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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

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29 May 1973

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (USSR): The Role of Surface Vessels in Combat at Sea

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought." This article identifies the primary missions for naval surface vessels, placing the destruction of enemy strategic attack submarines and carriers first. The future trends for such vessels are said to be in the direction of large antisubmarine vessels already under construction and surface effects vehicles. A considerable increase in the numbers of naval auxiliary vessels would result if the author's thinking is implemented. This article appeared in Issue No. 2 (84) for 1968.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies.

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W. E. Colby
Deputy Director for Operations

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Intelligence Information Special Report

HR70-14

DIRECTORATE OF OPERATIONS

COUNTRY USSR

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DATE OF INFO. Mid-1968

DATE 29 May 1973

SUBJECT

MILITARY THOUGHT (USSR): The Role of Surface Vessels in Combat at Sea

SOURCE Documentary

SUMMARY

The following report is a translation from Russian of an article which appeared in Issue No. 2 (84) for 1968 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought." The author of this article is Rear Admiral I. Sysoyev. He stresses that the primary naval mission in wartime is to destroy aircraft carriers and submarines which can launch nuclear strikes on the USSR. Other missions which he cites are defense against amphibious landings and mines, and protection of friendly lines of communication at sea. He mentions the KASHIN and KYNDA and states that large antisubmarine vessels were already under construction as of the date of his article. Surface effects vehicles are said to be the likely trend for future naval surface vessels, and the author also would like to see construction of considerable numbers of auxiliary naval vessels.

END OF SUMMARY

[redacted] COMMENT:

In 1965 a dissertation by Captain First Rank I. Sysoyev was defended in an article written by B. D. Yakovlev in Military Herald titled "Defense of Dissertations--An Important Element in the Training of Naval Scientific Cadres." Military Thought has been published by the USSR Ministry of Defense in three versions in the past--TOP SECRET, SECRET, and RESTRICTED. There is no information as to whether or not the TOP SECRET version continues to be published. The SECRET version is published three times annually and is distributed down to the level of division commander.

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The Role of Surface Vessels in Combat at Sea

by Rear Admiral I. Sysoyev

The operational training experience of our fleets and their performance in combat service show that our Navy is capable of successfully carrying out its assigned missions. Thus, in a nuclear world war the Navy will participate in the destruction of important objectives on enemy territory, will destroy enemy nuclear missile submarines and carrier strike large units, will interdict shipping in ocean and sea lanes, will protect our own shipping, will carry out amphibious landings and destroy those of the enemy, and will also fulfil many other missions that arise during armed combat at sea.

In peacetime, the interests of Socialist countries necessitate a show of force by our Navy in different parts of the World Ocean for the following reasons: to contain aggressors; to dislodge forces of our probable enemies from areas of developing political tensions; to enforce adherence to fishing and maritime conventions; to protect our fishing and merchant fleets; and to carry out other important tasks.

The fulfilment of the above-mentioned missions requires a powerful, well-balanced Navy* capable of actively operating in all ocean and sea theaters.

At the same time, the role and place of the various arms of forces of the Navy are determined by their capability to fulfil these missions effectively under specific military-political and geographic conditions.

In a nuclear war the main missions of the Navy will be carried out by nuclear submarines and strike aircraft. Therefore, they represent the main arms of the naval forces, and their

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*By a well-balanced Navy we mean one which includes optimum proportions of various arms of forces (submarines, aviation, surface ships, coastal rocket artillery troops, naval infantry) equipped with nuclear and conventional types of weapons, and capable of ensuring the most effective fulfilment of assigned missions.

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development deserves the greatest attention. Also, the fulfilment of a number of important missions in such a war, especially if it begins only with conventional means of destruction, is impossible without a surface fleet which is of sufficient strength and which meets modern combat requirements. This is likewise true for the fulfilment of many missions in peacetime.

Let us examine the special features in the fulfilment of typical missions by the various naval forces and, at the same time, pay particular attention to the role of surface ships.

The destruction of enemy naval strike forces before they can use their weapons is the most important mission of our Navy. The reason for this is that up to 20 U.S. missile submarines (representing 320 ballistic missiles with thermo-nuclear charges) are on continuous combat patrol with readiness to launch in fifteen minutes; and in the very near future the number of patrol submarines may be increased to 22 or 23. Up to ten strike carriers, with more than 1000 nuclear munitions, are deployed by the U.S. and Great Britain in appropriate areas (or, under the pretext of exercises, deploy regularly to areas where deck heavy assault aircraft can take off and land). All these forces can be used to deliver powerful nuclear strikes in a short period of time against the territory of the Socialist commonwealth countries.

As is known, the fulfilment of the mission of interdicting these strikes has been assigned, primarily, to the forces on combat service. And for combat service to be effective it must be conducted constantly and uninterruptedly during peacetime in those areas patrolled by enemy strike groupings, and it must have the capability of locating these groupings and maintaining reliable contact with them.

Of no less importance is the capability of combat service forces to establish independently within the shortest possible time the fact of direct enemy preparations to begin combat actions; or to receive this information immediately from their command, or an order to use their weapons, and thus present determined resistance to the enemy. Aside from this, the effectiveness with which combat service forces fulfil their missions depends on their defensive capabilities, which should enable them to maintain their combat integrity at least until

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they can destroy enemy targets which they have been tracking from the onset of combat actions (i.e., before submarines can launch ballistic missiles or aircraft can take off from carriers in nuclear strikes against our country).

Research carried out at the Naval Academy and in the fleets, as well as the experience of combat service, reveal that the best results in fulfilling combat service missions may be achieved through the combined use of submarines, aircraft, and surface ships. Thus, our torpedo and missile submarines on combat service in the area where the naval strike forces of the probable enemy are located are able to maintain contact with them for a long period of time and deliver powerful torpedo and missile strikes when the war begins. However, so long as they are underwater, they are unable, on their own, to observe the fact of immediate preparation by the enemy to begin combat actions; nor are they able to receive this information immediately from higher command, or orders by radio to use their weapons (transmittal of such orders to submarines can take from several tens of minutes to several hours). Besides, a certain number of submarines on combat service in peacetime will inevitably be detected and will remain under observation by enemy ships and aircraft. Since the enemy will have the initiative at the beginning of combat actions, he may destroy these submarines covertly and without fear of retaliation. In general, our assault aircraft cannot remain constantly in the areas patrolled by carrier strike groups. In case combat actions are started by the enemy, our assault aircraft can deliver strikes against the aircraft carriers only after their aircraft take off. Therefore, when the enemy has the initiative at the beginning of combat actions, his missile submarines and aircraft carriers will be able to expend their entire nuclear combat resources.

To prevent this it is necessary to compensate for all the basic shortcomings inherent in independent operations of submarines and aircraft when performing combat service. This can be achieved only if those surface ships are used for combat service, whose most important positive characteristic is their capability to quickly detect hostile actions, to report them rapidly to higher command, and to deliver powerful strikes against the enemy within the shortest possible time. In addition, surface ships can instantly and readily receive information from higher command concerning the situation, as well as orders to start combat actions (deliver strikes) with either nuclear or conventional weapons. And the surface ships, in turn, are able to

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relay this information and any orders within a few minutes by means of underwater sound communications to submarines, and also issue target designation to them and to aircraft. When located in the same or adjacent areas as submarines performing combat service, surface ships can also interfere with enemy efforts to track and covertly destroy our submarines.

Joint operations by surface ships, submarines, and aircraft can be most successful in the search, tracking, and destruction of enemy nuclear missile submarines. Thus, estimates made at the Naval Academy have shown that the joint use of the above-mentioned antisubmarine forces in combat with nuclear missile submarines is two to three times more effective and economical than when each of them conducts independent operations of its own. There is also substantial evidence of this in the experience gained by the forces of our fleets during combat service.

Surface ships are very suitable as command posts for headquarters in direct control of combat service forces because of their following features: they have advanced means of communication and control on board; they permit direct observations of the situation; they allow the rapid receipt and transmittal of information; and they have facilities on board to readily accommodate such staffs. Therefore, during combat service the staffs of mixed large units are located on surface ships.

Of course, the most important factors in using surface ships for combat service are their durability* under air strikes and their effectiveness in delivering strikes against the enemy.

As is known, the low combat durability of surface ships under air attack was one of the main reasons for the lessening of their role in combat operations at sea during World War II.

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*It must be kept in mind that the requirements for combat durability of surface ships on combat service differ from those during the conduct of combat operations in wartime.

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While on combat service in peacetime, surface ships come in contact with objects which could become targets of strikes. Therefore, their combat durability must ensure, first of all, that their combat effectiveness will be maintained long enough to destroy the objects which were detected and still being tracked. In contrast to the last war, modern ships are equipped with antiaircraft systems which provide them with the necessary durability.*

As to the effectiveness of surface ships in combat against enemy strike forces, it must be kept in mind that one or two Project 58 missile cruisers are enough to effectively defeat an aircraft carrier of a carrier strike group, and one or two large Project 61 antisubmarine ships can defeat a nuclear submarine which has been detected and tracked. Thus, the combat durability of modern surface ships and their strike capabilities ensure the fulfilment of their combat service missions.

Amphibious landings and fire support of troops of a maritime front in both offense and defense represent another important mission of the Navy both in a nuclear war and in a war in which only conventional weapons are used. Modern amphibious landings require an enormous amount of technical equipment. For example, a tactical landing force of one reinforced motorized rifle regiment involves up to 400 items of large military equipment, while an operational-tactical landing force of one reinforced motorized rifle division involves up to 2000 items. Under modern conditions such an amount of technical equipment can be transported and placed on shore only by special landing craft and transport ships. And since the first echelons of the landing force must, as a rule, land on an open beach very quickly, their landing should be carried out in special landing craft with a shallow draft and constructed so that personnel and technical equipment can be quickly disembarked directly on the beach or in the water near the shore.

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*Thus, a strike group made up of one or two Project 58 missile cruisers and two or three large Project 61 antisubmarine ships, or a group of search/strike ships made up of three or four large Project 61 antisubmarine ships each of which has two twin surface-to-air missile systems, can destroy up to a squadron of enemy aircraft in one attack. And the unit of fire of the 32 surface-to-air missiles carried by each ship can repulse eight additional squadron attacks, which is greater than the capability of one carrier strike group. [Project 58 = KYNDA; Project 61 = KASHIN]

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Calculations and the experience gained from exercises show that to transport and land a tactical amphibious force of one reinforced motorized rifle regiment or one regiment of naval infantry on the open beach of the enemy will require 18 to 20 large and medium-size landing craft, while an operational-tactical amphibious force of a reinforced motorized rifle division or a division of naval infantry will require up to 60 to 65 such craft.

Aside from transporting and landing personnel and technical equipment, surface ships must also be used to provide protection for transport and landing means, while at sea and in the landing area, against strikes by a surface, submarine, or air enemy; and also, jointly with the landing troops to breach engineer anti-landing obstacles in the water on the approaches to the landing points and at the water's edge.

The surface ships will also have the responsibility of leading the amphibious landing equipment over broad water obstacles, and they will have a number of other tasks to do as well. For example, just to provide protection for the landing of one reinforced regiment against enemy air and submarine strikes, both at sea and in the area of the landing, and to participate in fire preparation and support of the landing requires up to 30 to 35 ships of different classes; and to land a reinforced division requires up to 60 to 65 such ships.

Thus, surface ships play a very important role in amphibious landings. They will also be extensively used to help furnish fire support for ground troops which are on the offensive or on the defensive on maritime axes.

To fulfil the missions of landing operations and support troops along maritime axes will require a significant number of landing craft and transports; antisubmarine, missile, and gun ships; protecting ships; antimine ships; and rescue and hospital ships.

The protection of our own lines of communication is related to the need to keep them functioning in all maritime theaters, primarily in the north and the Far East where supply by overland means is greatly complicated by inadequate or non-existent roads. Enormous shipments by sea will be required to supply the groupings of ground troops advancing along the coast, and to supply troops landed on islands and those in isolated areas and in remote areas

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of enemy territory. Shipments by sea and ocean will inevitably take place with our allies and countries friendly to us.

Just as in the case of the security provided to amphibious troop crossings, it will likewise be necessary to furnish direct protection for transports and convoys to safeguard maritime lines of communication against enemy attack, and to combat the danger of mines. The principal role in the fulfilment of these tasks belongs to surface ships and aircraft. As a specific example, the direct protection of only a single convoy of six to nine transports against air and submarine enemy strikes will require up to nine to twelve protecting ships.

As can be seen from the above, to maintain sea and ocean lines of communication requires that a fleet have a considerable number of antisubmarine, antimine, and strike ships, protecting ships, and others.

Combat against mines will be of great importance in all maritime theaters of military operations and in internal waterways.

At the present time our probable enemies are paying considerable attention to the development of mine weapons and are conducting extensive training in their use in a future war to immobilize our system of bases, to impede the deployment of our submarines, to damage maritime and river shipping, to set up obstacles for our amphibious landings, etc.

The principal role in combat with the mine danger lies with surface antimine ships. They must carry out minesweeping activities in the areas of naval bases; provide safeguards against mines for the safe deployment and return of our submarines and surface ships, and for our amphibious landings as well; and set up antimine defenses for maritime and river lines of communication.* To

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*Up to 60 antimine ships are required to land an amphibious force the size of a reinforced regiment in a heavily mined area, and up to 90 to land a division. Up to 20 to 25 minesweepers are needed for antimine security of one convoy consisting of six to nine transports and nine to twelve protecting ships. Dozens of antimine ships are needed for combat against a mine threat in the operational zone of a naval base.

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accomplish this it is necessary to have a considerable number of modern antimine ships of different subclasses and types.

Besides the missions just mentioned, there are others which also require extensive use of surface ships. They include: combat against multi-purpose submarines and enemy amphibious landings; disruption of sea communication lines; combat against antisubmarine forces impeding the deployment and recovery of our submarines; destruction of groupings of surface ships on the inland seas and in coastal areas of open sea theaters; combat against sabotage forces and means in areas of our naval bases; laying active and defensive mine barriers; conducting aerial observation from the direction of the sea within the system of the Air Defense of the Country and fleet air defense forces; protection of the merchant and fishing fleets; and many others.

It is also interesting to note that our probable enemies are devoting considerable attention to the development of surface ships of different classes on a level equal to other forces. Thus, during the postwar period a large number of cruisers and destroyers have been re-armed with antiaircraft guided missile systems. An entire series of new ships has been created, equipped with powerful antisubmarine and anti-aircraft weapons. Nuclear-powered ships have been built (the aircraft carrier "Enterprise", the cruiser "Long Beach", the frigates "Bainbridge" and "Truxtun"), and other nuclear-powered surface ships are being planned. Considerable attention is being devoted to the development of landing and antimine ships.

Speaking of surface ships, it is appropriate to mention that during the early years of the postwar period their development was influenced in many respects by the experience of the past war. And, as is known, we fought that war mainly against a continental enemy. Therefore, for the most part our surface ships carried out missions in support of defensive and offensive operations of ground troops and also in support of coastal shipping. Consequently, our navy, particularly the surface ships, was not confronted with the mission of performing combat service in remote sea and ocean areas in peacetime. As a result, surface ships were constructed for operations in limited sea theaters and in the coastal areas of open theaters. Such basic tactical and technical characteristics of old line surface ships as operational range, autonomy, and complement of

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strike and defensive weapons precluded their full effective use during prolonged absences from their bases. This resulted in the comparative evaluation of the role of submarines in the early postwar years.

In a future war against a strong naval enemy we will need (and they are already under construction) large antisubmarine ships, large missile ships designated as strike ships, protecting ships, amphibious landing ships, and several other types. They must have great operational range, be autonomous, and possess sufficient strike and defensive capabilities.

Research shows that the best solution to the problem of sharply increasing operational range and autonomy is to install nuclear propulsion on ships performing combat service. Calculations made at the Naval Academy show that these ships will possess higher combat effectiveness and be more economical than those with conventional propulsion, especially during extended sailings (more than 3 to 3.5 days). The reason this is attainable is that they do not require refueling, which consequently eliminates the need for tankers and protecting forces.

To increase the autonomy of ships and to raise the coefficient of operational effectiveness, it is quite important to have marked improvement in the living and working conditions of the crew, to improve the operational reliability of shipboard machinery and of combat equipment, and to decrease the frequency of repairs. The latter may be achieved, for example, by replacing whole components in short periods of time (so-called component replacement repair).

Comprehensive improvement in the defensive capabilities of ships against the effects of enemy air and submarine strikes is achieved by arming them with more advanced antiaircraft and antisubmarine missile systems, by increasing missile loads, and by equipping the ships with modern means for detecting air and submarine targets. Since it is a very complicated matter to combine effective strike and defensive capabilities on the same ship, it is advisable to install the minimum necessary defensive weapons on large strike and antisubmarine ships and to install powerful air defense and ASW means on protecting ships.

The resolution of the problem of optimum ship displacement is also of very great importance. It is difficult, and

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sometimes even impossible for small ships to achieve the necessary operating range, duration of autonomy, and seaworthiness, and to build up strike and defensive capabilities. Thus, in resolving the problem of optimum displacement of surface ships, the essential problem is to determine what is understood by the concept of large or small displacement?

Research shows that the incorporation of the above-mentioned requirements on ships designated for operations in remote areas is achieved by a displacement between 7,000 to 8,000 tons and 10,000 to 15,000 tons. However, because of burgeoning developments in science and technology, there should be additional comprehensive studies made of the problem of displacement with due consideration given to many new factors not touched upon in this article.

An important factor in the development of surface vessels is the further increase in their speed, which, to a certain extent, can compensate for deficiencies in their defensive capabilities. Higher speeds can make an especially important contribution to an increase in the combat and economic effectiveness of small and medium-size ships of various classes and subclasses.

At the present time, water-displacing* surface ships have already achieved very significant speeds and further increase in their speeds will entail a sharp increase in the output of the propulsion unit and, consequently, in the excessive increase of water displacement. Therefore, a further increase in the speed of ships can be achieved by using new principles of locomotion (for example, on an air cushion or on an air screen) which allow the speed of ships to approach the speed of aircraft.

Calculations show that ships which travel on an air cushion or on an air screen are three to six times more economical than water-displacing ships of similar subclasses. In addition, ships which use the new principles of locomotion have many operational-tactical advantages. They are virtually invulnerable to the submarine threat; they can travel over shallow waters and ice covers; they can avoid confrontations with a strong enemy; they can bypass strongly defended areas during assault landings; and

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*Since the appearance of hydrofoil and air cushion ships, as well as surface effects vehicles, conventional surface ships are now called water-displacing ships.

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they can carry out repeated actions (for example, mine-laying, troop landings, submarine searches "on request," etc.). Therefore, the introduction of new principles of locomotion apparently will be widely used in the near future in the designs of landing, antisubmarine, torpedo, missile, gun, and mine-laying ships.

In conclusion, we shall emphasize once more that the fulfilment of our diverse missions in armed combat at sea calls for a powerful, well-balanced nuclear/missile Navy which includes all types of forces: submarines, aircraft, surface ships, coastal missile-artillery forces, and naval infantry.

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