



Russia's Hypersonic missiles in the Arctic

OE Watch Commentary: According to Russian Ministry of Defense news outlet *Krasnaya zvezda*, the 3M-22 Tskirkon anti-ship hypersonic cruise missile (NATO designation SS-S-33), will be tested by Russia's Northern Fleet this year. The new Russian Yasen-class submarine will be the target designator and the new Russian frigate will be the launch vessel for this anti-ship missile.

In other regional missile news, *The Barents Observer*, a Norwegian news portal published in Russian and English, states that the Kh-47M2 Kinzhal hypersonic ballistic missile will be assigned to Arctic MiG-31K Russian aircraft. Russia continues its military buildup in the Arctic with strategic, operational and tactical systems. **End OE Watch Commentary (Grau)**



The Kinzhal air-launched ballistic missile attached to a MiG-31K fighter jet.
Source: mil.ru

“It will carry ... missile, artillery, radio electronic and other types of weaponry. Vertical launchers can be used for the Kalibr-NK universal missile type and the advanced “Tsirkon” hypersonic missiles.”

Source: “Адмиральская мощь «Касатонова» (The Admiral's Power of the 'Kasatonov'),” *Krasnaya zvezda* (Official news source of the Russian Ministry of Defense), 30 December 2020. <http://redstar.ru/admiralskaya-moshh-kasatonova/>

This summer the newest frigate, which is comparable to a destroyer in size, displacement and on-board weaponry, augmented the Northern Fleet. Named in honor of Hero of the Soviet Union, Admiral of the Fleet Vladimir Afanasyevich Kasatonov, who is considered to be one of the fathers of the Soviet nuclear fleet, the ship became the second Project 22350 ship and the first series-produced ship. Designed for combat with both surface as well as submarines, it is able to repel massed air attacks and to conduct strikes on land.

.... Roll stabilizers of a new design were also used, which made the use of all weapon types and equipment possible during Category 5 sea states....Composite construction materials in the ship's superstructure lower the level of the ship's secondary radar field by absorbing and scattering radio waves....The architecture of the superstructure was developed using “Stealth” low-observability technologies. All of this has led to a significant lowering of the radar and optical observability of the frigates.

It will carry ... missile, artillery, radio electronic and other types of weaponry. Vertical launchers can be used for the Kalibr-NK universal missile type and the advanced “Tsirkon” hypersonic missiles. There are 16 launchers on the “Admiral of the Fleet Kasatonov.” All of the missile silos have well-constructed protection. The artillery weaponry of the ship consists of the A-192M automatic 130-mm artillery mount. The munitions inventory allows it to strike coastal, naval and air targets.

The frigate's antisubmarine weapons consist of two quadruple launch complexes for the “Paket-NK” antisubmarine and anti-torpedo defense system, which are side-mounted in the middle portion of the superstructure....

Air defense is provided by the latest “Redut” air defense missile system located on the bow section of the hull. The munitions load consists of 32 medium-range air defense guided missiles and long-range missiles with a firing range of up to 150 kilometers. If necessary the missile cells can contain 128 short-range missiles with a firing radius of up to 15 kilometers...The “Admiral of the Fleet Kasatonov” develops a speed of up to 30 knots and has a sailing range of 4,500 miles. The crew includes 170 sailors plus a 20-man naval infantry subunit....



Continued: Russia's Hypersonic missiles in the Arctic

“Several joint exercises involving the Yasen-class submarines and the Admiral Gorshkov series frigates will take place in 2021. The maneuvers will be conducted within the Northern Fleet training program.”

Source: Roman Kretsul and Aleksei Ramm, “Всё «Ясень»: субмарины наведут «Цирконы» на противника (All Yasen-class submarines will provide the finish for the enemy),” *Izvestia* (Russian daily broadsheet newspaper), 17 December 2020. <https://iz.ru/1100830/roman-kretcul-aleksei-ramm/vse-iasen-submariny-navedut-tcirkony-na-protivnika>

The Defense Ministry intends to conduct a series of naval exercises, during which it plans to rehearse the interaction of the latest surface and submarine ships....Several joint exercises involving the Yasen-class submarines and the Admiral Gorshkov series frigates will take place in 2021. The maneuvers will be conducted within the Northern Fleet training program.

The submarines will detect the hypothetical enemy and provide target designation to the frigates for Tsirkon launches. The frigates will provide cover for the submarines with their long-range anti-aircraft missile systems. Such interaction will make it possible to destroy enemy ships while remaining invisible and absolutely unexpected for the enemy.

Northern Fleet Commander Vice Admiral Aleksandr Moiseyev stated earlier that the Navy is adopting the most modern models of military equipment....Project 22350 frigates will become the main Tsirkon hypersonic missile carriers. The lead ship of this series production will conduct the tests.

Little is known about the characteristics and features of this unparalleled hypersonic missile. Some of the data was presented after the first comprehensive test, which took place on 6 October of 2020. In his report to the President, General Staff Chief Valeriy Gerasimov mentioned the flight range of 450 km, altitude of up to 28 km, 4.5 minutes of time to the target, and the speed of Mach 8. Experts conclude that the missile enters the stratosphere after the launch and stays there in the course of the flight to the target location area then dives to strike the designated enemy target.

Thanks to the missile's operational range and the noiselessness of the Project Yasen submarines, Russian sailors will be able to sink enemy ships without putting themselves at risk. Captain 1st Rank Igor Kurdin, stated...“The Yasen possesses exclusive search capabilities with the aid of a sonar system and other means of detection. At the same time, the submarine itself remains unnoticed. A surface ship is very easy to track. Meanwhile, the submarine can find the target, conduct concealed tracking and transmit target designation to the frigate. It is able to use its weapons at the maximum distance without entering the range of enemy fire assets. At the same time, the Tsirkon missile is such a powerful weapon and such a tough target to defend against that it is virtually guaranteed to destroy any ship.”

Having transmitted the data, the submarine remains hidden from the enemy. After delivering the strike, the submarine's crew determines whether the target is hit and, if necessary, will carry out a repeated strike using its own weapons....

Source: Atle Staalesen, “Northern Fleet prepares deployment of hypersonic missile,” *The Barents Observer* (a Norwegian news portal published in Russian and English), 16 December 2020. <https://thebarentsobserver.com/en/security/2020/12/northern-fleet-prepares-deployment-hypersonic-missile-kinzhal>

The likely coming to the north of the new missile has been known since Chief of the General Staff of the Armed Forces Valery Gerasimov in December 2019 met with 150 military attaches from foreign diplomatic missions. Gerasimov then told his foreign guests that “a network of airports is under development, that will provide an expanded geography for the use of this [missile] complex,” thus hinting that it could be used in the new airfields currently built in the Arctic.

Russia is expanding existing and building new runways at least five locations in its far North, including Rogachevo in Novaya Zemlya, Nagurskoye in Franz Josef Land, Sredniy in Severnaya Zemlya and Kotelny in the New Siberian Islands. MiG-31 fighter jets are used as carriers of the Kinzhal, and the aircraft currently based near Monchegorsk, Kola Peninsula, could be applied....

The new missile system is similar to an air-carried version of the Iskander land-based short-range ballistic missile. However, the deployment of such a missile on an aircraft gives it a more dangerous strategic position. Unlike cruise missiles launched from an aircraft, the Kinzhal goes ballistic. Like other ballistic missiles launched from silos or submarines, going ballistic via space means hypersonic speed.

Test shooting of the Kinzhal took place over the Barents Sea in November 2019. Then the speed of the missile reportedly reached 10 Mach, ten times the speed of sound. The missile can carry both conventional and nuclear warheads. It is believed to have a range of up to 2,000 km and will pose a totally new military challenge for neighboring countries in the Arctic.