In the practical class with rural residents stress is placed on matters of receiving and accommodating evacuees (meeting them, providing them with everything necessary and arranging jobs for them). Specific actions are practiced. Each family must know who is being settled in their home and must provide dishes, bedding and other basic necessities for the arrivals and adapt the cellar or basement as a PRU [radiation shelter] not only for themselves but also for the resettled persons. It is also important to take steps to protect food products and water and to provide individual protective means.

It is the duty of all village residents to give necessary assistance to people who have been forced to leave their homes, to greet them in a friendly manner, surround them with attention and care and share food products with the arrivals, especially during the first days.

The director explains to trainees how it is proposed to organize the work of various shops, laundries, bathhouses, barbershops and shops during this period and how medical services will be provided. He should dwell in particular on the work of schools with consideration for including school-age children who have arrived from the city in the studies and also on how

the problem of jobs for evacuees will be resolved. The latter will replace rural workers who have left for the Army in agricultural and other jobs to the extent of their abilities.

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Material for Radio Broadcasts on CD

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p 29

[Article: "For the Local Radio Broadcast: In An Area of Radioactive Contamination"]

[Text] Each citizen has to ask himself whether or not he is ready to act confidently and properly in response to the signal "Radiation Danger," whether or not he is capable of quickly using individual protective gear, whether or not he knows the procedure for occupying protective structures, and whether or not he has an idea on the regime of protection in an area contaminated by radioactive substances. We will attempt to answer these questions briefly.

Radioactive substances represent an enormous danger to people. True, there are many opportunities not only for reducing, but preventing radiation injuries. The rayon CD staff provides notification as to the beginning of radioactive fallout on the terrain. The "Radiation Danger" signal is given over the radio broadcasting network and it is duplicated by sirens and frequent blows against objects which give off a loud sound.

A territory is not contaminated all at once, but gradually. There is time to take necessary protective steps from the moment the radioactive cloud forms until it approaches.

It is bad if people do not know what they must take along on heading for a protective structure or radiation shelter. Each person must have a protective mask or respirator, a supply of food and water and the basic necessities, especially for children. One should go quickly and in orderly fashion to the protective structures: there must be no crush created at the entrance. Dawdling and panic alike are inadmissible. One must remember that radioactive substances possess "hidden" action and have no external signs--color, odor or taste--at all. One can only detect them on the terrain by instruments which are part of the equipment of civil defense formations.

Those taking shelter themselves keep order in the protective structure. It is prohibited to walk around, make noise or light candles unnecessarily. Individual protective gear must be used in a timely manner. When permission to leave the shelter comes, one must emerge from it wearing protective masks without fail during dry, windy weather; in wet weather it is sufficient to don a respirator, antidust fabric mask or cotton gauze bandage.

The rayon CD staff determines zones of radioactive contamination according to radiation and chemical survey data. Regimes of personal protection are established depending on which zone the terrain falls in.

If an area is in a zone of moderate radioactive contamination, people leave the shelter at the command of CD organs in approximately six hours and go to their homes. It should be noted that enterprises and establishments in this zone do not cease work, but the length of the work shift is cut to four hours. Only after two days can the regime be abolished.

How about in zones of heavy and dangerous radiation? Staying in protective structures is an obligatory measure of protection in the first especially dangerous period. It can last up to three days. Then it is possible to go home, but the danger of injury will remain for another several days and people's stay on exposed terrain should be limited to 3-4 hours a day. In dry weather it is necessary to use individual protective gear.

The time of stay in shelters is increased in some cases to six or more days in the zone of dangerous contamination. But even after going to ordinary facilities it is authorized to leave them only in extreme need and for no more than one hour a day.

The duration of each of the aforementioned periods is updated by civil defense organs according to radiation and observation data. Established regimes for protection of the populace must be followed strictly. To this end it is necessary to have a clear idea of the extent to which the exposure of people in shelters is reduced. On open terrain a person could receive a fatal dose of radiation or one leading to radiation sickness. While the exposure is reduced a hundredfold in a slit trench covered by a 60 cm layer of earth, it will be reduced 100-200 times in earth and wood shelters, 6-7 times in the basement of a wooden house, 20-25 times in the basement of a stone house and two times in the cab of a vehicle or a tractor. There is practically complete protection against radioactive substances in protective structures, shafts and mines.

It is difficult to provide ahead of time for all variants of regimes for personal protection on contaminated territory. Everything will depend on the radiation situation. But one must firmly realize that all objects on exposed terrain will be contaminated. Therefore one must observe caution in moving around. Do not raise dust, don't sit down, don't touch contaminated surfaces or vegetation with the bare hands. And in dry weather wear individual protective gear.

Drinking water can be taken only from a water line or protected wells. During the first 10-12 days one must avoid giving children milk from cows which have grazed on contaminated pastures. It is best to use canned milk or dried milk mixtures.

By having a firm knowledge of the rules of behavior in an area contaminated by radioactive substances and following them strictly, you will protect yourself from injury.

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Vehicles for Decontamination Described

Moscow VOYENNNYYE ZNANIYA in Russian No 8, Aug 78 signed to press 7 Jul 78 pp 30-31

[Article by V. Gaydamak: "For Equipping Formations"]

[Text] As is generally known, technical facilities available in the national economy are used to outfit decontamination formations. For example, there are public utilities vehicles used for cleaning up the territory of cities and populated points and some construction vehicles and instruments. But this equipment is suitable only for urban decontamination crews and groups.

The same formations created in kolkhozes and sovkhozes are outfitted basically with agricultural vehicles used for introducing mineral and organic fertilizer into the soil and for combatting plant pests, and with road construction vehicles (motor scrapers, motor graders, bulldozers) and land improvement vehicles (pumping stations, sprinklers).

We are recommending some of these technical facilities.

There are several methods for gas decontamination and disinfection of the terrain. The most widespread is to spread dry gas decontamination substances on the contaminated terrain and then soak it with water or to spray on gas decontamination solutions. The calcium hypochlorite and other substances used for these purposes usually absorb moisture contained in the air during the process, however, and become lumpy. The substances are unsuitable in this form. What is to be done?

Agriculture uses the ISU-4 pulverizer (Photo 1) [Photo not reproduced] in preparing caked mineral fertilizers for application to the soil. This piece of equipment also is suitable for pulverizing lumpy gas decontamination substances. The pulverizer is mounted on a tractor and is driven from the tractor's power take-off shaft. For operation in depots the pulverizer can be installed with a 7.5 kilowatt electric motor. The pulverizer's hopper holds 0.5 m³. It is capable of processing up to six tons of gas decontamination substances in an hour. It is serviced by one tractor operator and one or two workers.

It is advisable to use the 1-RMG-4 mineral fertilizer spreader (Photo 2) [Photo not reproduced] for spreading dry pulverized gas decontamination substances over contaminated terrain sectors. It is towed, has a single axle, has a capacity up to 4 tons, with a spreading width from 6 to 14 m and maximum application density of 0.6 kg/m². The spreader is coupled with the

YuMZ-6 and "Belarus'" tractors equipped with a hydraulic hook and brake system control. A tractor operator can work 12 hectares in an hour.

Another variant also is possible--the KSA-3 mineral fertilizer and lime spreader on the chassis of the ZIL-MMZ-555 dump truck. It is a removable cab with spreader device (Photo 3) [Photo not reproduced]. It consists of the following basic assemblies: Cab with carrier; proportioning device; spreading and wind protection devices; and drive for working elements which operates from the vehicle's hydraulic system with the help of the MNSh-46 hydraulic motor. The carrier is set in motion from the running wheel of the vehicle's chassis by a roller and three chain drives. Spread width of the gas decontamination substances is 6-10 m, with a maximum application density up to 0.6 kg/m² and a load capacity of 4 tons. Seventeen hectares can be covered in an hour. The KSA-3 is serviced by one driver.

The ARUP-8 pulverized fertilizer truck spreader (Photo 4) [Photo not reproduced] serves as a higher capacity means of transporting, pneumatic discharge and spreading of pulverized fertilizers and lime substances on the surface of the soil. But gas decontamination substances intended for application to contaminated terrain must have a moisture content within limits of the established norm and be well pulverized. The ARUP-8 is a semitrailer tank on the base of the S-927 cement carrier with a pulverizing device coupled with the ZIL-130V1 prime mover.

If wheels with strong tires are mounted on the tank-semitrailer the vehicle's trafficability will improve. We will note that its operating speed is 9-12 km/hr. Application width of gas decontamination substances is 12-14 m, with a load capacity of 8 tons and maximum density of application up to 0.9 kg/m². With a norm of 0.5 kg/m² of gas decontamination substances it is possible to treat 26 hectares in an hour. The RZhT-4 and RZhT-8 liquid organic fertilizer spreaders can be used to spray on solutions of gas decontamination substances. The RZhT-8 (Photo 5) [Photo not reproduced] is a tank-semitrailer with a pressure switching device and vacuum pump. Its load capacity is 8 tons. It has an application width up to 10 m and an operating speed of 10 km/hr, and it is serviced by one driver.

The RZhU-3.6 liquid fertilizer spreader (Photo 6) [Photo not reproduced] is mounted on the chassis of the GAZ-53A vehicle. It is recommended to be used for taking on gas decontamination solutions, transporting them and spraying them on contaminated terrain sectors. Its spray width is up to 8 m with a tank capacity of 3.6 m³, an operating speed of 9 km/hr and an operating pressure in the tank of 0.7 kilogram-force/cm².

Gas decontamination (disinfection) and radioactive decontamination of buildings, equipment and other contaminated objects can be performed by vehicles which use chemical means for protection of plants. They primarily include various types of sprayers.

The ORR-1 "Era-1" pack sprayer (Photo 7) [Photo not reproduced] is best used for gas decontamination of small surfaces in areas inaccessible for treatment by tractor-mounted sprayers. To create a working pressure of 1-3 kilogram-force/cm² in the reservoir it is necessary to work the pump handle 30-40 times a minute. Height of surfaces to be treated is up to 3 m. Reservoir capacity is 12 liters.

The OVKh-14 sprayer with OPKh-14 spraying device (Photo 8) [Photo not reproduced] is used to combat plant pests in cotton growing areas. Application width is up to 12 m, with a capacity of 680 liters in the sprayer tanks, an operating speed of 5 km/hr and a productivity of network of 5.5 hectares per hour.

Towed sprayers also can be used, such as the OVS-A orchard blower sprayer (Photo 9) [Photo not reproduced] and the OVT-1A. The OVS-A has two-way action. It is coupled with the DT-54A, T-74, DT-75 and all versions of the MTZ tractors. Tank capacity is 1,800 liters with a working speed of 7 km/hr. It treats a surface to a height up to 8 m. It is serviced by one tractor operator.

Outfitting CD formations with these machines will broaden their capabilities to decontaminate territory, structures, equipment and other contaminated objects.

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Rapid Shelter Construction Methods

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[Article by M. Katsenel'son, CD chief of staff of a construction trust, Leningrad: "A Trench Became a Shelter"]

[Text] It will be extremely necessary to build quickly fabricated protective structures at the threat of enemy attack. Therefore for several years now our construction trust has been studying the possibilities for most effective accomplishment of this task in a short period of time.

The idea was born in particular of using incomplete zero cycles at construction sites of industrial and civilian housing projects. These are pits and trenches prepared for the construction of buildings and for laying utility lines.

To check the capabilities of our nonmilitarized CD formations in erecting the simplest protective structures, we held a scheduled tactical-special exercise with a composite work mechanization crew. It was directed by V. Davydov, chief engineer of the trust.

For this work we chose a trench dug for laying a heating line at one of the construction sites. After forming up, the composite crew performed a march

there. The march column included truck cranes, bulldozers with pneumatic drive, special vehicles and a mobile workshop.

One of the subunits of this nonmilitarized formation, commanded by V. Pavlov, was assigned the mission of erecting a very simple protective structure, using the prepared trench and construction materials at hand. The commander had a sketch of the shelter in his hands. Tractor operators and assemblers dextrously laid reinforced concrete slabs and panels. The outlines of the shelter could already be seen. Excavator and bulldozer teams covered it with gravel, sand and earth from above. Carpenters worked inside, making seats, sealed doors and steps at the entrance.

Then the shelter was ready. If necessary it can be occupied quickly by workers at the construction site and by residents of nearby homes. Calculations show that a considerable portion of the populace can be provided with protective structures in a short period of time in this manner if the threat of nuclear attack should arise.

Good training led to success of the exercise. Veterans of the Great Patriotic War and of labor were among the participants. In particular, B. Nikulenko, a trailer driver and an outstanding production worker, is a good mentor of the young members of this nonmilitarized formation.

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