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CONTENTS

DRDO News

DRDO Technology News

Press Information Bureau
Government of India

Ministry of Defence

Sat, 18 Dec 2021 12:33PM

New generation ballistic missile 'Agni P' successfully test-fired by DRDO

Defence Research and Development Organisation (DRDO) successfully tested the new generation nuclear capable ballistic missile 'Agni P' from Dr APJ Abdul Kalam island off the coast of Odisha at 1106 hrs on December 18, 2021. Various telemetry, radar, electro-optical stations and down range ships positioned along the eastern coast tracked and monitored the missile trajectory and parameters. The missile followed text book trajectory meeting all mission objectives with high level of accuracy.

The Agni P is a two-stage canisterised solid propellant ballistic missile with dual redundant navigation and guidance system. This second flight-test has proven the reliable performance of all the advanced technologies integrated into the system.

Raksha Mantri Shri Rajnath Singh congratulated DRDO for the successful flight test and expressed his happiness for the excellent performance of the system. Secretary Department of Defence R&D and Chairman DRDO Dr G Satheesh Reddy appreciated the efforts of the team to have done the second development flight trial with many additional features and congratulated for the consecutive success within the same calendar year.

https://pib.gov.in/PressReleasePage.aspx?PRID=1782960

पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Sat, 18 Dec 2021 12:33PM

नई पीढ़ी की बैलिस्टिक मिसाइल 'अग्नि पी' का डीआरडीओ द्वारा सफलतापूर्वक परीक्षण किया गया

रक्षा अनुसंधान और विकास संगठन (डीआरडीओ) ने 18 दिसंबर, 2021 को 1106 बजे ओडिशा के तट पर डॉ. एपीजे अब्दुल कलाम द्वीप से नई पीढ़ी की परमाणु सक्षम बैलिस्टिक मिसाइल 'अग्नि पी' का सफलतापूर्वक परीक्षण किया। विभिन्न टेलीमेट्री, रडार, इलेक्ट्रो-ऑप्टिकल स्टेशन और पूर्वी तट के साथ

स्थित डाउन रेंज जहाजों ने मिसाइल ट्रेजेक्टरी और मानकों को ट्रैक किया तथा उनकी निगरानी की। इस मिसाइल ने उच्च स्तर की सटीकता के साथ सभी मिशन उद्देश्यों को पूरा करते हुए अपने लक्ष्य का अनुसरण किया।

अग्नि पी डुअल रिडनडेंट नेविगेशन तथा मार्गदर्शन प्रणाली के साथ एक दो चरणों वाली केनिस्ट्राइज्ड सॉलिड प्रोपेलेंट बैलिस्टिक मिसाइल है। इस दूसरे उड़ान परीक्षण ने प्रणाली में एकीकृत सभी उन्नत प्रौद्योगिकियों के भरोसेमंद प्रदर्शन को साबित किया है।

रक्षा मंत्री श्री राजनाथ सिंह ने सफल उड़ान परीक्षण के लिए डीआरडीओ को बधाई दी और प्रणाली के उत्कृष्ट प्रदर्शन पर प्रसन्नता व्यक्त की। रक्षा अनुसंधान एवं विकास विभाग के सचिव और डीआरडीओ के अध्यक्ष डॉ. जी सतीश रेड्डी ने कई अतिरिक्त विशेषताओं के साथ दूसरी विकास उड़ान परीक्षण करने के लिए टीम के प्रयासों की सराहना की तथा एक ही कैलेंडर वर्ष के भीतर लगातार सफलता के लिए बधाई दी।

https://pib.gov.in/PressReleasePage.aspx?PRID=1782971

Press Information Bureau
Government of India

రక్షణ మంత్రిత్వ శాఖ

Sat, 18 Dec 2021 12:33PM

నవతరం బాలిస్టిక్ క్షిపణి 'అగ్ని పి'ని విజయవంతంగా పరీక్షించిన డీఆర్‌డీఓ

'డిఫెన్స్ రీసెర్చ్ అండ్ డెవలప్‌మెంట్ ఆర్గనైజేషన్' (డీఆర్‌డీఓ) అణు సామర్థ్యంతో కూడిన కొత్తతరం బాలిస్టిక్ క్షిపణి 'అగ్ని-పి'ని

విజయవంతంగా పరీక్షించింది. ఒడిశా తీరంలోని డాక్టర్ ఏపీజే అబ్దుల్ కలాం ద్వీపం నుండి గురువారం (డిసెంబర్ 18, 2021) 1106 గంటలకు దీనిని పరీక్షించారు. తూర్పు తీరం వెంబడి ఉన్న వివిధ టెలిమెట్రీ, రాడార్, ఎలక్ట్రో-ఆప్టికల్ స్టేషన్లు, డౌన్ రేంజ్ నౌకలు క్షిపణి పథం, పారామితులను ట్రాక్ చేసి పర్యవేక్షించాయి. క్షిపణి అధిక స్థాయి ఖచ్చితత్వంతో అన్ని మిషన్ లక్ష్యాలను చేరుకునే టెక్ట్ బుక్ పథాన్ని అనుసరించింది. 'అగ్ని-పి' అనేది ద్వంద్వ రిడెండెంట్ నావిగేషన్ మరియు గైడెన్స్ సిస్టమ్‌తో కూడిన రెండు-దశల డబ్బీ సాలిడ్ ప్రొపెల్లెంట్ బాలిస్టిక్ క్షిపణి. రెండో ఫ్లైట్-టెస్ట్ సిస్టమ్‌లో విలీనం చేయబడిన అన్ని అధునాతనమైన సాంకేతికతల యొక్క విశ్వసనీయ పని తీరును ఇది నిరూపించింది. కేంద్ర రక్షణ శాఖ మంత్రి శ్రీ రాజ్ నాథ్ సింగ్ ఈ విజయం సాధించినందుకు డీఆర్‌డీఓను అభినందించారు. సిస్టమ్ యొక్క అద్భుతమైన పని తీరుపై తన సంతోషాన్ని వ్యక్తం చేశారు. అనేక అదనపు లక్షణాలతో రెండో డెవలప్‌మెంట్ ఫ్లైట్ ట్రయల్‌ను నిర్వహించినందుకు గాను రక్షణ శాఖ ఆర్ అండ్‌డీ విభాగం కార్యదర్శి, డీఆర్‌డీఓ చైర్మెన్ డాక్టర్ జి సతీష్ రెడ్డి.. డీఆర్‌డీఓ బృందం చేసిన ప్రయత్నాను అభినందించారు. దీనికి తోడు అదే క్యాలెండర్ సంవత్సరంలో వరుస విజయం సాధించినందుకు ఆయన బృందానికి అభినందనలు తెలిపారు.

https://pib.gov.in/PressReleasePage.aspx?PRID=1783009

THE HINDU

Sun, 19 Dec 2021

New generation nuclear capable ballistic missile Agni-P tested for second time

The first test took place in June last

New Delhi: New generation nuclear capable ballistic missile Agni-P was successfully tested from Dr. APJ Abdul Kalam island off the coast of Odisha at 11.06 a.m. on Saturday, the Defence Research and Development Organisation (DRDO) said. This is the second test of the missile. The first test took place in June last.

This second flight-test has proven the reliable performance of all the advanced technologies integrated into the system. Photo: PIB Press Release

"Various telemetry, radar, electro-optical stations and down range ships positioned along the eastern coast tracked and monitored the missile trajectory and parameters. The missile followed text book trajectory meeting all mission objectives with high level of accuracy," a DRDO statement said.

Agni-P is a two-stage canisterised solid propellant missile with dual redundant navigation and guidance system and has a range of upto 2000 km. This second flight-test had proven the reliable performance of all the advanced technologies integrated into the system, the DRDO stated.

Improved parameters

DRDO officials termed Agni-P as a new generation advanced variant of Agni class of missiles with improved parameters, including manoeuvring and accuracy. Canisterisation of missiles reduces the time required to launch the missile while improving the storage and ease of handling.

Agni class of missiles are the mainstay of India's nuclear launch capability, which also includes the Prithvi short-range ballistic missiles, submarine launched ballistic missiles and fighter aircraft. Agni-V, an Inter-Continental Ballistic Missile (ICBM) with a range of over 5,000 km, had been tested several times and validated for induction.

In the last few years, India has operationalised its submarine-based nuclear launch capability, completing the nuclear triad. This is especially important given India's stated No-First-Use policy while reserving the right of massive retaliation if struck with nuclear weapons first.

https://www.thehindu.com/news/national/india-successfully-tests-nuclear-capable-ballistic-missile-agni-p/article37984273.ece

Hindustan Times

Sun, 19 Dec 2021

Agni Prime test successful: All you need to know about new generation missile

Agni Prime has a range of 1000km to 2000km and weighs 50 per cent less than the Agni 3 missile. The first test of the missile took place in June this year.

By Amit Chaturvedi

New Delhi: India on Saturday successfully test-fired the Agni Prime missile from APJ Abdul Kalam island off the coast of Odisha. Defence minister Rajnath Singh congratulated the Defence Research and Development Organisation (DRDO) for the successful test.

This was the second test of the Agni Prime Missile.

The missile test took place at 11.06 am, according to DRDO.

The missile followed textbook trajectory and met all mission objectives with high level of accuracy, the DRDO said, adding that the test was being monitored by telemetry, radar, electro-optical stations and downrange ships positioned along the eastern coast.

"The missile test met all its mission objectives with a high level of accuracy," a DRDO official was quoted as saying by news agency ANI.

Here's everything you need to know about the Agni Prime missile:

- According to DRDO, it is a two-stage canisterised solid-propellant ballistic missile with dual redundant navigation and guidance system.
- Agni P is the first of the new class of Agni missile to be launched by DRDO. It weighs 50 per cent less than Agni 3 and has new guidance and a new generation of propulsion.
- Since Agni P is canisterised, it can be launched from rail and road and stored for a longer period and transported all across the country as per operational requirements.
- This was the second flight test of the missile and has proven the reliable performance of all the advanced technologies integrated into the system, the DRDO said. The first test took place in June this year.
- The missile has a range between 1000km to 2000km, and can be used to target enemy armadas in the Indo-Pacific.

https://www.hindustantimes.com/india-news/agni-prime-test-successful-all-you-need-to-know-about-new-generation-missile-101639812225899.html

the pioneer

Sun, 19 Dec 2021

Agni Prime widens India's Nuke reach to over 2000 kms

New Delhi: With a view to ensure the operational readiness of its missile arsenal as a deterrence, India on Saturday successfully conducted test of nuclear capable Agni-Prime (P). It is a new variant of the Agni series of missiles and has the capability to hit a target at more than 2,000 kms. The weapon system gives the forces the advantage of covering any target in China and the Indo-Pacific region.

The validation test of the new generation of the indigenously-designed and manufactured Agni strategic missile was conducted by the Defence Research and Development Organisation (DRDO) at Dr APJ Abdul Kalam Island off the Odisha coast at 11.06 am.

It was the second successful test after the first test conducted earlier this year.

Giving details of the significance of the latest test, officials said here various telemetry, radar, electro-optical stations and down range ships positioned along the eastern coast tracked and monitored the missile trajectory and parameters. The missile followed textbook trajectory meeting all mission objectives with high level of accuracy.

The Agni 'P' is a two-stage canisterised solid propellant ballistic missile with dual redundant navigation and guidance system. This second flight-test has proven the reliable performance of all the advanced technologies integrated into the system.

Defence Minister Rajnath Singh congratulated the DRDO for the successful flight test and expressed his happiness for the excellent performance of the system. DRDO Chairman G Satheesh Reddy appreciated the efforts of the team to have done the second development flight trial with many additional features and congratulated for the consecutive success within the same calendar year. The first test took place on June 28.

The new missile is much lighter compared to Agni 3 and can be ferried by road or rail thereby giving the strategic forces the much needed flexibility to camouflage and attack the enemy from anywhere.

At present, India has an array of strategic deterrence missiles including Agni-V which has a range of over 5,000 km besides Prithvi short range ballistic missiles. Strategic and ballistic missiles are capable of carrying nuclear warheads.

Moreover, India has now completed the nuclear triad meaning it can launch nuclear missiles from air, land, sea and underwater from submarines.

The nuclear arsenal of the country is handled by the Strategic Forces Command. Besides the Agni missiles, the country is also indigenously manufacturing nuclear powered submarines Arihant. While the first submarine is already ready, the next two submarines will also be ready shortly. In all, four such nuclear submarines will add muscle to India's nuclear prowess.

https://www.dailypioneer.com/2021/page1/agni-prime-widens-india---s-nuke-reach-to-over-2000-kms.html

अमर उजाला

Sun, 19 Dec 2021

परमाणु क्षमता वाली अग्नि प्राइम मिसाइल का परीक्षण सफल, भारत के दुश्मनों को आसानी से बना सकती है निशाना

सार

Agni Prime missile: अग्नि पी मिसाइल अग्नि सीरीज की नए जनरेशन वाली एडवांस मिसाइल है। इसकी मारक क्षमता 1000 से 2000 किलोमीटर के बीच है।

विस्तार

बालासोर: भारत ने शनिवार को अग्नि प्राइम मिसाइल का सफल परीक्षण किया। इस मिसाइल का परीक्षण ओडिशा के बालासोर से किया गया। सरकारी अधिकारियों ने इसकी जानकारी दी। अग्नि पी मिसाइल अग्नि सीरीज की नई जेनरेशन वाली एडवांस मिसाइल है। इसकी मारक क्षमता 1000 से 2000 किलोमीटर के बीच है। अग्नि-पी बैलिस्टिक मिसाइल की अग्नि सीरीज की छठी मिसाइल है। यह मिसाइल सतह से सतह पर मार करने वाली है। इस परमाणु सक्षम मिसाइल को रक्षा अनुसंधान और विकास संगठन यानी डीआरडीओ द्वारा डिजाइन और विकसित किया गया है। अग्नि प्राइम को या तो ट्रेन में ले जाया जा सकता है या कनस्तर में रखा जा सकता है।

अग्नि प्राइम मिसाइल - फोटो : ANI

गौरतलब है कि बीते दिनों भारत ने ओडिशा के चांदीपुर से ब्रह्मोस सुपरसोनिक क्रूज मिसाइल के वायु संस्करण का सफलतापूर्वक परीक्षण किया था। इससे पहले ब्रह्मोस सुपरसोनिक क्रूज मिसाइल के एंटी-शिप वर्जन का सफल परीक्षण किया था। इस मिसाइल का परीक्षण अंडमान और निकोबार द्वीप समूह से किया गया था। वहीं, अगले कुछ दिनों में डीआरडीओ की ओर से और कई बैलेस्टिक और क्रूज सीरीज की अत्याधुनिक किस्म की मिसाइलों का परीक्षण किए जाने की संभावना है।

https://www.amarujala.com/india-news/india-successfully-testfired-the-agni-prime-missile-off-the-coast-of-odisha-in-balasore

NEWS 18

Sun, 19 Dec 2021

Explained: Nuke capable, 1,000-2,000-Km Range. All you need to know about Agni P Missile

By Knneth Mohanty

Agni Prime is the latest missile to taste success in a test off the Odisha coast, strengthening India's missile production capabilities. Designed for ease of handling and deployment at short notice, the test featured advance technologies integrated into the missile.

WHAT IS THE AGNI P MISSILE?

The Agni P, or Prime, missile is described by the Defence Ministry as a "new generation nuclear capable ballistic Missile". Belonging to the Agni family that constitutes the mainstay of India's stable of short- (SRBM), medium- (MRBM), intermediate range (IRBM), and intercontinental ballistic missiles (ICBM), the Agni P is a two-stage canisterised solid propellant missile.

Canisterised means the missile is capable of launch at short notice through improvements in its storage and handling features. Reports said that Agni P is the smallest and lightest of the Agni missiles and weighs less than half as much as the Agni-3 missile.

This is the second test this year of Agni P with the earlier one having been conducted in June from the same Dr APJ Abdul Kalam island off the coast of Odisha. After the first test, the Defence Ministry had said that an "advanced variant of Agni class of missiles", Agni P has a range of between 1,000-2,000 km.

The London, UK-based International Institute for Strategic Studies (IISS) classed Agni-P as a medium-range ballistic missile (MRBM) and said that its images suggest that the missile is wider in diameter compared with both the Agni-I and -II, "potentially allowing for a larger payload to be accommodated, thereby providing India with greater flexibility and targeting options".

IISS further notes that the Agni-P has "an overall more compact design" while also pointing to speculation that it "utilises some of the same technology from the Agni-IV and -V".

WHAT DID THE TEST ACHIEVE?

As with its June run, the Defence Ministry said following the test on December 18 that "the missile followed text book trajectory meeting all mission objectives with high level of accuracy".

The ministry said that the latest test of this missile, which comes with "dual redundant navigation and guidance system", proved the "reliable performance" of all the advanced technologies integrated into it. Redundancies involve the introduction of extra components on the principle that if one functionality suffers a failure then a backup feature would still enable the objective to be achieved.

The Defence Ministry statement said that the second development flight trial included many additional features, noting that "various telemetry, radar, electro-optical stations and down range ships positioned along the eastern coast tracked and monitored the missile trajectory and parameters".

WHAT DOES AGNI-P FOR INDIA'S MISSILE CAPABILITIES?

Given its stated 1,000-2,000-km range, Agni-P sits between the Agni-I of 700-1,200km reported range and the 2,000-3,500km Agni-2. IISS says that Agni-P's range means "it is likely that the system is being developed with Pakistan rather than China in mind due to the limited number of possible targets within this range threshold in China from northern India".

According to the Washington DC-based nonprofit Nuclear Threat Initiative (NTI), the Prithvi-II, Agnis I-IV are "India's fully operational land-based ballistic missiles and form the foundation of the country's ballistic missile arsenal".

"Agni-II, deployed in 2011, has a range of 2000km and can strike anywhere in Pakistan and most parts of south and southeastern China. Agni-III, with a range of between 3,500 and 5,000km was deployed in 2014, NTI says, adding that India has also "developed but not yet deployed" Agni-IV and Agni-V missiles.

It was reported in 2018 that India had conducted a successful test — its seventh at the time — of its nuclear-capable Agni-IV missile with a range of 4,000km as part of a user trial by the Army. In October 2021, India also conducted a test of the Agni-5, which the Defence Ministry said is capable of hitting targets at a distance of 5,000km, making it the country's first ICBM.

The ministry had said at the time that the missile, which uses a three-stage solid fuel engine, had demonstrated a "very high degree of accuracy".

Washington DC-based think tank Centre for Strategic and International Studies (CSIS) notes that the "foremost" purpose served by India's missile arsenal is to support "New Dehli's nuclear deterrent posture against its main rivals Pakistan and China". NTI says India's "strategic missile programmes have matured such that it currently has the capacity to deploy short-, medium-, and long-range ballistic missiles".

Following the Agni-5 test, the Defence Ministry had said that it was "in line with India's stated policy to have 'credible minimum deterrence' that underpins the commitment to 'No First Use'.

This was the second test this year of the Agni Prime missile. (Photo: Ministry of Defence)

https://www.news18.com/news/explainers/explained-nuke-capable-1000-2000-km-range-all-you-need-to-know-about-agni-p-missile-4571084.html

The Indian EXPRESS

Mon, 20 Dec 2021

Explained: India's missile capability

Defence Minister Rajnath Singh has urged DRDO scientists to work towards developing hypersonic missile technology. What missiles has India developed so far, and where does it stand in relation to its neighbours?

By krishn Kaushik

New Delhi: At a seminar organised by the Defence Research and Development Organisation (DRDO) last Tuesday, Defence Minister Rajnath Singh encouraged scientists to work towards developing hypersonic missile technology. China had demonstrated its hypersonic missile capability with successful tests of a hypersonic glide vehicle (HGV) which, according to reports, circled the globe but missed its target by just a few kilometres.

What is the history of missile technology in India?

Before Independence, several kingdoms in India were using rockets as part of their warfare technologies. Mysore ruler Hyder Ali started inducting iron-cased rockets in his army in the mid-18th century. By the time Hyder's son Tipu Sultan died, a company of rocketeers was attached to each brigade of his army, which has been estimated at around 5,000 rocket-carrying troops.

Akash surface to air defence missile will be displayed at the Army Day parade. (Express File photo by Tashi Tobgyal)

At the time of Independence, India did not have any indigenous missile capabilities. The government created the Special Weapon Development Team in 1958. This was later expanded and called the Defence Research and Development Laboratory (DRDL), which moved from Delhi to Hyderabad by 1962.

"In 1972, Project Devil, for the development of a medium range Surface-to-Surface Missile was initiated. A large number of infrastructure and test facilities were established during this period." DRDO's official history of the lab states. "The development of components / systems for Project Devil formed the technology base for the future IGMDP Programme," says DRDO. By 1982, DRDL was working on several missile technologies under the Integrated Guided Missiles Development Programme (IGMDP).

What kind of missiles does India have?

India is considered among the top few nations when it comes to designing and developing missiles indigenously, although it is way behind the US, China and Russia in terms of range.

DRDO chairman G Satheesh Reddy told The Indian Express that DRDO is "working on multiple varieties of missiles". Among the surface-launched systems:

ANTI-TANK GUIDED MISSILE: Nag has already been inducted into the services. Reddy said Nag is the only "fire-and-forget ATGM meeting all weather requirements for its range (around 20 km)". Recently Heli-Nag was tested, which will be operated from helicopters and will be inducted by 2022, said Reddy. There is also a Stand-off Anti-Tank (SANT) missile, with a range over 10 km. Tested from Indian Air Force (IAF) helicopters on December 11, it has a millimetre wave seeker, which enhances target detection in all weather conditions. Reddy said "man-portable ATGMs" are also available.

SURFACE-TO-AIR MISSILE: The short-range SAM system Akash has already been inducted in the Army and the Air Force. For Akash 1, which has a seeker, the Army has already got the Acceptance of Necessity from the government, Reddy said. For Akash (New Generation), the first tests were conducted in July this year; Reddy said a couple more trials are to be done.

Medium-Range SAM: Production of MRSAM systems for the Navy is complete, and it is placing its order, Reddy said. The Jaisalmer-based 2204 Squadron of the Air Force became the first unit to get the MRSAM systems in September this year. Technology for MRSAM for the Army "is also in a good shape and will be flight-tested soon".

Short-Range SAM: For the Navy, the first flight tests have been successfully conducted.

Reddy also mentioned several air-launched systems:

AIR-TO-AIR: Astra, India's Beyond Visual Range Air-to-Air Missile (BVRAAM), has been completely tested and is under induction. It has a range of around 100 km, and DRDO is trying to now induct it with more IAF platforms, including the domestically developed light combat aircraft Tejas. A long-range Astra is also being developed, for which initial tests have been conducted. The missile uses solid fuel ramjet technology, which enhances speed, and will have an indigenously-built seeker.

AIR-TO-GROUND: Rudram, a New Generation Anti-Radiation Missile (NGRAM), has cleared initial tests and "some more tests will be conducted soon." With a maximum range of around 200 km, the missile mainly targets communication, radar and surveillance systems of the adversary, and was tested from the Sukhoi-30MKI fighter jet last year. Reddy mentioned that BrahMos, which India developed jointly with Russia, is already operational. It has a 300 km to 500 km range, and is a short-range, ramjet-powered, single warhead, supersonic anti-ship or land attack cruise missile.

Reddy said a supersonic missile-assisted torpedo system was successfully launched from Wheeler Island last Monday. It "carried a torpedo and delivered it at a longer range" and will enhance Navy anti-submarine capability with a range of around 400 km, Reddy said.

Which of India's missile systems are most important?

The two most important are Agni and Prithvi, both being used by the Strategic Forces Command.

Agni (range around 5,000) , is India's only contender for an inter-continental ballistic missile (ICBM), which is available with only a few countries. Prithvi, although a short-range surface-to-surface missile with a 350 km range, has strategic uses. India also tested a anti-satellite system in April 2019. A modified anti-ballistic missile named Prithvi Defence Vehicle Mk 2 was used to hit a low-orbit satellite. It put India only behind the US, Russia and China in this capability.

What about hypersonic technology?

India has been working on this for a few years, and is just behind the US, Russia and China. DRDO successfully tested a Hypersonic Technology Demonstrated Vehicle (HSTDV) in September 2020, and demonstrated its hypersonic air-breathing scramjet technology.

According to sources, India has developed its own cryogenic engine and demonstrated it in a 23-second flight. India will try to make a hypersonic cruise missile, using HSTDV.

Sources said only Russia has proven its hypersonic missile capability so far, while China has demonstrated its HGV capacity. India is expected to be able to have a hypersonic weapons system within four years, with medium- to long-range capabilities.

What makes India good in missile technology?

Lt Gen V K (retired) Chaturvedi, who had headed the Army's artillery's modernisation programme, said missile technology is "one field in which India has made very, very positive and substantial progress".

Under the IGMP then headed by A P J Abdul Kalam, later India's President, first came Prithvi, then Agni. BrahMos, at 2.5-3 times the speed of sound, was among the fastest in the world when developed, Chaturvedi said. "After the nuclear blast in 1998, cryogenic etc were not given to us. Kalam and others, they made it a point that they developed it within the country."

Chaturvedi said the US is leading in missile technology, and China is building up". India is also "at a very advanced stage" among the top three or four nations .

With India's missiles, Chaturvedi said "today our basic opponent, area of interest is northern border [China]. In the western border [Pakistan] we cover the whole area".

With Agni V ready, he said, India is working on Agni VI and Agni VII, which should have a much longer range. He mentioned that Prithvi, which DRDO developed in consultation with the armed forces, "was originally with the Army, and went to the Strategic Forces" but is expected to be back to the Army later. Pinaka rocket systems have also been developed in close coordination with the user agencies, he said.

Where do China and Pakistan stand compared to India?

While China is ahead of India, Chaturvedi believes a "lot of things about China are psychological".

According to a Pentagon report in 2020, China may have either achieved parity, or even exceeded the US in land-based conventional ballistic and cruise missile capabilities.

Chaturvedi said China's missile development is "definitely a concern for us, but we will definitely evolve". He said if China strikes a strategic target of India, "we will hit back with equal potential, and hit them at the place where it matters the most."

Chaturvedi was more dismissive about Pakistan. China has given Pakistan the technology, "but getting a technology and really using it, and thereafter evolving and adopting a policy is totally different".

He called hypersonic missiles "weapons of deterrence" but will not be used. He believes they "will continue to deter, but unlikely that China will ever use this. But if it does, India will not sit idle."

On nuclear capability, Chaturvedi said although India does not call BrahMos nuclear, it can be used. India's only nuclear missiles are Prithvi and Agni, but beyond those, tactical nuclear weapons can be fired from some IAF fighter jets or from Army guns, which have a low range, around 50 km.

https://indianexpress.com/article/explained/explained-indias-missile-capability-7680821/

UNI यूनीवार्ता भारत की अग्रणी संवाद समिति

Sun, 19 Dec 2021

अग्नि के सफल परीक्षण की शुभकामनायेँ दीं नायडू ने

अग्नि के सफल परीक्षण की शुभकामनाएं दी नायडू ने

नयी दिल्ली 18 दिसंबर (वार्ता) उप राष्ट्रपति एम वेंकैया नायडू ने रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) के वैज्ञानिकों को अग्नि पी. के सफल परीक्षण पर शुभकामनाएं दी हैं।

श्री नायडू ने शनिवार को यहां संदेश में कहा कि डीआरडीओ की रक्षा तकनीक देश को आत्मनिर्भर बनाती हैं।

उन्होंने कहा,"नई पीढ़ी की अत्याधुनिक 'अग्नि पी' बैलिस्टिक मिसाइल के सफलतापूर्वक परीक्षण पर डीआरडीओ के वैज्ञानिकों को हार्दिक बधाई। आपकी हर सफलता देश को विज्ञान और रक्षा तकनीक के क्षेत्र में आत्म निर्भर बनाती है। भावी सफलताओं के लिए शुभकामनाएं।"

सत्या.संजय

http://www.univarta.com/naidu-wishes-for-successful-test-of-agni/india/news/2596689.html

Press Information Bureau
Government of India

Ministry of Defence

Sun, 19 Dec 2021 10:54AM

DRDO conducts flight demonstration of Controlled Aerial Delivery System

Aerial Delivery Research and Development Establishment (ADRDE), Agra conducted a flight demonstration of Controlled Aerial Delivery System of 500 kg capacity (CADS-500) on December 18, 2021. ADRDE, Agra is an R&D laboratory of Defence Research and Development Organisation (DRDO) and the flight demonstration is part of a series of activities organised towards celebrating 'Azadi Ka Amrit Mahotsav', commemorating 75 years of Independence.

The CADS-500 is used for precise delivery of payload upto 500 kgs at predetermined location by making use of manoeuvrable capabilities of Ram Air Parachute (RAP). It uses Global Positioning System for the coordinates, altitude and heading sensors for the heading information during its flight. The CADS, with its onboard electronics unit, autonomously steers its flight path using waypoint navigation towards target location by operating controls.

System performance was demonstrated at Drop Zone, Malpura from an altitude of 5000m. The system was para-dropped from AN32 aircraft and then steered to the predesignated landing point in autonomous mode. Eleven paratroopers of Indian Army and Indian Air Force chased the CADS-500 in air and landed simultaneously.

https://pib.gov.in/PressReleasePage.aspx?PRID=1783168

पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Sun, 19 Dec 2021 10:54AM

डीआरडीओ ने कंट्रोल्ड एरियल डिलीवरी सिस्टम का हवाई प्रदर्शन किया

आगरा के हवाई वितरण अनुसंधान एवं विकास प्रतिष्ठान (एडीआरडीई) ने 18 दिसंबर 2021 को 500 किलोग्राम क्षमता (सीएडीएस-500) के कंट्रोल्ड एरियल डिलीवरी सिस्टम का हवाई प्रदर्शन किया। एडीआरडीई, आगरा रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) की एक अनुसंधान व विकास प्रयोगशाला है और यह हवाई प्रदर्शन स्वतंत्रता के 75 वर्ष पूरे होने के उपलक्ष्य में 'आजादी का अमृत महोत्सव' मनाने के लिए आयोजित गतिविधियों की श्रृंखला का एक हिस्सा है।

सीएडीएस-500 का उपयोग रैम एयर पैराशूट (आरएपी) की युद्धाभ्यास क्षमताओं का उपयोग करके पूर्व निर्धारित स्थान पर 500 किलोग्राम तक के पेलोड की सटीक डिलीवरी के लिए किया जाता है। यह अपनी उड़ान के दौरान सभी आवश्यक जानकारी के लिए निर्देशांक, ऊंचाई और शीर्षक सेंसर में ग्लोबल पोजिशनिंग सिस्टम का उपयोग करता है। सीएडीएस, अपनी ऑनबोर्ड इलेक्ट्रॉनिक्स इकाई के साथ, ऑपरेटिंग नियंत्रण प्रणाली द्वारा निर्धारित लक्ष्य स्थल की ओर वेपॉइंट नेविगेशन का उपयोग करके अपने उड़ान पथ को स्वायत्त रूप से संचालित करता है।

इसने मालपुरा के ड्रॉप जोन में 5000 मीटर की ऊंचाई से कार्यप्रणाली का सफलतापूर्वक प्रदर्शन किया गया। सिस्टम को एएन32 विमान से पैरा-ड्रॉप किया गया था और फिर स्वायत्त मोड में पूर्वनिर्धारित लैंडिंग बिंदु पर ले जाया गया था। भारतीय सेना और भारतीय वायु सेना के ग्यारह पैराट्रूपर्स ने हवा में सीएडीएस-500 का पीछा किया और एक साथ नीचे उतरे।

https://pib.gov.in/PressReleasePage.aspx?PRID=1783191

THE TIMES OF INDIA

Sun, 19 Dec 2021

DRDO lab ADRDE demonstrates aerial delivery system 500 kg

By Arvind Chauhan

Lucknow: DRDO lab, the aerial development research and development establishment (ADRDE) demonstrated the flight of controlled aerial delivery system -500 kg (abbreviated as CADS-500) on Saturday.

CADS-500 is used for precise delivery of payload upto 500 kg at predetermined location by making use of manoeuvrable capabilities of Ram Air Parachute (RAP).

The demonstration was organised as part of ongoing celebration of Azadi Ka Amrit Mahotsava.

CADS-500 is used for precise delivery of payload upto 500 kg at predetermined location by making use of manoeuvrable capabilities of Ram Air Parachute (RAP).

It uses global positioning system for the coordinates, altitude and heading sensors for the heading information during its flight. With its onboard electronics unit autonomously steers its flight path using waypoint navigation towards target location by operating control lanyards of RAP.

System performance was demonstrated on at drop zone Malpura (Agra) from an altitude of 5000 meter.

The system was para-dropped from AN32 aircraft and then steered to the predesignated landing point in autonomous mode.

11 Paratroopers of army led by Col Sandeep Pratap, (Deputy Commandant 50(I) Para Brigade) and IAF led by chief test jumper Wing Commander Lakesh chased CADS-500 in air and landed simultaneously.

https://timesofindia.indiatimes.com/city/lucknow/drdo-lab-adrde-demonstrates-aerial-delivery-system-500-kg/articleshow/88359639.cms

INDIA TODAY

Mon, 20 Dec 2021

DRDO conducts flight demonstration of Controlled Aerial Delivery System

The CADS-500 system was para-dropped from an AN32 aircraft and then steered to the predesignated landing point in autonomous mode.

New Delhi: The Defence Research and Development Organisation's R&D lab conducted a flight demonstration of Controlled Aerial Delivery System of 500 kg capacity (CADS-500) on Saturday, the Ministry of Defence said.

The CADS-500 system was para-dropped from an altitude of 5,000 metres. (Photo: Twitter/@DRDO_India)

The system, developed by Aerial Delivery Research and Development Establishment (ADRDE) in Agra, was para-dropped from an AN32 aircraft and then steered to the predesignated landing point in autonomous mode. Eleven paratroopers of the Indian Army and Indian Air Force chased the CADS-500 in the air and landed simultaneously at the drop zone in Malpura from an altitude of 5,000 metres.

The CADS-500 is used for precise delivery of payload up to 500 kgs at a predetermined location by making use of manoeuvrable capabilities of the Ram Air Parachute (RAP).

It uses Global Positioning System for the coordinates, altitude and heading sensors for the heading information during its flight.

The CADS, with its onboard electronics unit, autonomously steers its flight path using waypoint navigation towards target location by operating controls.

The flight demonstration was part of a series of activities to celebrate 'Azadi Ka Amrit Mahotsav', commemorating 75 years of India's independence.

https://www.indiatoday.in/india/story/drdo-demonstrates-aerial-delivery-system-cads-500-1889564-2021-12-19

UNI BREVITY ACCURACY SPEED यूनीवार्ता भारत की अग्रणी संवाद समिति

Sun, 19 Dec 2021

डीआरडीओ ने नियंत्रित हवाई वितरण प्रणाली की क्षमता का प्रदर्शन किया

डीआरडीओ ने नियंत्रित हवाई वितरण प्रणाली की क्षमता का प्रदर्शन किया

नयी दिल्ली 19 दिसंबर (वार्ता) देश के प्रमुख रक्षा प्रतिष्ठान रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) ने नियंत्रित हवाई वितरण प्रणाली के जरिए 500 किलोग्राम के पेलोड को सफलतापूर्वक ले जाने की क्षमता का प्रदर्शन किया है।

यह परीक्षण उड़ान डीआरडीओ की आगरा स्थित प्रयोगशाला एडीआरडीई ने संचालित की और इसके तहत 500 किलोग्राम के पेलोड को उठाकर दूसरी जगह ले जाया गया।

परीक्षण उड़ान के दौरान मालपुरा के ड्रॉप जोन में 5000 मीटर की ऊंचाई से कार्यप्रणाली का सफलतापूर्वक प्रदर्शन किया गया। इसे वायु सेना के मालवाहक विमान ए एन 32 से पैरा-ड्रॉप किया गया था और फिर स्वायत्त मोड में पूर्वनिर्धारित लैंडिंग बिंदु पर ले जाया गया। सेना और वायु सेना के ग्यारह पैराट्रूपर्स ने हवा में इस का पीछा किया और उसके साथ नीचे उतरे।

इस प्रणाली का इस्तेमाल रैम एयर पैराशूट (आरएपी) की युद्धाभ्यास क्षमताओं का उपयोग करके पूर्व निर्धारित स्थान पर 500 किलोग्राम तक के पेलोड की सटीक डिलीवरी के लिए किया जाता है। यह अपनी उड़ान के दौरान सभी आवश्यक जानकारी के लिए ग्लोबल पोजिशनिंग सिस्टम का उपयोग करता है। सीएडीएस, अपनी इलेक्ट्रॉनिक्स इकाई के साथ, ऑपरेटिंग नियंत्रण प्रणाली द्वारा निर्धारित लक्ष्य स्थल की ओर अपनी उड़ान को स्वायत्त रूप से संचालित करता

यह परीक्षण उड़ान आजादी के अमृत महोत्सव के तहत आयोजित की गई।

संजीव, उप्रेती

http://www.univarta.com/drdo-demonstrated-the-capability-of-controlled-air-delivery-system/india/news/2597320.html#

THE ECONOMIC TIMES

Sun, 19 Dec 2021

DRDE to set up advanced biological defence lab in Gwalior to research, fight dangerous viruses

Synopsis

The proposed Advanced Biological Defence Research Centre (ABDRC) will focus on dangerous viruses, its effect on humans and come up with safeguards and develop equipment to fight them, DRDE Director Dr Manmohan Parida told reporters on the sidelines of a exhibition of the premier institution here on Friday.

A new laboratory to study viruses dangerous to humans will be set up at the Defence Research Development Establishment (DRDE) in Gwalior in Madhya Pradesh shortly, a senior official said.

He said the DRDE laboratory has been successful in equipping T-90 tanks with the means to ward off nuclear, chemical and biological attacks, adding that "even Israel and Egypt have evinced keen interest in our products".

The proposed Advanced Biological Defence Research Centre (ABDRC) will focus on dangerous viruses, its effect on humans and come up with safeguards and develop equipment to fight them, DRDE Director Dr Manmohan Parida told reporters on the sidelines of a exhibition of the premier institution here on Friday.

"Defence labs are working hard to make India self-reliant and society is getting benefited by it. The DRDE's laboratory here has already provided defence to the Army to fend off nuclear and chemical warfare. DRDE scientists have already developed technology for detection of and defence from dengue, anthrax and such dangerous viruses," he said.

"The new ABDRC laboratory with the help of artificial intelligence and cyber techniques will develop ways to repel virus attacks instantly. ABDRC is going to be of Bio Safety Level (BSL) - 4, which very few countries have right now," Parida informed.

He said the DRDE laboratory has been successful in equipping T-90 tanks with the means to ward off nuclear, chemical and biological attacks, adding that "even Israel and Egypt have evinced keen interest in our products".

The products of DRDE have not only saved valuable foreign exchange but made India emerge as a big exporter, he added.

Amid the coronavirus outbreak, DRDE has come up with top quality sanitisers, N -95 masks and PPE kits, while a lamp kit for PCR test developed recently has shown encouraging initial results, he said.

"We will join hands with IITs and universities to enhance DRDE's role in biological defence, as well as to foster scientific temper and promote research for the benefit of people," Parida said.

https://economictimes.indiatimes.com/news/defence/drde-to-set-up-advanced-biological-defence-lab-in-gwalior-to-research-fight-dangerous-viruses/articleshow/88357550.cms

राष्ट्रीय सहारा

Sun, 19 Dec 2021

ग्वालियर में बनेगी नई प्रयोगशाला

■ ग्वालियर (भाषा)।

रक्षा अनुसंधान एवं विकास स्थापना, ग्वालियर के निदेशक एवं वैज्ञानिक डॉ. मनमोहन परीदा ने कहा कि डीआरडीई यहां जल्दी ही एक नई प्रयोगशाला 'उन्नत जैव रक्षा अनुसंधान केन्द्र' स्थापित करेगी, जिसमें भविष्य के खतरनाक और मनुष्य को नुकसान पहुंचाने वाले वायरसों पर अनुसंधान होगा और उनसे बचने के उपकरण एवं अन्य सामग्री विकसित की जाएगी। उन्होंने यह भी कहा कहा कि रक्षा प्रयोगशालाएं पूरी सुरक्षा के क्षेत्र में देश को आत्मनिर्भर बनाने में जुट गई हैं और इससे समाज को भी लाभ हो रहा है।

शुक्रवार को ग्वालियर में आजादी के अमृत महोत्सव के तहत डीआरडीई में विकसित किए गए रक्षा उत्पादों की प्रदर्शनी लगाई गई थी। इसी प्रदर्शनी के दौरान डॉ. परीदा ने मीडिया से कहा, "ग्वालियर स्थित प्रयोगशाला पहले ही परमाणु और रासायनिक युद्ध से बचाव के साधन सेना को उपलब्ध करा रही है। डेंगू, एंथ्रेक्स और हानिकारक वायरस से बचाव और पहचान करने की तकनीक डीआरडीई, ग्वालियर के वैज्ञानिकों

■ रक्षा अनुसंधान एवं विकास स्थापना, ग्वालियर के निदेशक परीदा ने कहा, इस नई प्रयोगशाला में आर्टिफिशियल इंटेलिजेंस और साइबर तकनीक से उपकरणों को विकसित किया जाएगा, जिससे वायरस हमले का तुरंत निदान मिल सके। इस प्रयोगशाला का स्तर बीएसएल-4 होगा, जो दुनिया के कुछ ही देशों के पास है

ने पहले ही विकसित किए हैं और अब यह प्रयोगशाला भविष्य की तकनीकों पर काम करेगी।" उन्होंने कहा, 'इसके लिए ग्वालियर में उन्नत जैव रक्षा अनुसंधान केन्द्र की स्थापना की जा रही है। इस प्रयोगशाला में भविष्य में मानव को नुकसान पहुंचाने वाले खतरनाक वायरसों पर अनुसंधान होगा। इसके साथ इस नई प्रयोगशाला में आर्टिफिशियल इंटेलिजेंस और साइबर तकनीक से उपकरणों को विकसित किया जाएगा, जिससे वायरस हमले का तुरंत निदान मिल सके। इस प्रयोगशाला का स्तर बीएसएल-4 होगा, जो दुनिया के कुछ ही देशों के पास है।"

डॉ. परीदा ने बताया कि डीआरडीई के उत्पाद पूरी तरह आत्मनिर्भर भारत की परिकल्पना को पूरा करते हैं। इसी प्रयोगशाला ने टी-90 टैंक को परमाणु और रासायनिक एवं जैविक युद्ध के बचाव के साधन उपलब्ध कराएं हैं। उन्होंने कहा, 'हमारे उत्पाद के लिए मिस्र और इस्राइल जैसे देश रुचि दिखा रहे हैं।' डीआडीई निदेशक ने कहा, "आत्मनिर्भर भारत में डीआरडीई, ग्वालियर के अनेक उत्पादों से न सिर्फ बहुमूल्य विदेशी मुद्रा की बचत हुई है, बल्कि भारत अब एक बड़े निर्यातक के रूप में सामने आया है। कोरोना काल में सैनेटाइजर, एन-95 मास्क एवं व्यक्तिगत सुरक्षा उपकरण (पीपीई किट) के अनुसंधान एवं गुणवत्तापूर्ण उत्पादन में अग्रणी भूमिका निभाई गई है। हाल ही में डीआरडीई ग्वालियर में कोरोना के पीसीआर टेस्ट के लिए लैंप किट तैयार की है और इसके अच्छे परिणाम आए हैं।"

THE HINDU

Sun, 19 Dec 2021

DRDO ready to fund research projects, says its Chairman

'They should, however, find solution to any existing problem'

Anantapur: The Defence Research and Development Organisation (DRDO) is ready to fund up to ₹10 crore any research project at the JNTU-A College Engineering Incubation Centre if the idea is approved and finds a solution to any existing problem.

Making the announcement on the concluding day of the Platinum Jubilee celebrations of JNTU-A College of Engineering here on Saturday, Union Defence Secretary and DRDO Chairman G. Sateesh Reddy said the DRDO would actively pursue efforts to get patents for any specific innovative project incubated.

DRDO Chairman G. Sateesh Reddy speaking at the Platinum Jubilee celebrations of JNTU-A College of Engineering, in Anantapur on Saturday. | Photo Credit: R.V.S. PRASAD

'Make for the world'

"Academic institutions are the places for new ideas and solutions. But they must fulfil the 'Make for the World' dream of the Prime Minister," the Defence Secretary said.

Earlier, he unveiled the pylon of the Platinum Jubilee celebrations in the presence of Registrar C. Sashidhar, Principal P. Sujatha, and the alumni.

Congratulating the APSPDCL group of the JNTU-A College of Engineering Alumni Association led by SPDCL CMD H. Haranatha Rao for donating ₹27 lakh and the 1979-83 batch for donating ₹50 lakh for the establishment of the Innovation Makers' Lab on the campus, Mr. Sateesh Reddy asked Vice-Chancellor G. Ranga Janardhana Rao to keep in touch with the alumni and find ways and means to improve the quality of education and research on the campus.

"Donating money alone will no improve quality, and the alumni can help in many other ways," he opined.

He also called upon the students and faculty to apply for the 'Dare to Dream' contest of the DRDO in six verticals to earn good rewards for ideating on several new projects and get funded for the incubation.

He advised the College of Engineering to start M.Tech in Defence Technologies course on the campus with a chance to work in the laboratories of the DRDO in the second year. He said four members of the alumni were occupying top positions in road transport and DRDO, which tells the power of dedication.

SRIT Engineering College director Aluru Sambasiva Reddy and Singanamala MLA J. Padmavathi, both alumni of JNTU-A College of Engineering, donated ₹9.2 lakh for construction of one hostel room in the Platinum Jubilee block that would have 100 such rooms.

https://www.thehindu.com/news/national/andhra-pradesh/drdo-ready-to-fund-research-projects-says-its-chairman/article37988179.ece

NEWS 18

Mon, 20 Dec 2021

कानपुर:-जानिए सियाचिन के ग्लेशियर में -40 डिग्री तक जवानों को जमा देने वाली ठंड से बचाएगा यह विशेष टेंट

चीनी सीमा के फारवर्ड एरिया में सियाचीन ग्लरेशियर में जवानों को ख़ुद जीवित रखना भी एक बड़ी चुनौती है। ठंड में यहां का तापमान -30 से -35 डिग्री तक चलता जाता है। ऐसे में डीआरडीओ (DRDO) ने जवानों के लिए विशेष टेंट तैयार किया है। जिसके अंदर -40 डिग्री तक जवानों को ठंड नहीं लगेगी और वह देश की सीमाओं की रक्षा के लिए मुस्तैद रहेंगे।

By आलोक तिवारी

भारत एक प्रायद्वीप है, जो तीन ओर से समुद्र से घिरा हुआ है। जबकि इसकी उत्तरी सीमा में हिमालय पर्वत है। जहां भारतीय सेना सबसे ज़्यादा सेना का मूवमेंट रहता है। इसकी प्रमुख वजह भारत के पड़ोसी देश चीन व पाकिस्तान की मंशा में संदेह होना है। हिमालय पर्वत पर चीन और पाकिस्तान की सीमा के चलते यहां हर समय भारतीय सेना के जवान तैनात रहते हैं। वहीं, चीनी सीमा के फारवर्ड एरिया में सियाचीन ग्लरेशियर में जवानों को ख़ुद जीवित रखना भी एक बड़ी चुनौती है। ठंड में यहां का तापमान -30 से -35 डिग्री तक चलता जाता है। ऐसे में डीआरडीओ (DRDO) ने जवानों के लिए विशेष टेंट तैयार किया है। जिसके अंदर -40 डिग्री तक जवानों को ठंड नहीं लगेगी और वह देश की सीमाओं की रक्षा के लिए मुस्तैद रहेंगे।

ओईएफ की कानपुर इकाई में तैयार किया गया आर्टिकल एमके-2 टेंट

टेंट में लगाया गई है हिमतापक डिवाइस

टेंट में वातावरण को गर्म करने वाला और बर्फ को पिघलाने वाला हिमतापक डिवाइस को भी लगाया गया है। इससे शून्य से -40 डिग्री सेंटीग्रेड नीचे वाले माहौल में रहने की स्थितियां बनाई जा सकती हैं। यह जहरीली गैसें पैदा किए बिना भी टेंट को गर्म रखता हैयह डिवाइस जवानों की कार्बन मोनो ऑक्साइड और अग्निकांड से बचाती है। इस डिवाइस को केरोसिन से चलाया जाता है। इस डिवाइस को डीआरडीओ की शाखा डिफेंस इंस्टीट्यूट फॉर फिजियोलॉजी एंड एलाइड साइंसेज ने तैयार किया है। यह संस्था असामान्य वातावरण और युद्ध की स्थिति में सैनिकों की क्षमता बढ़ाने वाले उपकरण विकसित करती है।

ओईएफ (OEF) में किया जा रहा निर्माण

डीआरडीओ की ओर से डिज़ाइन किए गए आर्टिक एमके-2 टेंट को कानपुर की आर्डिनेंस इक्विपमेंट फ़ैक्ट्री (अब ट्रूप कम्फ़र्ट लिमिटेड) में तैयार किया जा रहा है। टेंटे को विशेष तरह के फ़ायर प्रूफ़ कपड़े से तैयार किया जाता है। जिसके चलते यह हिमतापक डिवाइज़ से आग ना पकड़ सके। टेंट के अंदर कपड़े की दो लेयर लगाई जाती हैं, ताकि दोनों लेयर के बीच में गर्म हवा भर जाए और टेंट के अंदर का तापमान गर्म रहे।

हिमतापक डिवाइस को भी किया जा रहा अपग्रेड

हिमतापक डिवाइस को केरोसिन से संचालित करने के चलते टेंट के अंदर इसकी बदबू भर जाती थी। जिसकी जवानों की ओर से लगातार शिकायत की जा रही थी। उनकी शिकायत को देखते हुए हिमतापक डिवाइस को अपग्रेड किया गया है। इसमें सोलर सिस्टम के साथ पंखा लगया गया है जो अंदर की बदबू को बाहर निकाल देगा। इसे सौर ऊर्जा की मदद से संचालित किया जा सकता है।

https://hindi.news18.com/news/uttar-pradesh/kanpur-kanpur-know-this-special-tent-will-save-the-soldiers-from-freezing-cold-up-to-40-degrees-in-the-glacier-of-siachen-3907329.html

Press Information Bureau
Government of India

Ministry of Defence

Fri, 17 Dec 2021 2:42PM

Development of Bio-Toilets by DRDO

The major features of bio-toilet developed by Defence Research and Development Organisation (DRDO)are as under:

- It makes use of an anaerobic (without oxygen) process through which the human waste is digested by consortium of bacteria;
- Bio-toilet has been customized and different designs have been developed for use under different geo-climatic conditions.

The Cow dung is used for the enrichment bacterial consortium. Following four types of bacteria are present in the consortium:

- Hydrolase
- Acidogenase
- Acitogenase
- Methogens

DRDO has transferred the technology to approximately 60 industries all over the country. These industries have installed bio-digesters across the country. A total number of about 16000 bio-digesters have been installed in more than 20 states. In addition, more than 2.5 lakhs bio-digesters have been installed in Indian Railways coaches, which cater to the need of more than 100 lakh passengers on daily basis.

This information was given by Raksha Rajya Mantri Shri Ajay Bhatt in a written reply toShri Mitesh Rameshbhai Patel (Bakabhai) in Lok Sabha today.

https://pib.gov.in/PressReleasePage.aspx?PRID=1782608

Press Information Bureau
Government of India

Ministry of Defence

Fri, 17 Dec 2021 2:37PM

Defence Startups

The Department of Defence Production, Ministry of Defence has approved a central sector scheme viz. Innovations for Defence Excellence (iDEX)with budgetary support of Rs498.78 crore for the next 5 years from 2021-22 to 2025-26. The objective of the scheme is to provide financial support to nearly 300 Startups/MSMEs/individual innovators and about 20 Partner incubators through Defence Innovation Organisation (DIO). Innovations for Defence Excellence (iDEX) framework aims to achieve self-reliance and foster innovation and technology development in Defence and Aerospace Sector by engaging Industries including MSMEs, startups, individual innovators, R&D institutes and academia. A total of 89 iDEX winners have so far been identified. 35 new problem statements have been launched recently to expand the network, under Defence India Startup Challenge (DISC)-5.

Further, in order to promote startups, DRDO has also launched DARE to DREAM contest and Technology Development Fund (TDF) Scheme.

i. Dare to Dream is a Pan India Innovation Contest to support startups & innovators to contribute in Defence ecosystem. DRDO has been conducting Dare to Dream Contest since 2019. DRDO specifies various themes and invites innovative ideas under those themes. Best ideas are selected and awarded. DRDO also supports awarded ideas to realize them into Prototype through TDF scheme. Two versions of Dare to Dream Contest have already been successfully conducted.

ii. TDF Scheme is executed by DRDO under 'Make in India' initiative. The Government has approved TDF Scheme to encourage industries especially MSMEs and Startups to develop various defence technologies. The scheme operates in Grants-in-Aid Mode. The scheme was launched in Sep 2016. At present, a total of 37 project have been awarded to various industries specially MSMEs and Startups under TDF scheme.

Procedure for 'Make-II' category, which is Industry funded, was introduced in DPP-2016 to encourage indigenous development and manufacture of defence equipment. It has a number of industry friendly provisions such as relaxation of eligibility criterion, minimal documentation, provision for considering proposals suggested by industry/individual etc. So far, 60 projects relating to Army, Navy & Air Force, have been accorded 'Approval in Principle'.

The steps taken to strengthen Research and Development in defence manufacturing are as follows:

i. Transfer of Technology (ToT) policy with 'nil' ToT fee for Development cum Production Partner (DcPP), Production Agency (PA) and Development Partner (DP) has been promulgated by DRDO. No royalty is charged from industry for supply to Indian Armed Forces/Paramilitary/Police Forces. 2% royalty is charged for export and products for commercial markets.

ii. DRDO is promoting research by providing Grant-in-Aid funding to various Indian R&D institutions/Universities.

iii. 10 Centers of Excellence (CoEs) are operational in various IITs/Universities across India for directed research in identified areas.

iv. 108 technologies/products have been exclusively earmarked for R&D leading to product development by Indian industry. DRDO provides necessary support, including testing and certification, wherever necessary/applicable.

v. DRDO patents have been made available to Industry for use at 'nil' cost.

vi. DRDO test facilities have been opened to industry for testing their equipment products.

Further, following policy initiatives have been undertaken by the Government to promote Defence Exports:

i. Standard Operating Procedures (SOPs) for the export of munitions list items has been simplified to reduce the processing time for export authorizations.

ii. A completely end-to-end online portal for receiving and processing authorization permission has been developed. The applications submitted on this portal are digitally signed and the authorizations are also digitally issued.

iii. An online portal has been created through which export leads received from various stakeholders are being disseminated directly to the Indian Defence Exporters who are registered on the portal.

iv. The Government has notified the Open General Export License (OGEL) - a one-time export license, which permits the industry to export specified items to specified destinations, enumerated in the OGEL, without seeking export authorisation on case to case basis during the validity of the OGEL.

v. A Scheme for Promotion of Defence Exports has been notified to provide an opportunity to the prospective exporters to get their product certified by the Government and provides access to the testing infrastructure of Ministry of Defence for initial validation of the product and its subsequent field trials. The certificate can be produced by the prospective exporter for marketing their products suitably in the global market.

vi. A separate Export Promotion Cell has been formed in the Department of Defence Production (DDP) to co-ordinate and follow-up on export related action including enquiries received from various countries and facilitate private sector and public sector companies for export promotion.

vii. Defence Attache (DA) Scheme for Export Promotion has been formulated under which funds are provided to DAs for export promotion of Indigenous defence products of both public and private sector.

viii. DPSUs have been allocated certain countries to establish their marketing offices to have focused attention to encourage Defence exports in those countries.

ix. Subject to strategic considerations, domestically manufactured defence products are being promoted through Lines of Credit. Defence Lines of Credit (LOCs) are extended to sovereign governments of Friendly Foreign Countries to enable buyers in those countries, to import goods and services from India on attractive credit terms.

x. A High Level Committee (HLC) has been constituted under the Chairmanship of Hon'ble Raksha Mantri to facilitate faster clearances to export of major indigenous defence platforms to Friendly Foreign Countries.

xi. Webinars are being organized with Friendly Foreign Countries under the aegis of DDP, Ministry of Defence with active participation from Indian Defence Industries.

This information was given by Raksha Rajya Mantri Shri Ajay Bhatt in a written reply to Ms Debasree Chaudhuri and Shrimati Poonam Mahajanin Lok Sabha today.

https://pib.gov.in/PressReleasePage.aspx?PRID=1782604

Press Information Bureau
Government of India

Ministry of Defence

Fri, 17 Dec 2021 2:44PM

Equipment produced under 'Make In India' initiative

Many significant projects including 155mm Artillery Gun system 'Dhanush', Light Combat Aircraft 'Tejas', 'Akash' Surface to Air Missile system, INS Kalvari, INS Khanderi, INS Chennai, Anti-Submarine Warfare Corvette (ASWC), Arjun Armoured Repair and Recovery Vehicle, Bridge Laying Tank, Landing Craft Utility, Bi-Modular Charge System (BMCS) for 155mm Ammunition, Medium Bullet Proof Vehicle (MBPV), Lakshya Parachute for Pilotless Target Aircraft, Thermal Imaging Sight Mark-II for T-72 tank, Offshore Surveillance Ship, Water Jet Fast Attack Craft, Inshore Patrol Vessel, Offshore Patrol Vessel, Fast Interceptor Boat, 25 T Tugs, etc. have been produced in the country under 'Make in India' initiative of the Government in last few years.

The Government has taken several policy initiatives and brought reforms to promote self-reliance in defence manufacturing. These policy initiatives are aimed at encouraging indigenous design, development and manufacture of defence equipment in the country, thereby reducing dependency on imports in long run. Important policy initiatives and reforms are as under:

i. DPP-2016 has been revised as Defence Acquisition Procedure (DAP)- 2020, which is driven by the tenets of Defence Reforms announced as part of 'Aatmanirbhar Bharat Abhiyan'.

ii. In order to promote indigenous design and development of defence equipment 'Buy {Indian-IDDM (Indigenously Designed, Developed and Manufactured)}' category has been accorded top most priority for procurement of capital equipment.

iii. Ministry of Defence has notified two 'Positive indigenisation lists' of total 209 items for which there would be an embargo on the import beyond the timeline indicated against them. This is a big step towards self-reliance in defence. This would offer a great opportunity to the Indian defence industry to manufacture these items using their own design and development capabilities to meet the requirements of the Armed Forces.

iv. The 'Make' Procedure of capital procurement has been simplified. There is a provision for funding upto 70% of development cost by the Government to Indian industry under Make-I category. In addition, there are specific reservations for MSMEs under the 'Make' procedure.

v. Procedure for 'Make-II' category (Industry funded), introduced in DPP-2016 to encourage indigenous development and manufacture of defence equipment has number of industry friendly provisions such as relaxation of eligibility criterion, minimal documentation, provision for considering proposals suggested by industry/individual etc. So far, 60 projects relating to Army, Navy & Air Force, have been accorded 'Approval in Principle'.

vi. The Government of India has enhanced FDI in Defence Sector up to 74% through the Automatic Route for companies seeking new defence industrial license and up to 100% by Government Route wherever it is likely to result in access to modern technology.

vii. An innovation ecosystem for Defence titled Innovations for Defence Excellence (iDEX) has been launched in April 2018. iDEX is aimed at creation of an ecosystem to foster innovation and technology development in Defence and Aerospace by engaging Industries including MSMEs, Start-ups, Individual Innovators, R&D institutes and Academia and provide them grants/funding and other support to carry out R&D which has potential for future adoption for Indian defence and aerospace needs.

viii. An indigenization portal namely SRIJAN has been launched in August 2020 for DPSUs/Services with an industry interface to provide development support to MSMEs/Startups/Industry for import substitution. So far, 16445 Defence items, which were

earlier imported, have been displayed on the portal. The Indian industry have shown their interest in 3559 items. Out of them, 342 have already been indigenized.

ix. "Offset portal" has been launched in May 2019 to ensure greater transparency, efficiency and accountability in the process. Reforms in Offset policy have been included in DAP 2020, with thrust on attracting investment and Transfer of Technology for Defence manufacturing, by assigning higher multipliers to them.

x. Government has notified the 'Strategic Partnership (SP)' Model in May 2017, which envisages establishment of long-term strategic partnerships with Indian entities through a transparent and competitive process, wherein they would tie up with global Original Equipment Manufacturers (OEMs) to seek technology transfers to set up domestic manufacturing infrastructure and supply chains.

xi. Government has notified a 'Policy for indigenisation of components and spares used in Defence Platforms' in March 2019 with the objective to create an industry ecosystem which is able to indigenize the imported components (including alloys & special materials) and sub-assemblies for defence equipment and platform manufactured in India.

xii. Government has established two Defence Industrial Corridors, one each in Uttar Pradesh and Tamil Nadu to attract total investments of Rs 20,000 Cr in the two Defence corridors by year 2024. So far, investment worth Rs 3600 Cr have been made in both the corridors by public as well private sector companies. Moreover, the respective State Governments have also published their Aerospace & Defence Policies to attract private players as well as foreign companies including Original Equipment Manufacturers (OEMs) in these two corridors.

xiii. An Inter-Governmental Agreement (IGA) on "Mutual Cooperation in Joint Manufacturing of Spares, Components, Aggregates and other material related to Russian/Soviet Origin Arms and Defence Equipment" was signed in September 2019. The objective of the IGA is to enhance the After Sales Support and operational availability of Russian origin equipment currently in service in Indian Armed Forces by organizing production of spares and components in the territory of India by Indian Industry by way of creation of Joint Ventures/Partnership with Russian Original Equipment Manufacturers (OEMs) under the framework of the "Make in India" initiative.

xiv. Defence Products list requiring Industrial Licences has been rationalised and manufacture of most of parts or components does not require Industrial License. The initial validity of the Industrial Licence granted under the IDR Act has been increased from 03 years to 15 years with a provision to further extend it by 03 years on a case-to-case basis.

xv. Defence Investor Cell (DIC) has been created in Feb-2018 in the Ministry to provide all necessary information including addressing queries related to investment opportunities, procedures and regulatory requirements for investment in the sector. As on 31st Oct 2021, 1257 queries had been received and addressed by DIC.

This information was given by Raksha Rajya Mantri Shri Ajay Bhatt in a written reply to Shri Sisir Kumar Adhikari in Lok Sabha today.

https://pib.gov.in/PressReleasePage.aspx?PRID=1782610

PUNEKAR NEWS

Sat, 18 Dec 2021

Pune: DRDO Establishment HEMRL displays indigenous defence products during exhibition

Pashan: High Energy Materials Research Laboratory (HEMRL), Pune, a premier DRDO establishment for the development of an entire range of explosives, propellants and pyrotechnics for powering defence systems like missiles, rockets, guns, grenades, bombs, etc.

HEMRL is known for working towards self-reliance in the field of defence technology contributing significantly to the strategic and tactical system.

Azadi Ka Amrit Mahotsav is an initiative of Govt of India to celebrate and commemorate the 75 years of progressive India and the glorious history of its people, culture and achievements. DRDO celebrated the Mahotsav by conducting various activities with a focus on the theme of "Atma Nirbhar Bharat".

On this occasion, HEMRL organized an exhibition and showed the contribution of HEMRL in defence-related products and systems. P K Mehta, DS & DG (ACE) inaugurated the function in the presence of Shri KPS Murthy, OS & Director, HEMRL, Pune & Sanjeev Gupta, General Manager of Ordance Factory Dehuroad.

Indigenously developed products by the HEMRL was shown in the exhibition. Live demonstration of flares and door cutting explosive system were undertaken. The main attraction at the event was Agni, Ashtra, BrahMos, Pinnaka, MDS system, ERA Mark-II laden tank, Gravitational mixer, Smoke ammunition, IR Flares, Explosive detection kit, etc. there was more than 900 participants of the general public, defence enthusiasts, school and college students for the exhibition.

https://www.punekarnews.in/pune-drdo-establishment-hemrl-displays-indigenous-defence-products-during-exhibition/

THE TIMES OF INDIA

Sat, 18 Dec 2021

Guided rockets: PSU made to work with pvt cos to get DRDO systems

By Shishir Arya

Nagpur: The new defence PSUs formed out of the Ordnance Factory Board (OFB) are now depending on the private sector to complete the latest guided Pinaka rocket systems they are working on. The guided rocket has a range of over 70km and is precise on the target due to the guidance kit. It is being jointly made by Yantra India Limited (Yantra) and Munitions India Limited (MIL). Based at Nagpur, Yantra is providing the hardware while filling is to be done by MIL, which has its headquarters in Pune.

The transfer of technology (ToT) for the kit has happened to Nagpur's Economic Explosives Limited (EEL), an arm of Solar Group, and Bharat Forge, from Research Centre Imarat (RCI) one of the labs of DRDO. EEL is also working on the guided rocket project and is at an advanced stage.

Without the technology for the guidance kits, on which the performance of the rockets hinges, the PSUs had approached the two companies to complete the project.

As EEL is also making the Pinaka rockets, getting the kits from it is ruled out. It is learnt that EEL has also not agreed to comply with the conflict of interest clause, on account of its own Pinaka project.

The PSUs are learnt to be now close to a deal with Bharat Forge, which has the technology but is not developing the rocket. A source in Bharat Forge confirmed that the company will be supplying the kit. After that, it would be a joint endeavour and the company will ensure that the PSU remains competitive in the pricing.

Both EEL and Bharat Forge have got the guidance kit in sub-assembly condition. This means the companies will only be integrating the sub-assemblies into one component to be fitted into the rocket. The same would be passed on to the PSUs.

The ToT happened under the development-cum production partner mode, under which the private entity also puts in funds, said a source in one of the companies. Under the model, even private entities are being roped in for development of products through ToTs.

However, this has put the PSUs at a disadvantage. Normally, the ToTs from DRDO labs have gone to the erstwhile ordnance factories. In the new scenario, the TOT is with the private players, said sources. Even the ordnance factories had the know-how to make the system if the technology was made available, said a source.

After much pushing, the PSUs will now be getting the guidance kits for initial lot of rockets, which would be used for testing purposes. This happened after the matter was escalated to higher levels. Even as it is expected that a further arrangement would continue with the DRDO lab, the private sector route has also been kept open.

Pinaka is one of the crucial orders for the factories, which are at present making the Pinaka Mk1 variant. As there are plans to replace Pinaka Mk1 with the advanced versions, even the PSUs will have to match the pace.

https://timesofindia.indiatimes.com/city/nagpur/guided-rockets-psu-made-to-work-with-pvt-cos-to-get-drdo-systems/articleshow/88348028.cms

THE ECONOMIC TIMES

Sat, 18 Dec 2021

HAL bags ADE-DRDO supply order for 'ABHYAS' target platform

Synopsis

ABHYAS was first successfully flight-tested in May 2019 and subsequent evaluation trials are being conducted by ADE, DRDO. "This order would mark the beginning of series production of ABHYAS," the statement said.

Hindustan Aeronautics Limited on Friday said it has secured an order for manufacturing, assembly, integration, testing and supply of High Speed Expendable Aerial Target (HEAT) System, known as 'ABHYAS', from Aeronautical Development Establishment (ADE), DRDO. Post successful completion of this initial order, HAL said in a statement it would be identified as Development-cum-Production Partner (DcPP) for supply of this target system along with a private firm (50 per cent of the volume).

ABHYAS - the High-speed Expendable Aerial Target (HEAT) being flight-tested by DRDO from the Integrated Test Range (ITR), at Chandipur beach.

The platform is estimated to have large requirement from the tri-services, and DRDO laboratories for evaluation trials of missile programmes, according to the Bengaluru-headquartered HAL.

ABHYAS was first successfully flight-tested in May 2019 and subsequent evaluation trials are being conducted by ADE, DRDO.

"This order would mark the beginning of series production of ABHYAS," the statement said.

ABHYAS is designed and developed by DRDO's ADE, Bengaluru.

The air vehicle is launched using twin under-slung boosters which provide the initial acceleration to the vehicle. It is powered by a gas turbine engine to sustain a long endurance flight at subsonic speed.

The target aircraft is equipped with Micro Electro Mechanical System (MEMS) based Inertial Navigation System (INS) for navigation along with the Flight Control Computer (FCC) for guidance and control, it was stated.

The vehicle is programmed for fully autonomous flight. The check-out of air vehicle is done using laptop-based Ground Control Station (GCS), the statement added.

https://economictimes.indiatimes.com/news/defence/hal-bags-ade-drdo-supply-order-for-abhyas-target-platform/articleshow/88335376.cms

TIMESNOWNEWS.COM

Sat, 18 Dec 2021

ABHYAS to augment India's defence capability with HEAT system as HAL secures massive order – Details

ABHYAS was first successfully flight-tested in May 2019 and subsequent evaluation trials are being conducted by Aeronautical Development Establishment of the DRDO.

Key Highlights

- ***It is estimated to have large requirement from tri-services – Indian Army, Indian Air Force and Indian Navy and DRDO laboratories***
- ***This order would mark the beginning of the series production of ABHYAS***

New Delhi: In yet another shot in the arm for India, state-owned Hindustan Aeronautics Limited (HAL) has successfully secured an order for manufacturing, assembling, integrating, testing and supplying the High Speed Expendable Aerial Target (HEAT) system, known as ABHYAS, from the Aeronautical Development Establishment of the Defence Research and Development Organisation (DRDO).

HAL's High Speed Expendable Aerial Target system, known as ABHYAS. | Photo Credit: Twitter

Following the successful completion of the order, HAL would be identified as the development-cum-production partner for the supply of this target system along with a private firm (50% of the volume).

It is estimated to have large requirement from tri-services – Indian Army, Indian Air Force and Indian Navy and DRDO laboratories for evaluation trials of the missile programme.

ABHYAS was first successfully flight-tested in May 2019 and subsequent evaluation trials are being conducted by ADE-DRDO.

This order would mark the beginning of the series production of ABHYAS.

The latest development comes after HAL signed a contract with Bharat Electronics Limited (BEL) for the development and supply of 20 types of systems for the LCA Tejas Mk1A programme.

The 5-year contract from 2023-2028 is pegged at Rs 2,400 crore, and involves supplying critical avionics Line Replaceable Units, flight control computers and night flying line-replaceable units.

"HAL signed the biggest ever contract with an Indian company-BEL valued at Rs 2400 crores for the development and supply of critical avionics LRUs of 83 LCA Tejas Mk1A production program," the HAL announced on social media platform Twitter.

https://www.timesnownews.com/india/article/abhyas-to-augment-indias-defence-capability-with-heat-system-as-hal-secures-massive-order-details/841324

जागरण

Sat, 18 Dec 2021

ABHYAS के रूप में HAL को मिला बड़ा आर्डर, इस HEAT सिस्टम को बनाकर बढ़ाएगा भारत की रक्षा क्षमता

इस प्रारंभिक आदेश के सफलतापूर्वक पूरा होने के बाद से एचएएल को एक निजी फर्म (वाल्यूम का 50 प्रतिशत) के साथ इस लक्ष्य प्रणाली की आपूर्ति के लिए विकास सह उत्पादन भागीदार (डीसीपीपी) के रूप में पहचाना जाएगा।

By Nitin Arora

नई दिल्ली: भारत को और अधिक मजबूत करने की दिशा में, भारत की ही स्वामित्व वाली हिंदुस्तान एयरोनाटिक्स लिमिटेड (एचएएल) को रक्षा अनुसंधान और विकास संगठन (DRDO) के वैमानिकी विकास प्रतिष्ठान से हाई स्पीड एक्सपेंडेबल एरियल टारगेट (हीट) सिस्टम, जिसे ABHYAS के रूप में जाना जाता है, के निर्माण, संयोजन, एकीकरण, परीक्षण और आपूर्ति के लिए सफलतापूर्वक एक बड़ा आर्डर प्राप्त हुआ है।

इस प्रारंभिक आदेश के सफलतापूर्वक पूरा होने के बाद, एचएएल को एक निजी फर्म (वाल्यूम का 50 प्रतिशत) के साथ इस लक्ष्य प्रणाली की आपूर्ति के लिए विकास सह उत्पादन भागीदार (डीसीपीपी) के रूप में पहचाना जाएगा। मिसाइल कार्यक्रमों के मूल्यांकन परीक्षणों के लिए मंच को त्रि-सेवाओं, डीआरडीओ प्रयोगशालाओं से बड़ी आवश्यकताओं का अनुमान है। बता दें कि ABHYAS का पहली बार मई 2019 में सफलतापूर्वक उड़ान परीक्षण किया गया था और फिर बाद में एडीई- डीआरडीओ द्वारा मूल्यांकन परीक्षण किए जा रहे हैं। यह आदेश ABHYAS की श्रृंखला के उत्पादन की शुरुआत को चिह्नित करेगा।

ABHYAS के बारे में: इसे डीआरडीओ के वैमानिकी विकास प्रतिष्ठान (एडीई), बेंगलुरु द्वारा डिजाइन और विकसित किया गया है। हवाई वाहन को ट्विन अंडर-स्लंग बूस्टर का उपयोग करके लान्च किया जाता है जो वाहन को प्रारंभिक त्वरण प्रदान करते हैं। यह गैस टर्बाइन इंजन द्वारा संचालित है जो सबसोनिक गति पर लंबी सहनशक्ति उड़ान बनाए रखने के लिए है।

लक्ष्य विमान मार्गदर्शन और नियंत्रण के लिए उड़ान नियंत्रण कंप्यूटर (एफसीसी) के साथ नेविगेशन के लिए माइक्रो इलेक्ट्रो मैकेनिकल सिस्टम (एमईएमएस) आधारित जड़त्वीय नेविगेशन सिस्टम (आईएनएस) से लैस है। वाहन को पूरी तरह से स्वायत्त उड़ान के लिए प्रोग्राम किया गया है। लैपटाप आधारित ग्राउंड कंट्रोल स्टेशन (जीसीएस) का उपयोग करके हवाई वाहनों का चेक-आउट किया जाता है।

https://www.jagran.com/news/national-hal-gets-a-big-order-in-the-form-of-abhyas-will-increase-india-defense-capability-by-making-this-heat-system-22301749.html

DRDO on Twitter

MyGovIndia @mygovindia · 20h

Inviting young creative minds to participate in the short Animation Film and Digital Wallpaper design contest hosted by @DRDO_India as a part of Azadi Ka #AmritMahotsav celebrations. Visit: contest.drdolms.in for more details.

Rajnath Singh @rajnathsingh · Dec 18

The Agni P Missile has been successfully tested off the coast of Odisha.

The flight test has proven the reliable performance of all the advanced technologies integrated into the system.

Congratulations to Team @DRDO_India. The nation is proud of their achievements.


A. Bharat Bhushan Babu @SpokespersonMoD · Dec 18
.@DefenceMinIndia @rajnathsingh @RajnathSingh_in @PIB_India @PIBHind
@IAF_MCC @indiannavy @adgpi @AjaybhattBJP4UK @drajaykumar_ias
@DRDO_India
@PBNS_India @airnewsalerts
0:24 376 views


Prasar Bharati News Services पी.बी.एन.एस.
@PBNS_India
WATCH | Flight demonstration of Controlled Aerial Delivery System of 500 kg (CADS-500) lands precisely, during trials by Aerial Delivery Research and Development Establishment (ADRDE),DRDO.
@DRDO_India
Watch on Twitter
11:18 AM · Dec 19, 2021

ANI
@ANI

Today India successfully testfired the nuclear-capable strategic Agni Prime missile off the coast of Odisha from Balasore.

12:32 PM · Dec 18, 2021

ANI @ANI · Dec 18, 2021

Replying to @ANI

Defence Minister Rajnath Singh congratulated the DRDO for the successful flight test and expressed his happiness for the excellent performance of the system: DRDO

ANI
@ANI

Secretary DDR&D and Chairman DRDO Dr G Satheesh Reddy appreciated the efforts of the team to have done the second development flight trial with many additional features and congratulated them for the consecutive success within the same calendar year: DRDO

12:40 PM · Dec 18, 2021

DRDO
@DRDO_India

Controlled Aerial Delivery System of 500 kg (CADS-500) lands precisely during demonstration trials by #ADRDE, DRDO. #AmritMahotsav #AtmaNirbharBharat

pib.gov.in/PressReleseDet...

11:13 AM · Dec 19, 2021

DRDO @DRDO_India · Dec 18

New generation ballistic missile 'Agni P' successfully test-fired by DRDO from Dr APJ Abdul Kalam Island. #AmritMahotsav #IconicWeek

pib.gov.in/PressReleseDet...

DRDO @DRDO_India · Dec 17

Exhibiting a range of indigenous developments,#HEMRL, Pune celebrated #AmritMahotsav. Live demonstration of flares, explosive technologies, outdoor display of missiles captivated the young minds. Visitors evinced keen interest in the technologies #IconicWeek #InspiringInnovations

Defence Strategic: National/International

Press Information Bureau
Government of India

Ministry of Defence

Sat, 18 Dec 2021 4:25PM

Raksha Mantri Shri Rajnath Singh spells out broad contours of Government's vision of 'India beyond 75' at FICCI Annual General Meeting

Says, the aim is to make India a global defence manufacturing hub

Armed Forces modernisation and creating an 'Aatmanirbhar' defence industry to deal with present & future security threats is our focus: RM

Focusses on 'Make in India, Make for India and Make for the world'

Raksha Mantri Shri Rajnath Singh addressed the 94th Annual General Meeting of Federation of Indian Chambers of Commerce & Industry (FICCI), on the theme 'India Beyond 75', in New Delhi on December 18, 2021. He voiced the Government's vision to make India a global defence manufacturing hub in the coming times, stressing that the focus is to modernise the Armed Forces and create a strong & 'Aatmanirbhar' defence industry which can help in safeguarding the country from conventional and non-conventional, present and future security threats.

Underscoring the importance of achieving 'Aatmanirbharta' in defence, Shri Rajnath Singh said, India cannot depend on other countries for defence technologies due to its stature, its geographical location as well as the security challenges it faces. "For the security of India and its people, it is necessary that we develop our defence capacity and capability that even the most powerful country in the world has to think a thousand times before planning anything that endangers our interests. Our government's aim is not to attack anyone, but prepare our Armed Forces to be ready at all times to give a befitting reply to the country's enemies," he said.

The Raksha Mantri asserted that, on one side, there is one country born out of the partition and is worried seeing the progress of India, while on the other, there is a nation which keeps on creating new plans. He highlighted the recent visits of Defence Ministers of US, Russia & France, and said, "countries across the world have friendly relations with us and we have told them that we wish to manufacture defence equipment in India as national security is our top priority". He also mentioned about the recent agreement with Russia, worth more than Rs 5,000 crore, to manufacture over six lakh AK-203 Rifles in Amethi, inviting every country to 'Make in India, Make for India and Make for the world'.

Shri Rajnath Singh listed out measures taken by the Government to promote foreign investment, including increasing the FDI limit to 74 per cent through automatic route and 100 per cent through Government route under certain circumstances. He said, foreign investment will help to create an ecosystem of defence manufacturing in the country and achieve 'Aatmanirbhar Bharat', envisioned

by Prime Minister Shri Narendra Modi. He also spoke about the initiatives taken by the Government to reduce dependency on imports, such as notifying two positive indigenisation lists of over 200 items. “The items in ‘Positive List' will cross the 1,000-mark in this decade. This is our vision of ‘India Beyond 75’,” he said.

Saying that the defence sector has been able to overcome the challenges posed by COVID-19 due to policy reforms brought out by the government, the Raksha Mantri exhorted the private sector to take advantage of the policies and contribute towards nation building. He said, the decision to corporatise Ordnance Factory Board was taken in order to provide fair competition between public and private entities in the defence sector and bring efficiency in government companies. He appreciated the industry for working with the Government to achieve self-reliance. He made special mention of the order of 10 lakh Multi-Mode Hand Grenades given to Economic Explosives Limited following Transfer of Technology from Defence Research & Development Organisation (DRDO); the first batch of which has already been handed over to the Indian Army.

Voicing the Government’s aim to tap the potential of MSMEs and ensure their progress, Shri Rajnath Singh said, a series of steps have been taken to encourage indigenisation, development & design in the defence and aerospace sector. “At present, India's defence and aerospace manufacturing market is worth Rs 85,000 crore. I believe, in 2022, it will increase to Rs one lakh crore. When I talk about ‘India Beyond 75’, I see defence and aerospace manufacturing market in India to be Rs five lakh crore by 2047. The present contribution of private companies is Rs 18,000 crore in the market of Rs 85,000 crore. According to the current situation, more than Rs one lakh crore will be the contribution of the private sector in the market Rs five lakh crore in the future,” he said.

On the Innovation for Defence Excellence (iDEX) initiative, the Raksha Mantri stated that while it is solving the technical problems of the Armed Forces, it has identified many technologies such as military security systems, secure hardware encryption devices, unmanned surface and underwater vehicles, 4G/LTE strategic local area networks, radar, artificial intelligence-based image analysis satellites. Stressing that the future wars will be fought in the digital war zone inter-connected through Artificial Intelligence, Augmented Reality & Virtual Reality, he urged the educational institutions to focus on specialised courses in defence technologies to meet the demand of professionals who can covert the future challenges into opportunities and bolster the security framework of the country. He called upon FICCI to play an important role in the collective efforts to take India to newer heights.

To realise its vision of making India a global manufacturing hub, Shri Rajnath Singh said, the Government has taken several measures, including increase the defence capital outlay by 18.75 per cent in the last budget. He added that 64 per cent of our total capital outlay, which is about Rs 70,221 crore, has been reserved for domestic procurement. He appreciated the fact that the country’s defence exports have grown by 325 per cent in the last five years and exuded confidence that India will not only achieve its export target of Rs 35,000 crore by 2024-2025 but will also become a net exporter of defence equipment. The private sector accounts for 95 per cent of the country's defence exports, he said.

The Raksha Mantri lauded the industry for their contribution to the Government’s efforts to deal with the COVID-19 pandemic. “Work was done on a war footing to meet the huge demand of PPE kits, ventilators, masks and sanitizers across the country. In addition, in a country where there was always a delay in vaccination, we took the pledge at the very beginning. As a result, today 55 per cent of India's population has been vaccinated. The work, which earlier governments did in years, our government did it within days,” he said.

Shri Rajnath Singh concluded his address by extending his best wishes to Shri Sanjiv Mehta who took over as the Chairman of FICCI in place of Shri Uday Shankar. He hoped that the industry & organisations like FICCI will help in making India the world's leading exporter of defence equipment.

https://pib.gov.in/PressReleasePage.aspx?PRID=1783013

पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Sat, 18 Dec 2021 4:25PM

फिक्की की वार्षिक आम बैठक में रक्षा मंत्री श्री राजनाथ सिंह ने "इंडिया बियॉन्ड 75" पर सरकार के दृष्टिकोण की व्यापक रूपरेखा पेश की कहा, भारत को वैश्विक रक्षा विनिर्माण केंद्र बनाना है उद्देश्य

वर्तमान और भविष्य के सुरक्षा खतरों से निपटने के लिए सशस्त्र बलों का आधुनिकीकरण और "आत्मनिर्भर" रक्षा उद्योग बनाना हमारा ध्येय है : रक्षा मंत्री

'मेक इन इंडिया, मेक फॉर इंडिया और मेक फॉर द वर्ल्ड' पर ज्यादा जोर

रक्षा मंत्री श्री राजनाथ सिंह ने 18 दिसंबर, 2021 को नई दिल्ली में "इंडिया बियॉन्ड 75" विषय पर फेडरेशन ऑफ इंडियन चैंबर्स ऑफ कॉमर्स एंड इंडस्ट्री (फिक्की) की 94वीं वार्षिक आम बैठक को संबोधित किया। उन्होंने आने वाले समय में भारत को वैश्विक रक्षा विनिर्माण केंद्र बनाने के लिए सरकार के दृष्टिकोण को सामने रखा, सशस्त्र बलों के आधुनिकीकरण पर जोर दिया और मजबूत व "आत्मनिर्भर" रक्षा उद्योग बनाने पर ध्यान केंद्रित किया जो देश को पारंपरिक और गैर पारंपरिक, वर्तमान और भविष्य के सुरक्षा खतरों से बचाने में मदद कर सकता है।

रक्षा में "आत्मनिर्भर भारत" होने के महत्व को रेखांकित करते हुए श्री राजनाथ सिंह ने कहा कि भारत अपने कद, भौगोलिक स्थिति और सुरक्षा चुनौतियों के कारण रक्षा प्रौद्योगिकियों के लिए अन्य देशों पर निर्भर नहीं रह सकता है। उन्होंने कहा कि भारत और उसके लोगों की सुरक्षा के लिए यह आवश्यक है कि हम अपनी रक्षा क्षमता और विकसित करें, ताकि दुनिया के सबसे शक्तिशाली देश को भी हमारे हितों को खतरे में डालने वाली कोई भी योजना बनाने से पहले एक हजार बार सोचना पड़े। हमारी सरकार का उद्देश्य किसी पर हमला करना नहीं है, बल्कि देश के दुश्मनों को मुंहतोड़ जवाब देने के लिए हमारे सशस्त्र बलों को हर समय मुस्तैद रहने के लिए तैयार करना है।

रक्षा मंत्री ने कहा कि एक तरफ एक देश विभाजन से पैदा हुआ है और भारत की प्रगति को देखकर चिंतित है तो दूसरी तरफ एक ऐसा देश है जो नई योजनाएं बनाता रहता है। उन्होंने अमेरिका, रूस और फ्रांस के रक्षा मंत्रियों की हाल की यात्राओं पर प्रकाश डाला और कहा कि दुनिया भर के देशों से हमारे मैत्रीपूर्ण संबंध हैं और हमने उनसे कहा है कि हम भारत में रक्षा उपकरणों का निर्माण करना चाहते हैं क्योंकि राष्ट्रीय सुरक्षा हमारी सर्वोच्च प्राथमिकता है। उन्होंने अमेठी में छह लाख से अधिक एके-203 राइफल्स के निर्माण को लेकर रूस के साथ 5000 करोड़ रुपये से अधिक के हालिया समझौते का भी उल्लेख किया, जिसमें हर देश को 'मेक इन इंडिया, मेक फॉर इंडिया और मेक फॉर द वर्ल्ड' के लिए आमंत्रित किया गया था।

श्री राजनाथ सिंह ने विदेशी निवेश को बढ़ावा देने के लिए सरकार द्वारा उठाए गए उपायों को सूचीबद्ध किया, जिसमें कुछ परिस्थितियों में एफडीआई सीमा को सहज (ऑटोमैटिक) मार्ग से 74 प्रतिशत और सरकारी मार्ग से 100 प्रतिशत तक बढ़ाना शामिल है। उन्होंने कहा कि विदेशी निवेश देश में रक्षा निर्माण का पारिस्थितिकी तंत्र बनाने और प्रधानमंत्री श्री नरेन्द्र मोदी की परिकल्पना "आत्मनिर्भर भारत" को प्राप्त

करने में मदद करेगा। उन्होंने आयात पर निर्भरता को कम करने के लिए सरकार द्वारा की गई पहल के बारे में भी बताया, जैसे 200 से अधिक वस्तुओं की दो सकारात्मक स्वदेशीकरण सूचियों को अधिसूचित करना। उन्होंने कहा कि इस दशक में 'सकारात्मक सूची' में आइटम 1000 का आंकड़ा पार कर जाएंगे। यह है "इंडिया बियॉन्ड 75" का हमारा विजन।

सरकार द्वारा लाए गए नीतिगत सुधारों के कारण रक्षा क्षेत्र कोविड-19 से उत्पन्न चुनौतियों को दूर करने में सक्षम है, रक्षा मंत्री ने निजी क्षेत्र को नीतियों का लाभ उठाने और राष्ट्र निर्माण में योगदान करने के लिए प्रोत्साहित किया। उन्होंने कहा कि आयुध निर्माणी बोर्ड को निगमित करने का निर्णय रक्षा क्षेत्र में सार्वजनिक और निजी संस्थाओं के बीच उचित प्रतिस्पर्धा और सरकारी कंपनियों में दक्षता लाने के लिए लिया गया था। उन्होंने आत्मनिर्भरता प्राप्त करने के लिए सरकार के साथ काम करने के लिए उद्योग की सराहना की। उन्होंने रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) से तकनीकी हस्तांतरण के बाद इकोनॉमिक एक्सप्लोसिव्स लिमिटेड को दिए गए 10 लाख मल्टी मोड हथगोले के ऑर्डर का विशेष उल्लेख किया, जिसकी पहली खेप पहले ही भारतीय सेना को सौंपी जा चुकी है।

एमएसएमई की क्षमता का उपयोग करने और उनकी प्रगति सुनिश्चित करने के सरकार के उद्देश्य को व्यक्त करते हुए श्री राजनाथ सिंह ने कहा कि रक्षा और हवाई क्षेत्र में स्वदेशीकरण, विकास और डिजाइन को प्रोत्साहित करने के लिए कई कदम उठाए गए हैं। वर्तमान में भारत का रक्षा और एयरोस्पेस विनिर्माण बाजार 85000 करोड़ रुपये का है। मेरा मानना है कि 2022 में यह बढ़कर एक लाख करोड़ रुपये हो जाएगा। जब मैं "इंडिया बियॉन्ड 75" की बात करता हूं तो मुझे लगता है कि 2047 तक भारत में रक्षा और एयरोस्पेस विनिर्माण बाजार पांच लाख करोड़ रुपये का हो जाएगा। उन्होंने कहा कि 85000 करोड़ रुपये के बाजार में निजी कंपनियों का मौजूदा योगदान 18000 करोड़ रुपये है। वर्तमान स्थिति के अनुसार, भविष्य में पांच लाख करोड़ रुपये के बाजार में निजी क्षेत्र का योगदान एक लाख करोड़ रुपये से अधिक होगा।

इनोवेशन फॉर डिफेंस एक्सीलेंस (आईडीईएक्स) की पहल पर रक्षा मंत्री ने कहा कि यह सशस्त्र बलों की तकनीकी समस्याओं को हल कर रहा है, इसने सैन्य सुरक्षा प्रणाली, सुरक्षित हार्डवेयर एन्क्रिप्शन उपकरण, मानव रहित बाहय परत और पानी के नीचे के वाहन, 4जी/एलटीई रणनीतिक स्थानीय क्षेत्र नेटवर्क, रडार, कृत्रिम बुद्धि आधारित छवि विश्लेषण उपग्रह जैसी कई तकनीकों की पहचान की है। उन्होंने इस बात पर जोर दिया कि भविष्य के युद्ध आर्टिफिशियल इंटेलिजेंस, ऑगमेंटेड रियलिटी और वर्चुअल रियलिटी से जुड़े हुए डिजिटल क्षेत्र में लड़े जाएंगे, उन्होंने शैक्षणिक संस्थानों से ऐसे पेशेवरों की मांग को पूरा करने के लिए रक्षा प्रौद्योगिकियों में विशेष पाठ्यक्रमों पर ध्यान केंद्रित करने का आग्रह किया जो भविष्य की चुनौतियों को अवसरों में बदल सकते हैं और देश की सुरक्षा ढांचे को मजबूती दे सकते हैं। उन्होंने फिक्की से भारत को नई ऊंचाइयों पर ले जाने के सामूहिक प्रयासों में महत्वपूर्ण भूमिका निभाने का आह्वान किया।

भारत को वैश्विक विनिर्माण केंद्र बनाने के अपने दृष्टिकोण को साकार करने पर श्री राजनाथ सिंह ने कहा कि सरकार ने पिछले बजट में रक्षा पूंजी परिव्यय में 18.75 प्रतिशत की वृद्धि सहित कई उपाय किए हैं। उन्होंने कहा कि हमारे कुल पूंजीगत परिव्यय का 64 प्रतिशत जो लगभग 70221 करोड़ रुपये है, घरेलू खरीद के लिए आरक्षित किया गया है। उन्होंने इस तथ्य की सराहना की कि पिछले पांच वर्षों में देश का रक्षा निर्यात 325 प्रतिशत बढ़ा है और विश्वास व्यक्त किया कि भारत न केवल 2024-2025 तक 35000 करोड़ रुपये के अपने निर्यात लक्ष्य को प्राप्त करेगा बल्कि रक्षा उपकरणों का शुद्ध निर्यातक भी बन जाएगा। उन्होंने कहा कि देश के रक्षा निर्यात में निजी क्षेत्र की हिस्सेदारी 95 फीसदी है।

रक्षा मंत्री ने कोविड-19 महामारी से निपटने के लिए सरकार के प्रयासों में उद्योगों के योगदान की सराहना की। उन्होंने कहा कि देश भर में पीपीई किट, वेंटिलेटर, मास्क और सैनिटाइज़र की भारी मांग को

पूरा करने के लिए युद्ध स्तर पर काम किया गया। इसके अलावा जिस देश में टीकाकरण में हमेशा देरी होती थी, हमने शुरुआत में ही यह संकल्प ले लिया था। इसी का परिणाम है कि आज भारत की 55 प्रतिशत जनसंख्या का टीकाकरण किया जा चुका है। जो काम पहले की सरकारों ने सालों में किया वह हमारी सरकार ने दिनों में किया।

श्री राजनाथ सिंह ने श्री संजीव मेहता को शुभकामनाएं देते हुए अपने संबोधन का समापन किया। श्री मेहता ने श्री उदय शंकर के स्थान पर फिक्की के अध्यक्ष के रूप में पदभार ग्रहण किया है। उन्होंने उम्मीद जताई कि भारत को रक्षा उपकरणों में दुनिया का प्रमुख निर्यातक बनाने में फिक्की जैसे उद्योग और संगठन मदद करेंगे।

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Press Information Bureau
Government of India

Ministry of Defence

Fri, 17 Dec 2021 2:46PM

Indigenization of Defence Products

Two Positive Indigenisation Lists comprising 101 and 108 items were promulgated on 21 Aug 2020 and 31 May 2021 respectively. The lists have been hosted on Ministry of Defence Website to give wide visibility to the Defence Industrial base in enabling them to effectively meet requirements of the Armed Forces. The initiative has been welcomed by the Indian Industry.

Positive Indigenisation Lists comprise defence equipment which will be designed, developed and manufactured over a period from 2020 to 2025. Therefore, it will not be possible to assess actual savings at this juncture.However, as per available projections, it is estimated that over three and a half lakh Crores worth of equipment included in the Positive Indigenisation Lists will be ordered from Indian Vendors between 2020 to 2028.

The Positive Indigenisation Lists comprise not just of simple equipment but also some high technology weapon systems like Artillery Guns, Wheeled Armoured Fighting Vehicles, Light Combat Aircraft, Light Combat Helicopters, next Generation Missile Vessels & Corvettes, Land based High Power Radars, Land based Short Range Surface to Air Missiles, various types of Software Defined Radios, etc.

Focus has also been given to indigenisation of ammunition, which is a recurring requirement. Initiatives to promote indigenisation are likely to result in number of spinoffs; the major one being transformation of Indian Military from Buyers' to Builders' in respect of indigenous Defence production, and as a nation, from 'Importer to Exporter' of defence systems.The defence production sector is likely to emerge as one of the key contributors to nation's economy as well as creation of numerous job opportunities. For instance, setting up of the two defence corridors, one each in Uttar Pradesh and Tamil Nadu, aims to generate employment in coming years.Positive Indigenisation lists are promulgated periodically by MoD by obtaining and collating inputs from all stakeholders, viz. Services, DRDO, DDP and Private Industry.

This information was given by Raksha Rajya Mantri Shri Ajay Bhatt in a written reply to Shrimati Rita Bahuguna Joshi in Lok Sabha today.

https://pib.gov.in/PressReleasePage.aspx?PRID=1782613

Press Information Bureau
Government of India

Ministry of Defence

Sun, 19 Dec 2021 1:55PM

Mormugao, Indian Navy's second ship of the Project 15B, sails for maiden sea trials on Goa liberation day

Mormugao, Indian Navy's second indigenous stealth destroyer of the P15B class, planned to be commissioned in mid 2022, proceeded on her maiden sea sortie today. 19th December is perhaps the most befitting date for the ship to put to sea as today the nation celebrates 60 years of Goa’s liberation from Portuguese rule. The Indian Navy played a pivotal role in the liberation and dedicating the ship's name to the maritime state of Goa will not just enhance the bonding between the Indian Navy and the people of Goa, but also link the ship's identity permanently to the crucial role the Navy played in nation-building.

Mormugao is being built at Mazagon Dock Shipbuilders Ltd (MDSL) as part of the Project 15B destroyers. The ship incorporates several niche indigenous technologies and is a shining example of Atma Nirbhar Bharat. She has provided thrust and impetus to the 'Make in India' initiative.

Mormugao will add significantly to the Indian Navy’s combat capabilities. With the recent commissioning in November 2021 of INS Visakhapatnam and the fourth P75 submarine INS Vela, commencement of sea trials of Mormugao is testimony to the cutting-edge capabilities of MDSL and the strong indigenous shipbuilding tradition of a modern and vibrant India.

https://pib.gov.in/PressReleasePage.aspx?PRID=1783193

पत्र सूचना कार्यालय
भारत सरकार

रक्षा मंत्रालय

Sun, 19 Dec 2021 1:55PM

गोवा मुक्ति दिवस पर प्रोजेक्ट 15बी के तहत भारतीय नौसेना का दूसरा जहाज मोरमुगांव पहले समुद्री परीक्षण सफर के लिए रवाना

भारतीय नौसेना का पी15बी श्रेणी का दूसरा स्वदेशी स्टील्थ विध्वंसक पोत मोरमुगांव, जिसे 2022 के मध्य में अधिकृत रूप से कार्यान्वित करने की योजना है, वह आज अपनी पहली समुद्री परीक्षण यात्रा पर रवाना हुआ। इस जहाज को समुद्र में उतारने के लिए 19 दिसंबर की तारीख सबसे उपयुक्त थी, क्योंकि आज देश पुर्तगाली शासन से गोवा की मुक्ति के 60 वर्ष पूरे होने का जश्न मना रहा है। भारतीय नौसेना ने गोवा की मुक्ति में एक महत्वपूर्ण भूमिका निभाई है और इस पोत का नाम समुद्र तटीय राज्य गोवा को समर्पित करने से न केवल भारतीय नौसेना तथा गोवा के लोगों के बीच आत्मीय संबंधों में अधिक वृद्धि होगी,

बल्कि यह जहाज की पहचान को स्थायी रूप से राष्ट्र निर्माण में नौसेना द्वारा निभाई गई महत्वपूर्ण भूमिका से भी जोड़ता है।

मोरमुगांव को प्रोजेक्ट 15बी विध्वंसक के हिस्से के रूप में मझगांव डॉक शिपबिल्डर्स लिमिटेड (एमडीएसएल) में तैयार किया जा रहा है। इस पोत में कई विशिष्ट स्वदेशी प्रौद्योगिकियां शामिल की गई हैं और यह आत्मनिर्भर भारत का एक शानदार उदाहरण है। मोरमुगांव ने 'मेक इन इंडिया' पहल को बल और प्रोत्साहन प्रदान किया है।

मोरमुगांव भारतीय नौसेना की लड़ाकू क्षमताओं में महत्वपूर्ण वृद्धि करेगा। हाल ही में आईएनएस विशाखापत्तनम और चौथी पी75 पनडुब्बी आईएनएस वेला को नवंबर 2021 में कमीशन प्रदान किये जाने के साथ ही, मोरमुगांव के समुद्री परीक्षणों की शुरुआत एमडीएसएल की अत्याधुनिक क्षमताओं तथा आधुनिक एवं जीवंत भारत की मजबूत स्वदेशी जहाज निर्माण परंपरा का स्पष्ट प्रमाण है।

https://pib.gov.in/PressReleasePage.aspx?PRID=1783257

Press Information Bureau
Government of India

Ministry of Defence

Fri, 17 Dec 2021 2:43PM

Joint Naval Exercises

The MALABAR Exercise is being conducted annually since 1992 with the aim and objective to enhance Indian Navy's interoperability with other participating navies, improve skill-sets and exchange 'best-practices' including lessons learnt. Twenty five editions of the exercise have been conducted till date with last edition conducted in two phases in August and October 2021. Such exercises also provide impetus to better maritime security in the region in consonance with the Government's vision of 'SAGAR-Security and Growth for all in the Region'. As the exercise was a part of regular Indian Navy deployments, therefore, no additional expenditure was involved. INS Ranvijay, INS Satpura and an Indian Navy submarine alongwith crew members participated in the second phase of MALABAR Exercise.

Details of exercises to be undertaken with Friendly Foreign Countries are finalised in consultation with MEA and other stakeholders. These exercises help in development of interoperability with friendly foreign navies in the areas of core naval operations along with providing insights into best practices, Standard Operating Procedures (SOPs), concepts and technological innovations used by advanced / contemporary navies. Further, these exercises contribute towards showcasing indigenous ship-building capabilities and strengthening of bilateral relations between the countries.

To boost Naval cooperation with Friendly Foreign Countries, Navy-to-Navy Staff Talks and Executive Steering Group Meetings are conducted on annual/ biennial basis, besides joint exercises and joint patrolling, as also training exchanges, hydrography support and measures to enhance maritime domain awareness.

This information was given by Raksha Rajya Mantri Shri Ajay Bhatt in a written reply to Shri ThirunavukkarasarSu in Lok Sabha today.

https://pib.gov.in/PressReleasePage.aspx?PRID=1782609

INDIA TODAY

Mon, 20 Dec 2021

Army commanders called to Delhi for maiden conference post CDS Gen Bipin Rawat's demise

All seven commanders of Indian Army have been called to Delhi to attend an important meeting on the border situation with China. This is also the first time all commanders are meeting after the death of CDS Bipin Rawat.

By Manjeet Negi

New Delhi: All seven Army commanders have been called to Delhi this week for an important meeting over the security situation along the China border. This is also the first meeting of all the commanders after the death of Chief of Defence Staff (CDS) Gen Bipin Rawat on December 8.

During the commanders' conference, the security situation along the borders with China would be discussed, top government sources told India Today TV.

This would be the first meeting of the commanders after the death of Chief of Defence Staff, Gen Bipin Rawat, in a chopper crash on December 8, along with his wife and 12 other personnel.

Candlelight tribute to CDS General Bipin Rawat, his wife and 12 armed forces personnel killed in a chopper crash in Coonoor on December. 9, 2021 (Picture credit: PTI).

The Army commanders would be briefed on the situation along the China border, including the activities of the People's Liberation Army, in the eastern sector. India and China have been in a military stand-off since April-May last year after the Chinese showed unilateral aggression.

India responded very aggressively to Chinese aggression and checked their actions at multiple locations. The Galwan clash also took place where both sides had suffered casualties.

India has been working towards establishing peace in the area but has also maintained a high-level of preparedness to thwart any misadventure by enemy troops. Both sides have deployed a large number of troops, along with heavy weaponry, in the area.

https://www.indiatoday.in/india/story/first-meet-indian-army-seven-commanders-post-bipin-rawat-death-china-border-issue-1889653-2021-12-19

अमर उजाला

Mon, 20 Dec 2021

दिल्ली में बैठक करेंगे सेना के सभी कमांडर, सीडीएस रावत के निधन के बाद पहली मीटिंग

सार

चीन और पाकिस्तान के साथ सीमाओं पर सुरक्षा स्थिति करने के लिए भारतीय सेना के सभी कमांडर इस सप्ताह राष्ट्रीय राजधानी नई दिल्ली में बैठक करेंगे। सीडीएस जनरल रावत के बाद यह पहला मौका होगा जब सभी कमांडर एक साथ बैठक करने जा रहे हैं।

विस्तार

तमिलनाडु में हुए हेलिकॉप्टर हादसे में चीफ ऑफ डिफेंस स्टाफ (सीडीएस) जनरल बिपिन रावत के निधन के बाद इस सप्ताह पहली बार थल सेना के सभी कमांडर राष्ट्रीय राजधानी नई दिल्ली में होंगे। सरकारी सूत्रों ने बताया कि 23 और 24 दिसंबर को होने वाले इस कार्यक्रम में वर्तमान परिदृश्य में चीन और पाकिस्तान के साथ सीमाओं पर सुरक्षा की स्थिति पर चर्चा की जाएगी।

आठ दिसंबर को तमिलनाडु के कुन्नूर में वायु सेना का एमआई-17 हेलिकॉप्टर हादसे का शिकार हो गया था। इस दुर्घटना में सीडीएस जनरल बिपिन रावत, उनकी पत्नी मधूलिका और 12 अन्य सैन्य अधिकारियों की मौत हो गई थी। इसके बाद अब पहली बार सभी सेना कमांडर 23-24 दिसंबर को हो रही इस बैठक में जुटेंगे और चीन व पाकिस्तान के साथ सीमा पर सुरक्षा स्थिति पर चर्चा करेंगे।

एलएसी की सुरक्षा स्थिति पर रहेगा विशेष ध्यान

सूत्रों ने बताया कि इस दौरान सभी कमांडरों को सुरक्षा स्थितियों के बारे में जानकारी भी दी जाएगी। इसमें विशेष तौर पर ध्यान चीन के साथ सीमा वास्तविक नियंत्रण रेखा (एलएसी) पर रहेगा। लद्दाख और अरुणाचल प्रदेश के सामने भीषण ठंड के बावजूद चीन ने हाल के दिनों में बड़ी संख्या में सैनिकों की तैनाती की है। इस दौरान सेना में सुधारों पर विचार-विमर्श भी हो सकता है।

अगले सीडीएस की नियुक्ति के लिए प्रक्रिया शुरू

अरुणाचल प्रदेश से लेकर लद्दाख तक चीन के साथ देश की सीमा की सुरक्षा की जिम्मेदारी सेना की पूर्वी, मध्य और उत्तरी कमांड के पास है। चीन के साथ सीमा के सबसे बड़े हिस्से की सुरक्षा पूर्वी सेना कमांड संभालती है। सीडीएस रावत के निधन के बाद केंद्र सरकार उनके उत्तराधिकारी के चयन की प्रक्रिया में है और इसके लिए रक्षा मंत्रालय की ओर से कदम उठाया जा चुका है।

https://www.amarujala.com/india-news/all-army-commanders-to-be-in-delhi-this-week-for-first-time-after-death-of-cds-bipin-rawat-to-discuss-security-situation-at-borders-with-china-and-pakistan

THE ECONOMIC TIMES

Sat, 18 Dec 2021

India, France increase focus on defence industrial cooperation

By Manu Pubby

Synopsis

Emphasis of talks was on industrial cooperation, given that several Indian companies have gained capabilities in the last few years and could be fit partners for French defence manufacturers, according to government insiders.

India and France vowed to increase defence cooperation across all domains during bilateral talks between defence minister Rajnath Singh and his counterpart Florence Parly in New Delhi on Friday. Defence industrial cooperation was a key theme, with discussions on the Make in India initiative and possible joint projects in aerospace and maritime domain. The ministers acknowledged convergences on a number of strategic issues and discussed issues related to China and Afghanistan.

During government talks, the two sides had extended talks on regional security and convergences on developments in Afghanistan and Pakistan, according to insiders

Parly said that France was ready to provide additional Rafale fighter jets to India and noted that the use of the same aircraft by the strategic partners reflected "real asset and strength" in their ties. She called upon Prime Minister Narendra Modi and senior government officials too.

Emphasis of talks was on industrial cooperation, given that several Indian companies have gained capabilities in the last few years and could be fit partners for French defence manufacturers, according to government insiders. India is seeking a change from buyer-seller relationship to a more meaningful future where the industry can collaborate and manufacture cutting edge systems.

Areas where interests and capabilities converge include development of future Unmanned Aerial Vehicles and underwater systems such as submarines. The maintenance, repair and overhaul sector has also been identified as having strong potential for collaboration.

The minister said that France was focused on increasing participation of Indian companies. "We are fully committed to the Make in India initiative, as well as to the further integration of Indian manufacturers into our global supply chains. Make in India has been a reality for French industry for several years, particularly for defence equipment such as submarines," she said at a session organised by Ananta Aspen Centre. France would be interested in supplying jets for India's second aircraft carrier planned, she said.

During government talks, the two sides had extended talks on regional security and convergences on developments in Afghanistan and Pakistan, according to insiders. A substantial amount of time was also spent on discussing the China situation, with the Indian side expressing its concerns on the China Pakistan Economic Corridor and its security and financial implications for the region.

India and France also spoke on increasing maritime cooperation with increased exchanges, exercises and information sharing. France has a strong interest in the Indian Ocean Region and the two sides have been working together quietly on the naval front. India shared its vision for an Asean focused approach to maritime security in the region.

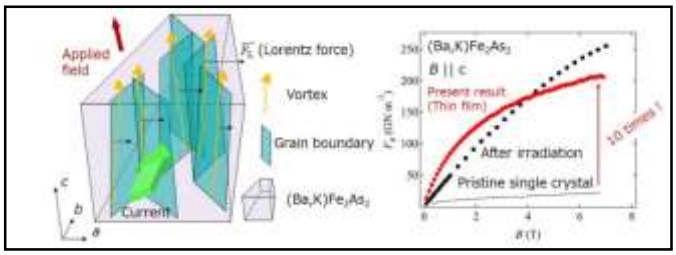
https://economictimes.indiatimes.com/news/defence/india-france-increase-focus-on-defence-industrial-cooperation/articleshow/88351615.cms

PHYS.ORG

Sat, 18 Dec 2021

Redrawing the lines: Growing inexpensive, high-quality iron-based superconductors

Superconducting materials show zero electrical resistance at low temperatures, which allows them to conduct "supercurrents" without dissipation. Recently, a group of scientists led by Dr. Kazumasa Iida from Nagoya University, Japan, developed an inexpensive, scalable way to produce high-temperature superconductors using "grain boundary engineering" techniques. The new method could help develop stronger, inexpensive, and high operating temperature superconductors with impactful technological applications.



Schematic illustration of how vortices are pinned by low-angle grain boundaries in a (Ba,K)Fe2As2 superconductor. The pinning force density Fp of (Ba,K)Fe2As2 thin film fabricated in this study is almost 10 times as high as a pristine single crystal. Credit: Kazumasa Iida

Key to the dissipation-free conduction of currents in superconductors in the presence of a magnetic field is a property called "pinning potential." Pinning describes how defects in the superconducting matrix pin vortices against the Lorentz force. Controlling the micro-structure of the material allows for careful introduction of defects into the material to form "artificial pinning centers" (APCs), which can then improve its properties. The most common approach to introducing such defects into superconductors is "ion irradiation." However, ion irradiation is both complicated and expensive.

In their study published in *NPG Asia Materials*, Professor Iida and his research team successfully grew a thin film superconductor that has a surprisingly high pinning efficiency without APCs. "Crystalline materials are made up of different regions with different crystalline orientations called 'grains.' When the angle between the boundaries of different grains in the material are less than their critical angle, θ_c, we call it a 'low-angle grain boundary (LAGB).' LAGBs contribute to magnetic flux pinning, which enhances the properties of the superconductor," explains Dr. Iida.

Iron (Fe)-based superconductors (FBS) are considered to be the next-generation superconductor technology. In their study, Professor Iida and team grew an FBS called "potassium (K)-doped $BaFe_2As_2$ (Ba122)" using a technique called "molecular beam epitaxy," in which the superconductor is grown on a substrate. "The difficulties involved in controlling volatile potassium made the realization of epitaxial K-doped Ba122 challenging, but we succeeded in growing the thin films on fluoride substrates," says Dr. Iida.

The team then characterized the FBS using transmission electron microscopy and found that the film was composed of columnar grains approximately 30–60 nm wide. These grains were rotated around the crystallographic principle axes by angles well within θ_c for K-doped Ba122 and formed LAGB networks.

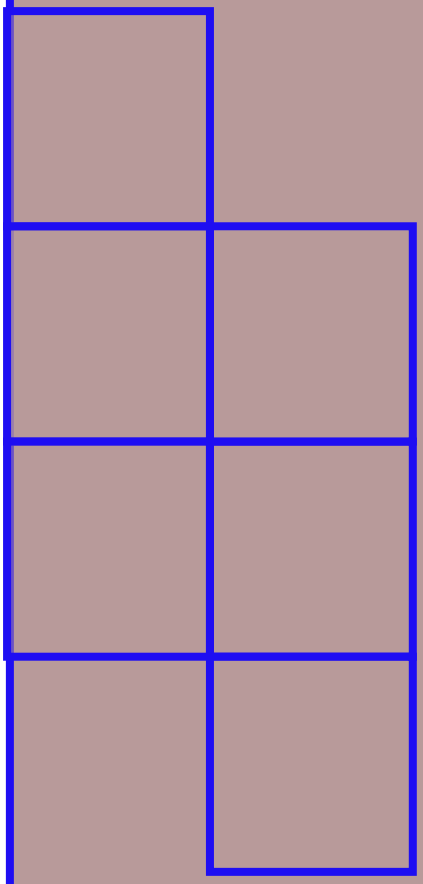
The researchers then performed measurements of the thin film's electrical resistivity and magnetic properties. They observed that the thin films had a surprisingly high critical current (the maximum current in a superconductor above which it transitions to a dissipation state). The LAGB networks further ensured a strong pinning efficiency in the material. "The in-field properties obtained in our study are comparable to that of ion-irradiated K-doped Ba122. Moreover, grain

boundary engineering is a simple technique and can be scaled up for industrial applications," comments Dr. Iida.

The findings of this study could accelerate the development of strong magnets using superconductors, leading to advances in magnetic resonance imaging (MRI). The widespread application of MRI is currently limited by the high investment and operational cost of the MRI machines due to the cooling costs of the superconductors within. But with simple and inexpensive techniques such as grain boundary engineering for fabricating superconductors, MRIs could become more accessible to patients, improving our quality of life.

More information: Kazumasa Iida et al, Approaching the ultimate superconducting properties of (Ba,K)Fe2As2 by naturally formed low-angle grain boundary networks, *NPG Asia Materials* (2021). DOI: 10.1038/s41427-021-00337-5

https://phys.org/news/2021-12-redrawing-lines-inexpensive-high-quality-iron-based.html



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