AD-A130 835 THE 'KRASINA' CLASS: A NEW CRUISER GENERATION OF THE SOVIET UNION(U) NAVAL INTELLIGENCE SUPPORT CENTER WASHINGTON DC TRANSLATION DIV S BREYER 25 MAY 83 NISC-TRANS-7080 1/1

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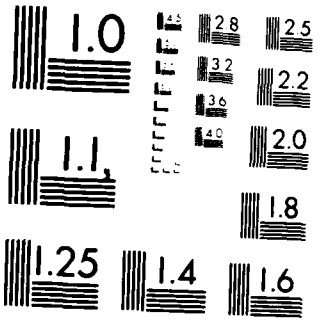

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THE "KRASINA" CLASS: A NEW CRUISER GENERATION OF THE SOVIET UNION

/236

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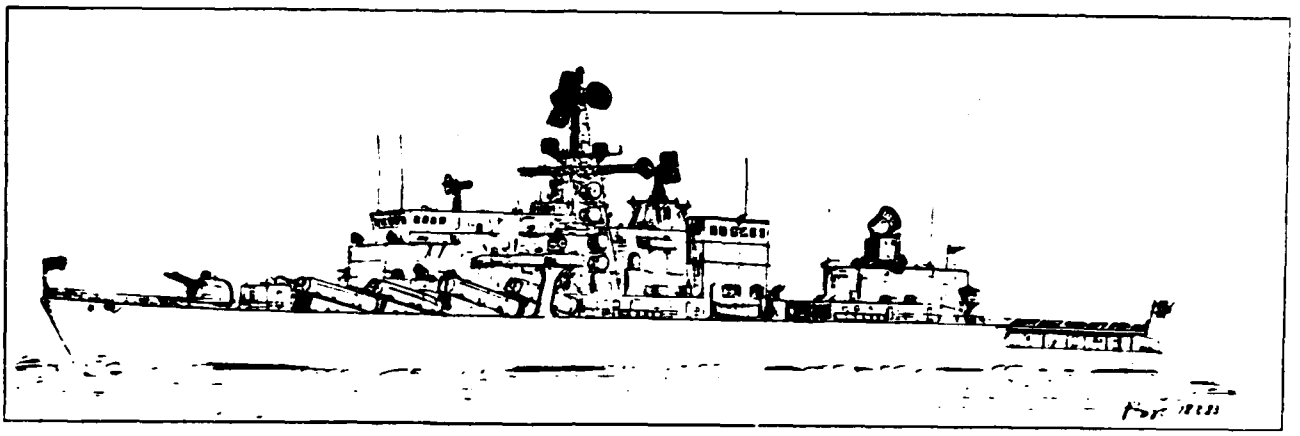
Our regular collaborator for the Warsaw Pact Navies provides an initial analysis with this article of the latest Soviet Cruiser type, whose lead ship is currently completing trials in the Black Sea.



According to the original Western analysis of the current Soviet naval construction program, initially it appeared very probable that the KARA Class, which has been built since the end of the 1960's, would result in ten units. As then in the second half of the 1970's at the 61. Kommunar Shipyard in Nikolaev additional cruiser hulls under construction were detected, these were classified as being hull numbers 8 and 10 of the KARA Class. Only later, towards the beginning of 1980, it was realized that these hulls actually represented a new class; this class was then assigned the NATO (interim) code BLK-COM 1 (Black Sea Combatant), Up to this time and to the present the information published in regard to this class in the international naval annuals has naturally been very limited.* Certainly, in the period thereafter

* Weyers Flottentaschenbuch 1982/83? Displacement 12,500 t, armament SS-N-19, SS-N-14 and SA-N-6 missile weapons systems and artillery; Jane's Fighting Ships 1982-83: Displacement 13,000 t, kength 183 m, armament: SS-N-19 and SA-N-6, 100 mm guns, gas turbine propulsion with 34 kn speed: Flottes de Combat 1982: Displacement 12,000 t, speed 34 kn, armament stated as: SS-N-19 (16 silos?), SA-N-6, SS-N-14, 130 mm guns, helicopters gas turbine propulsion; Combat Fleets of The World 1982: Displacement 12,000 t, length 183 m, speed 34 kn, armament: SS-N-12, SA-N-6 and SS-N-14 missiles an' 130 mm guns.

there were statements by notable naval experts, who regarded the BLK-COM 1 Class as something on the order of mini-KIROV's, and stated that like the spectacular KIROV it is intended to exert oceanic long-term presence, sonewhat in the sense if a "cheap edition" in a linearly reduced form*. Insofar as additional

* For example, Armin Wetterhahn already in the Spring of 1981.

was concerned, there was too little to obtain even a marginally reliable picture of this Class. A gas turbine propulsion system appeared to be certain from the beginning; as an indication for this variously the double stack was cited, and in regard to the main weapon system there was information that

contrary to all previous hypotheses there would not be an under-deck SS-N-19 /236 system as in the KIROV, but an above-deck storage and start container missile system, for which the container supports postioned obliquely forward on the side decks can be noted. This status of information is compatible with the statements in Combat Fleets 1982-83 (v. footnote on p. 1) to the extent that there the SS-N-12 missiles are cited as being the main armament and not the SS-N-19.

Hull number 1 of the new cruiser class left its shipyard for the first time in Spring 1982 for trials; since that time more than a year has elapsed. Therefore, it can be anticipated that it will leave the Black Sea for the first time in the near future, to displace to the Northern Fleet or to the Pacific Fleet, because on the basis of the long-term presence mission of this class, assignment to these fleets can be anticipated. Otherwise than is usually the case - to date the lead ships of Soviet ship classes have usually only been detected when they pass through foreign territorial waters - so many details have been acquired on this class before the usual sequence has occurred, that an initial analysis can be performed. The source for this is the second Pentagon Paper published in the Spring of 1983 on Soviet military power*.

* Soviet Military Power, Second Edition, March 1983; Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402: German edition.... (Spring 1983 by Mönch-Verlagsgruppe.

Principle Data of the "KRASINA" Class (provisional data)

Type displacement	ca. 10,000 t
Operational displacement	ca. 12,500 t
L.o.a.	187.00 m
Length at design water line	ca. 180.00 to 181.00 m
Maximum upper deck width	ca. 20.00 to 22.00 m
Draft (maximum)	ca. 7.50 - 8.00 m
Propulsion system	gas turbine
Propulsive power	ca. 88,300 kW (120,000 HP)
Speed	34 kn
Surface-to-surface missiles	8 x 2 SS-N-12
Ship-to-air missiles	8 x 1 SA-N-6
	2 x 2 SA-N-4?
ASW missiles	1 x 2 SS-N-14
Tube artillery	1 x 2 130 mm
Anti-aircraft artillery	8 x 1 30 mm Gatling, sextuple tubes
Torpedo tubes	?
Helicopters	2 to 3
Electronics	1 TOP SAIL 3D Tadar
	several navigation radars (PALM FROND)
	1 FRONT DOME missile fire control radar
	1 KITE SCREECH gun fire control radar
	4 BASS TILT anti-aircraft fire control radars
	2 POP GROUP missile fire control radars
	2 EYE BOWL missile fire control radars
	EW systems including 8 SIDE GLOBE systems et al.
Sonar equipment	Hull sonar, VDS (Variable Depth Sonar)
Crew	ca. 550 to 600 men

Not only the fact that the new construction series previously designated as /237
is designated in this publication as the "KRASINA" Class (apparently this is a NATO code), but also a drawing was published, which is the first which can has appeared, can be noted. Certainly, the validity is quite problematical, however, in any event it provides - as compared with the vague drawings of the KIEV, KIROV, SOVREMENNYI and UDALOY Classes - a parametric picture of what can be expected for the external architecture and weapons systems, although the latter lacks specific detail. Only the positions of the main missile weapon system and the main artillery are definite, and also the helicopter installations. For all secondary weapons systems - the SS-N-14, SA-N-6, very probably also the SA-N-4 and certainly without any doubt the 30 mm Gatling automatic guns - there are no indications at all in this regard. In order to identify and locate them, a measurement analysis, which however is possible only on a very rough basis currently for the KRASINA Class*.

* "Krasina" is apparently an artificial word; no etymological sense can be developed from it. Neither a geographical nor a personal reference can be derived.

On the basis of the L/B ratio of ca. 9.0 in the KARA Class, it could be assumed that in the new cruiser class the L/B ratio would be the same, or at least very close. With the stated length of 187 m in the new Pentagon Paoer (certainly the l.o.a. is intended with this) there is then a length of 180 to 181 at the water line, so that a width can be deduced, which would be 20 m with some certainty, or perhaps 1 or 2 meters greater. If on the basis of the Pentagon drawing a deck plan is projected and the beam is thereby restricted to 20 meters, then the following becomes apparent:

1. The missile container group - which can easily be projected onto this deck plan on the basis of the stated external dimensions of the KIEV Class - each require a width of ca. 4 meters and reduce the surface required for the center longitudinal superstructures to an extent, that between these and the missile containers there would be only a very small space for the upper deck passage. This might suggest that the upper deck has a width somewhat greater than 20 meters, merely to obtain place for laying the supply tracks which are characteristic for large Soviet naval ships. The fact that these are not single containers but double containers can be noted from the new Pentagon Paper, and the presence of an SA-N-6 weapon system.* There does not

* Page 58:"This ship carries 16 antiship cruise missiles and an advanced vertical launch SAM system of the same type as that on the KIROV Class".

appear to be an on-board reload capability for the missile containers located on the side decks, and such a capability would probably be too complex technically.

2. An upper deck area of approximately 13 x 10 m would be required for the eight SA-N-6 below-deck silo systems - in the basis of the conditions applying on the KIROV. The space in front of the bridge complex would hardly be sufficient for this. Therefore, it has to be assumed that this system is installed in the aftership, immediately behind the stacks which are angled towards the outside (which could also be an indication for the fact that the main engines are positioned side by side and not in sequence, because of which the installation of the SA-N-6 system could be installed). In principle this would correspond to the same configuration as on the KARA Class trials ship AZOV, whose SA-N-6 system is installed between stack and hangar.

3. What could be imagined as being in front of the bridge complex would /237
most probably be an SS-N-14 system, and in a configuration very similar to that in the KIROV, probably consisting of a double container and a magazine located in fromt of it. This area would be sufficient for it (this could a magazine reduced in size).

4. For a possibly present SA-N-4 CIWS ship-to-air missile system there would be positions on both side decks, specifically either directly behind the towe mast or in continuation of the stack.

5. It cannot to date be determined whether or not torpedo tubes and ASW rocket launchers are present, Howeverm a new ASW rocket launcher system is anticipated, which could be the same as the new model, which has been installed for the first time on guided missile destroyers of the UDALOY Class. Because of the absence of information in this regard, it would be inappropriate to venture estimates about the position of such systems.

6. As is customary on the large ships of the KIROV and KIEV Classes, it can alosi be assumed in this class that there are also 8 30 mm Gatling anti-aircraft guns installed: these could be divided equally on the bridge complex and in the hangar area.

7. The hangar is relatively large and therefore appears to be designed for the dimensions of the new Ka-27 HELIX helicopter. The height of the hangar makes it probable that the hangar floor is on the level of the following helipad, so that no elevator is required, which would have to lower the helicopters a deck lower, as is often the case on Soviet naval /238
ships. This also makes it apparent that several helicopters can be accommodated in this hangar, certainly two, possibly three, depending upon how much space is available for helicopters inside the hangar structure.

8. Insofar as the only gun turret on board is concerned, this would probably be the new 130 mm twin turret, which was first installed on the guided missile destroyers of the SOVREMENNYI class and is now installed on the second guided missile cruiser of the KIROV Class and on the guided missile destroyers of the UDALOY class from hull number 3 in place of the 100 mm single turret. Certainly it could be one of the older 76 mm twin turrets, but this appears to be unlikely for several reasons. However, this applies with the qualification that very likely weight problems could have been decisive for the installation of only one 76 mm turret, then in the Pentagon drawing the position of this turret is very far forward, so that the installation of the considerably heavier 130 mm turret could generate problems, because of which the lift (buoyancy) of the foreship could be affected.

9. Insofar as the electronics are concerned, the Pentagon drawing shows the installation positions for four large devices, which are only indicated vaguely. Of these the two center devices can be assigned as the usual surveillance radars, and the radars in front of and behind them as fire control radars. On the highest point, the tower mast, a TOP PAIR can be expected, and in the following stub pyramid a TOP STEER radar, both of which as known are 3D radars. What is installed on the bridge complex suggests in regard to the main artillerly, which is installed in the forward position, a KITE SCREECH radar, while the radar indicated on the hangar complex could be a FRONT DOME radar, the radar which is assigned to the SA-N-6 weapon system. The fact that it could only be this could almost be certain, if it is assumed that the SA-N-6 weapon system is in the immediate vicinity.

10. The return to a steeper (more raked) stem form as shown in the Pentagon drawing suggest that a hull sonar bulge could hardly be expected.

Instead of this, the normal hull sonar appears to be installed. The stern transom with the helipad built over it certainly does not make the presence of a VDS (Variable Depth Sonar) system definite, but also does not make such a system improbable, if it is considered that today in the current Soviet concept a VFS-installation may be associated with an SS-N-14 weapon system*. /238

* The absence if a VDS-installation on the cruisers of the KRESTA II Class, which are equipped with SS-N-14 missiles, should not be regarded as a contradiction in the context of this discussion, because this class was designed in the 1960's, while the new cruiser class was designed a decade later.

How these new constructions are designated in the Soviet nomenclature will have to be determined at a later date. However, their designation is unlikely as BPK = Bolšoj Protivolodočnyi Korabl' (large ASW ships); more likely they are designated as RKR = Raketnyj Krejser (missile cruisers), perhaps even as KU = Korabl' Upravlenyj (command ships). The assumption that these new cruisers have command and control functions, has already been expressed by the American side ("Like the KIROV, the new cruiser will probably function as a command ship)*. Thereby it would be confirmed what

* D.C. Daniel and T.A. Neely, Jr.: Their Navy in 1981 (in: Proceedings, October 1982, p. 109).

was assumed almost from the beginning:That these units were designed as replacements for the aging SVERDLOV cruisers, of which it is known several function as command ships.

To date three of these new constructions have been identified. It was initially regarded as being possible that their number would increase to approximately eight, but on the basis of more recent analyses this is apparently not the case. Additional keels would have had to be laid some time ago; on the basis of the building rate noted to fate, two building berths or building docks are being used, the first of which was available for laying another keel already from Autumn of 1979, after hull Number 1 had been launched. The second building dock became vacant at the turn of the year 1980/81, but no new construction as been noted in either of them. The reasons why this new class of cruiser appears to be limited to the unorthodox number of only three units is to date unknown; however, the relatively long building time of hull number 1 suggest that there are possibily problems, which cannot be easily corrected. Therefore, the decision might have been made to resume further construction after a basically revised design. That this will be realized might be regarded as being certain, because such ships appear to have a definite place in the new form of the Soviet "Forward Displacement", which has been noted since the development of deep-water combat ships.

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