GlobalResearch
Center for Research on Globalization

Latest 'Zircon' Test Reaffirms Russian Hypersonic Dominance

By Drago Bosnic
Global Research, December 11, 2024

Region: Russia and FSU
Theme: Militarization and WMD
In-depth Report: UKRAINE REPORT

On December 3, the Russian military demonstrated the true design of its 3M22 "Zircon" hypersonic missile for the first time. The footage shows the weapon being launched from the 3S14 UKSK vertical launch system (VLS). The launch platform was the Russian Navy's "Admiral Gorshkov", a frigate that regularly causes panic in NATO headquarters due to its long-range anti-ship and land-attack capabilities.

The first confirmed combat deployment of the "Zircon" occurred in January last year, although it's very likely it was already used in 2022. In combination with high maneuverability, the missile's maximum speed of Mach 9 (approximately 11,000 km/h) makes it effectively impossible to intercept, especially at very low altitudes, giving enemy forces mere seconds to react.

Information on the maximum range varies significantly, but informed military sources speculate it depends on the "Zircon's" flight profile. According to Army Recognition, when flying low, it can reach up to 500 km, which is in line with basic physics, as the atmosphere is much denser at such altitudes. However, Russian tests have confirmed ranges of up to 1,500-2,000 km, as flying higher greatly extends the missile's reach.

The "Zircon" is a two-stage weapon, with the first being a solid-fuel booster, while a scramjet (supersonic combustion ramjet) engine takes over after the missile has accelerated enough to enable its functioning (ramjets and scramjets can usually operate only after a certain velocity has been attained). It's the world's first and only operational weapon of this type.

The political West is particularly terrified of the "Zircon's" multipurpose capabilities, as it can be launched by various platforms, be it submarines, surface combatants and/or land-based platforms. The missile is also nuclear-capable, meaning that it can be used on a strategic level, although its conventional capabilities are no less concerning to NATO, as its sheer speed and kinetic energy are unmatched by anything the world's most vile racketeering cartel can deploy. As per usual, in order to somehow mask its inferiority (measured in decades at this point) in hypersonic technologies, the political West usually resorts to propaganda to denigrate the "Zircon", primarily by pushing the laughable narrative that the Neo-Nazi junta shot down a third of all "Zircons" fired by the Russian military.

However, not a single remotely informed military source takes such claims seriously. On the contrary, even Western ones admit that "no known technology has been proven to consistently counter hypersonic threats, meaning adversaries could not intercept the Zircon

in real-time, mainly when launched from long distances", as the aforementioned Army Recognition report posits. The publication also admits that "for the United States and NATO, the Zircon represents a new generation of missile technology that could shift the balance of power, particularly in naval operations", as its "extreme speed and the variety of launch platforms it can be deployed from increase its threat to naval assets such as aircraft carriers and destroyers" and that this "could severely limit Western operational reach".

This is certainly true and confirms that NATO militaries are extremely worried about the possibility of such missiles proliferating to sovereigntist nations, a development that could severely limit the political West's ability to conduct unprovoked aggression against the world. It should be noted that the United States, NATO and its other vassals and satellite states are mostly thalassocracies that focus on naval power projection, particularly on massive capital ships (such as aircraft carriers). These large and slow-moving targets are effectively sitting ducks for the Russian Navy which is focusing on deploying much smaller surface combatants such as frigates and corvettes that could carry the "Zircon". Such vessels are far more affordable, while the missile itself gives them a strategic reach.

This asymmetric advantage is very difficult to match, particularly as the political West is decades behind in hypersonic propulsion technologies. Worse yet, any large-scale deployment of a land-based variant of the "Zircon" would also greatly diminish NATO's land warfare capabilities, as the missile could easily target both high-value assets and large troop concentrations.

Its sophisticated guidance systems ensure pinpoint precision even at hypersonic speeds, making such strikes particularly deadly for high-tech opponents. The "Zircon" uses a combination of INS (inertial navigation system) and radar homing to achieve this. As the missile flies at 11,000 km/h, the air pressure in front of it forms a plasma cloud, absorbing radio waves and making it effectively invisible to radar.

This phenomenon, colloquially known as plasma stealth, and its sea-skimming capability, make intercepting an incoming "Zircon" effectively impossible. One downside of plasma stealth is that it greatly diminishes the ability to communicate with the missile, which is one of the many reasons why nobody in the political West has been able to develop a working hypersonic weapon. However, Russian scientists found a way to circumvent this, giving Moscow an unprecedented technological edge, as the "Zircon" is capable of information exchange during flight, allowing it to receive constant updates and adjustments in real-time. This doesn't only ensure pinpoint precision, but it also enables timely retargeting, confirming the claim that the missile can engage moving targets.

The KRN, a Belgrade-based military think tank that gave several fascinating interviews to InfoBRICS, posited that the "Zircon" can be used by existing land-based platforms of the Russian military, specifically the K300P "Bastion-P" coastal defense system. I'm also a long-time member of this organization and we've suggested this was the case years ago. The genius of Russian military specialists becomes all the more apparent when one realizes that the "Zircon" was made to fit not just into the previously mentioned 3S14 VLS, but also the K300P. Back in 2023, along with my KRN colleagues, I had the chance to analyze the size of the P-800 "Oniks" supersonic cruise missile and determined that these missiles fit into identical launchers, both on naval vessels and land-based platforms.

This greatly enhances the "Zircon's" already impressive versatility, making it a highly

flexible weapon with a simultaneous tactical, operational and strategic impact. In addition to the aforementioned naval role, it can also be used in strikes on land-based critical military infrastructure such as command centers, airbases, SAM (surface-to-air missile) and ABM (anti-ballistic missile) systems, army bases and numerous other strategic targets.

It greatly complements Russia's existing hypersonic weapons arsenal, including the "Iskander-M", "Kinzhal" and the latest "Oreshnik" missile systems. It fits perfectly into Moscow's non-nuclear (and nuclear) deterrence policies and has already been used in response to NATO-backed terrorist attacks, giving the perpetrators mere minutes (or seconds in some cases).

*

Click the share button below to email/forward this article to your friends and colleagues. Follow us on Instagram and Twitter and subscribe to our Telegram Channel. Feel free to repost and share widely Global Research articles.

Global Research's Holiday Fundraiser

This article was originally published on InfoBrics.

***Drago Bosnic** is an independent geopolitical and military analyst. He is a regular contributor to Global Research.*

Featured image is from InfoBrics

Comment on Global Research Articles on our Facebook page

Become a Member of Global Research

Articles by: **Drago Bosnic**