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Understanding the Induction of Sarmat

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Introduction

As per a Russian news agency report on September 1, 2023, the Sarmat missile has been formally inducted for combat duty.¹ RS-28 Sarmat has been developed by the Makeyev Design Bureau to replace the R-36 SS-18 'Satan' Intercontinental Ballistic Missile (ICBM). This article talks about the technicalities of the Sarmat missile, how it enhances the Russian security apparatus, and its implications on the New START Treaty (Strategic Arms Reduction Treaty).

Origin of Sarmat

Work on the Sarmat started in the 2000s.² By July 2011, the entire R&D work on Sarmat had been accomplished. The first time the world officially became aware of the news about the deployment of Sarmat was in February 2014. According to a Russian official in February 2014, Sarmat was scheduled for deployment in 2020. In May 2014, another Russian official claimed that Sarmat would be deployed 100 per cent as the Russian nuclear force deterrent in terms of the land vector by 2020. On February 18, 2023, Russia tested the Sarmat ICBM for the second time.

This missile test had failed in terms of the stage separation of Sarmat. It is a very heavy and gigantic ICBM. It is a 35.3-metre-tall, three-staged, liquid-fuelled ICBM with a range of 18000 kms.³ This ICBM is also capable of carrying a hypersonic glide vehicle (HGV) like the Avangard. The Russian Commander, Col. Gen. Sergei Karakayev, said that Sarmat had been developed to carry a number of Avangard HGVs.⁴ However, its deployment has been delayed, and now, in 2023, it has been finally deployed as stated⁵ by President Putin during the one-year anniversary of the Ukraine War.

Sarmat could be a missile with Multiple Independently Targetable Re-entry Vehicles (MIRV). It is claimed that up to ten MIRV nuclear warheads could be mated to the missile.⁶ President Putin also claimed that Sarmat would be a propulsion vehicle for the Avangard HGV. Thus, when the Avangard HGV is mounted, Sarmat will act as a booster rocket. However, all these are claims and cannot be confirmed as of now. There is no clarity on the weight of Sarmat, therefore, its warhead weight remains unclear. In one of the reports from 2018, President Putin claimed that Sarmat would weigh more than 200 tons.⁷ Hence, nothing is precisely known, as varying weight would lead to a varying range of the missile.

According to the Russian State media, RT, the Russian Defence Ministry said, “Sarmat will be able to carry up to 20 warheads of small, medium and high-power classes.”⁸ According to both Western and Russian press reporting, these levels are equal to 100-150KT, 350KT and 800KT. The main Russian government news agency, TASS, reported that not less than fifteen warheads could be mounted on the missile. Hence, unless a certified source provides a detailed profile of the missile, nothing can be said with conviction.

The Russian Defence Ministry said, “The new missile is capable of striking targets at long ranges, using different flight paths. The Sarmat features unique characteristics that enable it reliably to breach any existing and future anti-ballistic missile defences.”⁹ A missile of this nature will disrupt the ‘observe, orient, decide, and act’ loop of the NATO countries.

When Sarmat was tested on February 18, 2023 the missile failed. This happened on the day President Biden was visiting Kyiv. If this test had not failed, then it was possible that President Putin would have highlighted this in his State of the Nation address on February 21, 2023.

As far as the New START Treaty is concerned, President Putin said on February 21, 2023, that participation stands suspended but, at the same time, Russia is not withdrawing from the treaty.¹⁰ This is true in theory until 2026, but practically, they will not adhere to it in terms of inspection, owing to the fact that President Putin has said “that as the war goes on, they (the Russians) will not allow US inspectors inside Russia.”¹¹

In April 2022, Dmitry Rogozin, the Chief of Roscosmos, said that Roscosmos would develop 46 Sarmat ICBMs.¹² However, the Sarmat ICBM and the Avangard HGV do fall under the limits set out by the New START Treaty. That is, if the Russians properly enforced this treaty, they would not be able to build larger numbers of these Sarmat missiles.¹³ But now, with the last remaining arms control agreement, i.e., the New START Treaty, on the verge of a potential complete collapse, there is little hope left that it will be revived, especially if the Ukraine War continues, which seems to be continuing for years as both sides are yet to achieve their war aims.

Sarmat is going to be a potent nuclear deterrent, which will add to Russian existential security. For several years, the Russian aim has been to modernise their nuclear forces. Sarmat missile will help achieve that objective.

NOTES:

- ¹ “Russia puts advanced Sarmat nuclear missile system on ‘combat duty’”, *Al Jazeera*, September 2, 2023, <https://www.aljazeera.com/news/2023/9/2/russia-puts-advanced-sarmat-nuclear-missile-system-on-combat-duty>. Accessed on September 3, 2023.
- ² “ Key facts about Russia’s advanced Sarmat ICBM system”, *TASS*, March 1, 2018, https://tass.com/defense/992360?utm_source=en.wikipedia.org&utm_medium=referral&utm_campaign=en.wikipedia.org&utm_referrer=en.wikipedia.org Accessed on November 13, 2023.
- ³ Missile Defense Project, “RS-28 Sarmat”, *Center for Strategic and International Studies*, July 31, 2021, <https://missilethreat.csis.org/missile/rs-28-sarmat/>. Accessed on October 14, 2023.
- ⁴ “Russian officer: Missile to carry several hypersonic weapons”, *The New Indian Express*, April 24, 2022, <https://www.newindianexpress.com/world/2022/apr/24/russian-officer-missile-to-carry-several-hypersonic-weapons-2446000.html>. Accessed on September 10, 2023.
- ⁵ Guy Faulconbridge, “Putin says Russia to deploy Sarmat nuclear missiles”, *The Print*, February 23, 2023, <https://theprint.in/world/putin-says-russia-to-deploy-sarmat-nuclear-missiles/1392936/>. Accessed on August 31, 2023.
- ⁶ Ibid
- ⁷ Ibid
- ⁸ Mark Schneider, “Is the West Ready for Russia’s Sarmat Heavy ICBM?”, *The National Interest*, July 22, 2022, <https://nationalinterest.org/feature/west-ready-russia%E2%80%99s-sarmat-heavy-icbm-203659>. Accessed on September 1, 2023.
- ⁹ Mark Episkopos, “NATO Take Note: Russia Test Launches Nuclear-Capable Sarmat Missile”, *The National Interest*, April 21, 2022, <https://nationalinterest.org/blog/buzz/nato-take-note-russia-test-launches-nuclear-capable-sarmat-missile-201956>. Accessed on September 25, 2023.
- ¹⁰ Oren Liebermann and Natasha Bertrand, “US believes Russia had failed intercontinental ballistic missile test around when Biden was in Ukraine”, *CNN*, February 22, 2023, <https://edition.cnn.com/2023/02/21/politics/russia-intercontinental-ballistic-missile-test/index.html>. Accessed on October 9, 2023.
- ¹¹ Jay Desai, “Implications of Russian Suspension of the New START Treaty”, *Bharat Shakti*, August 1, 2023, <https://bharatshakti.in/implications-of-russian-suspension-of-the-new-start-treaty/>. Accessed on October 9, 2023.
- ¹² “Roscosmos to produce 46 Sarmat ICBM strategic missile systems”, *TASS*, April 27, 2022, <https://tass.com/science/1443943>. Accessed on February 24, 2023.
- ¹³ “Russia’s Nuclear Weapons: Doctrine, Forces, and Modernization”, *CRS*, April 21, 2022, <https://sgp.fas.org/crs/nuke/R45861.pdf>. Accessed on February 24, 2023.