

Thu, 18 Jan, 2018

India conducts Intercontinental long range ballistic missile Agni- 5 from Abdul Kalam Island

Balasore: India today successfully test- fired intercontinental long-range ballistic surface to surface missile Agni V with a range of 5,000 km from the Abdul Kalam Island off Odisha coast. Defence Research Development Organisation (DRDO) sources said Agni 5 missile, India's longest range nuclear capable missile took off from the launch pad at Abdul Kalam Island at 0955 hours and started rising exactly the way it was designed for. The missile followed the entire trajectory like in textbook with the three stages of propulsion dropping and falling at appropriate times into Bay of Bengal.

The three propulsion stages, developed completely indigenously the by DRDO, performed exactly the way they are intended to, a statement said, The indigenously developed Composite Rocket Motors have performed well and made India completely self-reliant.

The ships located in mid-range and at the target point have tracked the vehicle and witnessed the final event. All the radars and electro-optical systems along the path monitored the parameters of the missile and displayed in real time.

The missile will be so powerful that it can target most parts of Asia, including the northernmost parts of China and large parts of Europe as well.

The 17-meter-long, 2 meter wide and weighing nearly 50 tonnes surface-to-surface missile Agni-V could carry a pay-load of 1 tonne, defence sources said. (agencies)

<http://www.dailyexcelsior.com/successfully-india-conducts-intercontinental-long-range-ballistic-missile-agni-5-from-abdul-kalam-island/>



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Agni-5 ballistic missile tested successfully

It is the most advanced in the series and has a strike range of over 5,000 km.

India on Thursday successfully tested Agni-V, validating the long range surface-to-surface ballistic missile's reliability.

“This was the fifth test of the missile and the third consecutive one from a canister on a road mobile launcher. All the five missions have been successful,” the Defence Ministry said in a statement.

The missile was tested for its full range at 9.53 a.m. from the Dr. Abdul Kalam Island in Odisha. The launch was supervised by project director G. Ramaguru and programme director M.R.M. Babu. The flight performance of the missile was tracked and monitored by radars, range stations and tracking systems all through the mission.

“All objectives of the mission have been successfully met,” the Defence Ministry statement added.

Agni-V, with a range of over 5,000 km, is India's longest range ballistic missile and can reach most parts of China, making it the mainstay of India's triad to deliver nuclear weapons.

Deterrence strength

The user associate test-flight of the missile has further boosted indigenous missile capabilities and deterrence strength of the country.

Describing the trial as “fully successful,” the sources said, the sophisticated missile travelled for 19 minutes and covered 4,900 km.

Agni-V is the most advanced missile in the Agni series with new technologies incorporated in it in terms of navigation and guidance, warhead and engine.

“The navigation systems, very high accuracy Ring Laser Gyro based Inertial Navigation System (RINS) and the most modern and accurate Micro Navigation System (MINS) had ensured the missile reached the target point within few metres of accuracy. The high speed on-board computer and fault-tolerant software along with robust and reliable bus guided the missile flawlessly,” said an official of the Defence Research and Development Organisation.

The missile is so programmed that after reaching the peak of its trajectory, it will turn towards the Earth to continue its journey towards the intended target with an increased speed due to the attraction of the Earth’s gravitational pull, he said.

Its path is precisely directed by the advanced on-board computer and inertial navigation system, the official added.

Short preparation time

The first two successful flights of Agni-V in 2012 and 2013 were in open configuration.

The third, fourth and Thursday’s launch from a canister, integrated with a mobile sophisticated launcher, were in its deliverable configuration that enables launch of the missile with a very short preparation time as compared to an open configuration.

It also has advantages of higher reliability, longer shelf life, less maintenance and enhanced mobility.

<http://www.thehindu.com/news/national/india-successfully-test-fires-agni-5-ballistic-missile/article22462182.ece>

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India test-fires nuclear-capable intercontinental ballistic missile Agni-V from Abdul Kalam island

The weapon has a strike range of over 5,000 kilometres.

India on Thursday test-fired surface-to-surface nuclear capable intercontinental ballistic missile Agni-V from Abdul Kalam island off the coast of Odisha, ANI reported. The missile has a strike range of over 5,000 kilometres.

India currently has the Agni-I (700-km range), Agni-II (2,000-km range), Agni-III and Agni-IV (over 3,500-km range), and the supersonic Brahmos missiles. It had previously tested Agni-V on December 26, 2016 off Wheeler Island on the Odisha coast. This was described as the fourth and final experimental test of the missile.

When the Agni-V is inducted into the Indian military arsenal, the country will join the exclusive club of countries – the United States, Russia, China, Britain and France – who have Intercontinental Ballistic Missiles (ICBMs), *The Times of India* reported.



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Agni-V missile successfully test-fired

Agni 5 launch: Confirming the development, Defence Minister Nirmala Sitharaman said: "We have successfully launched nuclear-capable ballistic missile Agni-V today."

India Thursday successfully test fired its indigenously built, nuclear-capable missile, Agni-V. It was conducted off a test range from Odisha's Abdul Kalam island. The intercontinental surface-to-surface ballistic missile has a range of 5,000 km. Confirming the development, Defence Minister Nirmala Sitharaman said: "We have successfully launched nuclear-capable ballistic missile Agni-V today."

With the aim to strengthen its nuclear arsenal, the Indian army is modifying the Agni missile to make it capable of carrying nuclear warheads. New technologies are being incorporated into every test in addition to its navigation and guidance system, warhead and engine power.

It also has advantages of higher reliability, longer shelf life, less maintenance and enhanced mobility. India has at present in its armoury of Agni series, Agni-1 with 700 km range, Agni-2 with 2000 km range, Agni-3 and Agni-4 with 2500 km to more than 3500km range.

"The redundant Navigation systems, very high accuracy Ring Laser Gyro based Inertial Navigation System (RINS) and the most modern and accurate Micro Navigation System (MINS) had ensured the missile reached the target point within few metres of accuracy. The high speed on board computer and fault tolerant software along with robust and reliable bus guided the missile flawlessly," said an official of Defence Research and Development Organization (DRDO).

While the first test was conducted on April 19, 2012, the second and third tests were carried out in 2013 and 2015. The last test was done on December 26, 2017.

<http://indianexpress.com/article/india/india-test-fires-agni-5-missile-with-a-surface-range-of-5000-kms-5029731/>



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India Successfully Test-Fires Agni-5 Ballistic Missile: All You Need To Know

India successfully test-fires ICBM Agni-5 missile today. Agni-5 missile has higher reliability, longer shelf life, less maintenance and enhanced mobility.

India successfully test-fired nuclear capable surface-to-surface Agni-5 Ballistic Missile today, boosting indigenous missile capabilities and deterrence strength of the country. Agni-5 is the most advanced missile in the Agni series with a strike range of over 5,000 kilometres. Agni-5 was test-fired at about 9:54 am from launch pad number 4 of the Integrated Test Range (ITR) in Abdul Kalam Island, earlier known as Wheeler Island, off Odisha coast.

During the test-fire, the sophisticated missile travelled for 19 minutes and covered 4,900 km. With the first testing of Agni-5, India had become a part of the super-exclusive club of countries with ICBMs or inter-continental ballistic missiles in 2012.

Here are 10 Facts about Agni-V Ballistic Missile:

1. Agni-5 is most advanced missile in the Agni series with new technologies incorporated in it in terms of navigation and guidance, warhead and engine. It has a range of over 5,000 km.
2. The redundant Navigation systems, very high accuracy Ring Laser Gyro based Inertial Navigation System (RINS) and the most modern and accurate Micro Navigation System (MINS) had ensured the missile reached the target point within few metres of accuracy, said an official of Defence Research and Development Organization (DRDO).
3. After four successful developmental trials, this was the first user associate test of Agni-5 missile, sources said.
4. Agni-5 missile has a high speed on-board computer and fault tolerant software along with robust and reliable bus. Its path is precisely directed by the advanced on-board computer and inertial navigation system.
5. The three-stage, 17-metre tall, two-metre wide Agni-5 missile is capable of carrying a nuclear warhead of about 1.5 tonnes.
6. The missile so programmed that after reaching the peak of its trajectory it will turn towards Earth to continue its journey towards the intended target with an increased speed due to the attraction of the earth's gravitational pull, DRDO official said.
7. The first two successful flights of Agni-5 missile in 2012 and 2013 were in open configuration. Agni-5 has higher reliability, longer shelf life, less maintenance and enhanced mobility.
8. At present, Agni series missiles that India has in its armoury are: Agni-1 with 700 km range, Agni-2 with 2,000 km range, Agni-3 and Agni-4 with 2,500 km to more than 3,500 km range.
9. The first test of Agni-5 was conducted on April 19, 2012, the second on September 15, 2013, the third on January 31, 2015 and fourth trial on December 26, 2016 from the same base.
10. With testing of Agni-5, India had become a part of the super-exclusive club of countries with ICBMs or inter-continental ballistic missiles after US, Britain, Russia, China and France.

<https://www.ndtv.com/india-news/with-agni-v-nuclear-capable-ballistic-missile-india-enters-icbm-all-you-need-to-know-1801662>



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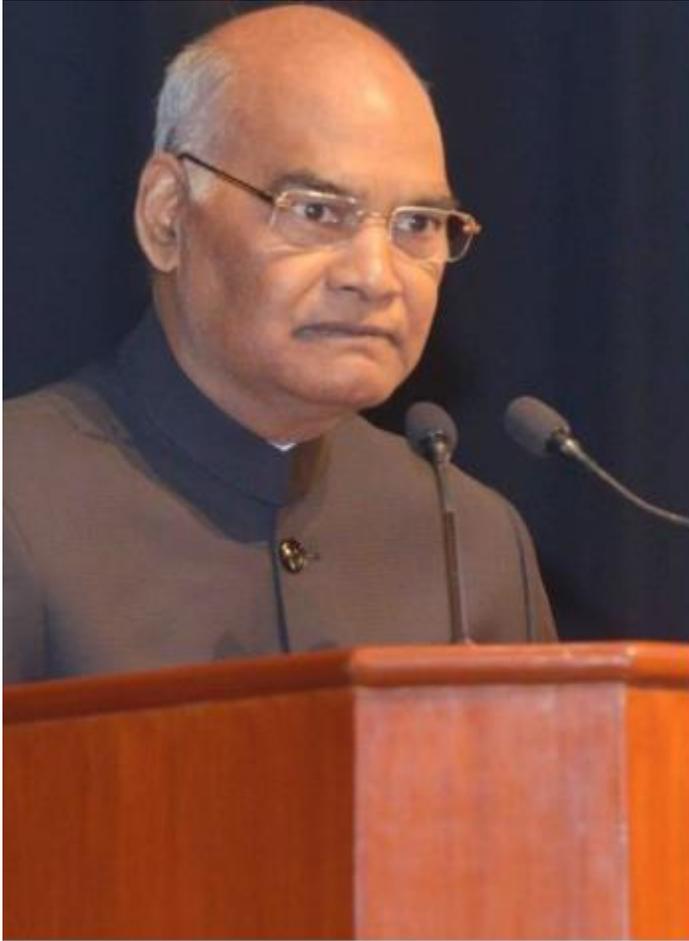
Agni-V missile will boost India's strategic defence: President Kovind

Congratulating the DRDO for the successful test firing of Agni-V missile, President Ram Nath Kovind on Thursday said the nuclear capable missile will boost India's strategic defence.

In a tweet, Kovind said: "Successful test firing of Agni-V ICBM makes every Indian very proud. It will boost our strategic defence."

"Congratulations to the team of DRDO (Defence Research and Development Organisation) scientists. May you go further on this trajectory," Kovind added.

The surface-to-surface intercontinental ballistic missile (ICBM), which has a range of 5000 km and can reach the northern-most parts of China, was fired from a test range on Abdul Kalam island off Odisha coast at 9.53 am. The Agni-V was last tested on December 26, 2016, which was then described as the fourth and final experimental test of the three-stage missile, developed and successfully tested by the DRDO under the Integrated Guided Missile Development Programme.



President of India Ram Nath Kovind (Photo: PIB)

This missile has been tested four times so far – two of the tests have been conducted from a canister on a road mobile launcher. All the four missions have been successful.

The Agni-V missile, in its operational form is designed to be stored and launched from the canister, enhancing its storage, operational readiness, transportability, response time and shelf life.

About 17 metres long, 2-metre wide and has launch weight of around 50 tonnes, the missile can carry a nuclear warhead of more than one tonne.

Once the Agni-V is inducted in the Indian military, India would join the super exclusive club of countries with ICBMs alongside the US, Russia, China, France and Britain.

The first test of Agni-V was conducted on April 19, 2012, while the second test was launched on September 15, 2013 and the third on January 31,

2015.

<https://www.thestatesman.com/india/agni-v-missile-will-boost-indias-strategic-defence-president-kovind-1502566988.html>



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Nagpur firm to make boosters for BrahMos

Pune: A crucial solid propellant booster of BrahMos, the world's fastest supersonic cruise missile, will now be manufactured in India enabling the government to save crores of rupees, a senior official of Defence Research and Development Organisation said on Wednesday. "The DRDO will sign an agreement of transfer of technology (ToT) with a Nagpur-based private company for mass production of the boosters during a defence industry development meet at Chennai on Thursday.

Defence minister Nirmala Sitharaman will hand over the ToT to the company," the official said, The DRDO's city-based High Energy Materials Research Laboratory (HEMRL) has developed the booster of the missile with a close coordination with Russian counterpart.

Interestingly, the missile was successfully fired for the first time from Indian Air Force's Sukhoi-30 MKI fighter jet in the Bay of Bengal in November last year. A senior HEMRL scientist, who didn't wish to divulge his identity, told TOI, "Currently, India imports about 35 boosters annually and the demand for the booster is going to be high as IAF will induct more missiles on its fighter jets in the near future.

Since the booster will be indigenously made, the maintenance will be timely as well as cost effective," he said, adding that India spends about 15% of the budget on importing the booster from the Russian counterpart. HEMRL director K P S Murthy said, "We have carried out all the requisite tests of the booster.

The results of the tests were positive and validated by Russian experts positively."

<https://www.nyoooz.com/news/pune/1011402/nagpur-firm-to-make-boosters-for-brahmos/>



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Spike Missile Deal Back on Track after Talks with PM Modi, says Netanyahu

Israeli Prime Minister Netanyahu, who announced the revival of the Spike anti-missile deal, did not elaborate on the details of the understanding that has been reached with New Delhi. It is being speculated that the deal could be much less than the \$ 500 million negotiated earlier.

By Alope Tikku

New Delhi: Prime Minister Narendra Modi has revived the deal to buy Spike anti-tank missiles from Israel just weeks after New Delhi had exited the \$ 500 million deal, Israeli Prime Minister Benjamin Netanyahu announced on Wednesday after wrapping up his trip to PM Modi's home state Gujarat.

"Following talks I have held with my friend, Indian Prime Minister Narendra Modi, the Indian government has informed us that it is putting the Spike deal back on track. This is very important and there will be many more deals," Mr Netanyahu announced in a 35-second video statement late on Wednesday evening.

PM Netanyahu's statement, who is on his first visit to India, did not elaborate on the details of the understanding that has been reached with New Delhi.

PM Netanyahu: "Following the talks I had with my friend Prime Minister @NarendraModi, the Indian government has informed us that it is putting the Spike deal back on track. This is very important and there will be many more deals." <https://t.co/rY9ocD5pys> - PM of Israel (@IsraeliPM) January 17, 2018

It is being speculated that the fresh deal that New Delhi signs could be much less than the \$ 500 million negotiated earlier. News agency Reuters said Israel's Channel 1 television was reporting that the original deal worth \$ 500 million would be cut in half.

India had opted out of buying the anti-tank guided missiles in December after the Defence Ministry decided to back the state-owned Defence Research and Development Organisation (DRDO) which promised to deliver a world-class missile within four years.

But the Army had been against being made to wait for DRDO-developed missiles, pointing that it would leave the Indian soldiers badly out-gunned till at least 2022.

"So how do we bridge the gap between now and 2022? It's through the Spike. Rather than going whole hog we are in the discussion with the government" to fill in the gap, Army Chief General Bipin Rawat said last week.

Spike is a man-portable "fire and forget" missile that can hit moving targets such as a tank, allowing the soldier who fires the missile to quickly move for cover.

Cancelling the deal would, according to experts, give Pakistan's foot-soldiers an edge over Indian infantry soldiers because they have portable anti-tank missiles that can strike Indian tanks and bunkers at a distance of 3-4 km; India's equivalent missiles have a range of just 2 km.

India had opted for Spike, manufactured by Israel's state-owned defence contractor Rafael Advanced Defence Systems, over the Javelin missiles offered by Washington in 2014. New Delhi had earlier declined to confirm if the Israeli side had raised the Spike deal at the bilateral meetings on Monday.

"I am not at liberty to go into the details of the discussions but it is suffice to say that where individual defence procurement is concerned the relevant matters are discussed by officials," Vijay Gokhale, secretary (economic relations) had said.

<https://www.ndtv.com/india-news/friend-pm-narendra-modi-guides-spike-missiles-deal-back-on-track-israel-pm-benjamin-netanyahu-1801477>



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Spike ATGM deal is back on track, says Netanyahu

The Spike anti-tank guided missile (ATGM) deal is "back on track", Israeli Prime Minister Benjamin Netanyahu said this to Israeli media on Wednesday. He said that the Indian government has decided to put the deal back on track following talks with his "friend", Indian Prime Minister Narendra Modi.

His comment comes just weeks after India scrapped the USD 500 million deal for the much-needed ATGM for the India Army.

The cancellation of the deal, which came just ahead of Netanyahu's six-day visit to India, appeared to cast a shadow on the otherwise robust ties between New Delhi and Tel Aviv.

According to the Israeli media, the revival of the deal is a "major strategic achievement".

Quoting Netanyahu after his meeting with Prime Minister Narendra Modi, Jerusalem Post wrote: "This (the Spike deal) is very important, and there will be many more deals."

Though details of the deal are yet to be worked out, the Israeli media hailed the positive development.

The deal for 1600 Spike missiles has been on and off ever since India picked the missile over the US-made Javelin in 2014.

India had previously scrapped the deal in November 2017. New Delhi has been insisting on transfer of technology to bolster defence production in the country under the government's ambitious 'Make in India' initiative.

The Defence Research and Development Organisation (DRDO) has been asked by the government to produce a Man Portable Anti-Tank Guided Missile (MPATGM) which is at par with Spike. The DRDO has been successful in producing the Nag, a 3rd generation fire-and-forget ATGM.

The Spike MR (ground-based) missile is a 4th generation, man portable, fire-and-forget, top attack ATGM with a range of 2.5 km. It can be operated both during the day and night.

<https://www.thestatesman.com/india/spike-atgm-deal-in-back-on-track-says-netanyahu-1502567062.html>

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Indo-Israeli \$500 Million Spike Anti-tank Guided Missile Deal Back on Table

India is likely to restart the \$500 million Spike Anti-Tank Guided Missile (ATGM) deal from Israeli firm Rafael it had cancelled before signing the deal earlier this month.

Following the visit of Israeli Prime Minister Benjamin Netanyahu to New Delhi, the deal is likely to be reconsidered after India cancelled it after state-run Defence Research and Development Organization (DRDO) had expressed confidence of producing the indigenous Nag ATGM barely two weeks before Netanyahu's visit.

"Following the talks I had with Prime Minister Narendra Modi, the Indian government has informed us that it is putting the Spike deal back on track," Netanyahu said in a statement Wednesday.

"They are reauthorizing the Spike deal," Netanyahu told Israeli journalists.

Netanyahu's remarks on the deal did not spell out if it would still be worth \$500 million. A proposal for fewer Spike ATGMs is likely to be considered to meet urgent operational requirements of the Army until the DRDO-developed missile is inducted into service, Financial Express reported Thursday.

According to earlier reports, India is likely to purchase Spike missile through the government-to-government (G-to-G) route. The government is now examining the possibility of purchasing the missiles from Israel through the G-to-G route like it did in sealing the deal for procuring 36 Rafale jets from France.

India's Kalyani group and Israel's state-run Rafael Advanced Defence Systems had commissioned Rs 70 crore production facility near Hyderabad in August last year, anticipating that the Israeli firm would bag the contract.

<http://www.defenseworld.net/news/21782/Indo-Israeli-500-Million-Spike-Anti-tank-Guided-Missile-Deal-Back-on-Table>



Thu, 18 Jan, 2018

US \$500 million Spike anti-tank missile deal between India and Israel back on table: Netanyahu

Israel Prime Minister Netanyahu, who is on a sixth-day tour to India, is believed to have told Israeli reporters, while on way to Mumbai, that the two countries will take the deal forward under the 'Make in India' scheme.

By Ashish Singh

The 500 million US dollar deal for Spike Anti Tank Guided Missiles (ATGM) between India and Israel is back on the table, Israel Prime Minister Netanyahu, who is on a sixth-day tour to India, announced on social media on Wednesday.

"Short update from India: following conversations I had with my friend the Prime Minister Narendra Modi, India Government informed us that the Spike deal is back on. This is very important-and many more deals!," Netanyahu tweeted.

Earlier, the Israeli PM told Israeli reporters, while on way to Mumbai, that the two countries will take the deal forward under the 'Make in India' scheme.

However, it was not clear if the new negotiations will be between India's Ministry of Defence and Israeli weapons firm Rafael Advanced Defence Systems or through government-to-government route.

India had pulled out of the multi-million weapons deal for a batch of missiles in November last year after the firm apparently expressed reservations in ensuring full transfer of technology as per the provisions of the 'Make in India' initiative.

Subsequently, the ministry had asked premier defence research laboratory DRDO to develop similar missiles with indigenous technology.

The official sources told PTI that the decision to retract the RFP was taken after the DRDO expressed confidence of producing the ATGMs.

India's Kalyani group and Israel's state-run Rafael Advanced Defence Systems had commissioned a Rs 70 crore production facility near Hyderabad in August last year, anticipating that the Israeli firm would bag the contract.

Last week, it was reported that Indian government is considering purchase of Spike missiles from Israel through the government-to-government (G-to-G) route, like it did in sealing the deal for procuring 36 Rafale jets from France.

In September 2016, India had signed an inter-governmental agreement with France for procurement of 36 Rafale fighter jets at a cost of around Rs 58,000 crore.

<https://www.indiatvnews.com/news/india-us-500-million-spike-anti-tank-missile-deal-between-india-and-israel-back-on-table-422739>