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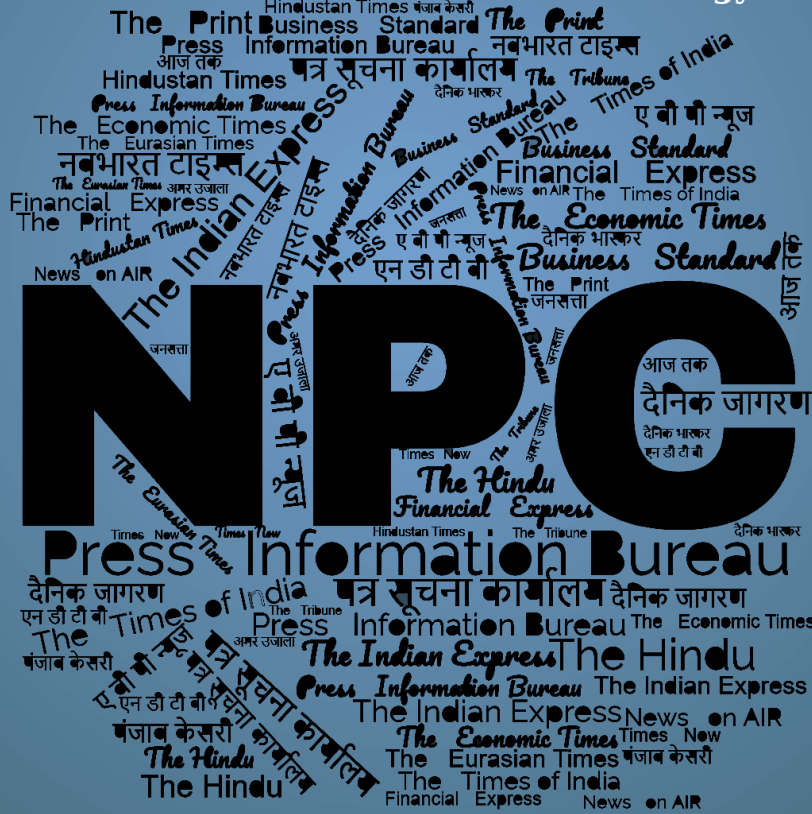
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समाचार पत्रों से चयित अंश Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

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Wed, 07 Jun 2023

कानपुर: समुद्र में तैनात वॉरशिप के लिए 'सेतु' बनेगा स्वदेशी पैराशूट, डीआरडीओ ने कंटेनर भी तैयार किया

समुद्री तट से 2000 किमी की दूरी पर तैनात जहाजों को विषम परिस्थितियों में रसद जुटाने, पुर्जों और भंडार को प्राप्त करने के लिए तट के करीब नहीं आना पड़ेगा।

डीआरडीओ द्वारा विकसित स्वदेशी एयर ड्रूपेबल कंटेनर 150 और कानपुर आयुध पैराशूट निर्माणी (ओपीएफ) में निर्मित पैराशूट सेतु का काम करेंगे। डीआरडीओ कंटेनर और पैराशूट का सफल परीक्षण कर चुका है।

परीक्षण के दौरान हेलीकाप्टर से 150 किलो भार क्षमता वाले कंटेनर को पैराशूट में बांधकर 1000 मीटर तक की ऊंचाई से छोड़ा गया।

पैराशूट सिस्टम हवा के दबाव को नियंत्रित करते हुए कंटेनर को आसानी से उतारने में सफल रहा। ग्लाइडर्स इंडिया लिमिटेड के अध्यक्ष और प्रबंध निदेशक विजय कुमार तिवारी के निर्देशन में ओपीएफ के इंजीनियरों ने स्वदेशी पैराशूट तैयार करके डीआरडीओ को दिए थे।

पैराशूट के माध्यम से वाटरप्रूफ कंटेनर को समुद्र तट से 2000 किमी से अधिक दूरी पर तैनात जहाजों को संकट के दौरान कम समय में राहत सामग्री उपलब्ध कराई जा सकेगी। रक्षा क्षेत्र में आत्मनिर्भरता की दिशा में देश की एकमात्र आयुध पैराशूट निर्माणी ने एक और कदम आगे बढ़ी है।

डीआरडीओ और नौसेना कर चुकी है सफल परीक्षण

डीआरडीओ की तीन लैब नौसेना विज्ञान और तकनीकी प्रयोगशाला (एनएसटीएल), विशाखापत्तनम, एरियल डिलीवरी रिसर्च एंड डेवलपमेंट इस्टैब्लिशमेंट (एडीआरडीई), आगरा और वैमानिकी विकास प्रतिष्ठान (एडीई), बंगलुरु ने स्वदेशी एयर ड्रूपेबल कंटेनर एडीसी-150 कंटेनर बनाया है।

डीआरडीओ और भारतीय नौसेना गोवा के तट से आइएल 38 एसडी विमान से एडीसी-150 का पहला सफल परीक्षण कर चुकी है।

सेंटर फार मिलिट्री एयरवर्थनेस एंड सर्टिफिकेशन (सीईएमआइएलएसी), बंगलुरु के नेतृत्व में रीजनल सेंटर फार मिलिट्री एयरवर्थनेस (आरसीएमए), कानपुर द्वारा इसे अहम उड़ान निकासी प्रमाणन दिया जा चुका है।

एयरोस्पेस के क्षेत्र में उत्कृष्ट उत्पादों के लिए अंतर्राष्ट्रीय प्रमाणपत्र

महाप्रबंधक बाला सुब्रमण्यम ने बताया कि ओपीएफ को एयरोस्पेस के क्षेत्र में उत्कृष्ट उत्पादों के निर्माण के लिए एएस 9100 डी का अंतर्राष्ट्रीय प्रमाण-पत्र मिला है।

एनवीटी क्वालिटी सर्टिफिकेशन इंटरनेशनल सर्टिफिकेट एयरोस्पेस, एविएशन एवं रक्षा क्षेत्रों के लिए अत्यन्त नवीन मानकों के आधार पर डिजाइन एवं विकास करने वाले संस्थानों को प्रदान किया जाता है।

ये मानक अंतर्राष्ट्रीय एयरोस्पेस क्वालिटी ग्रुप (आइएक्यूजी) द्वारा विविध एयरोस्पेस संगठनों से जुड़े प्रतिनिधियों की मदद से तैयार किए जाते हैं। यह सर्टिफिकेट उत्कृष्टता के क्षेत्र में वैश्विक मान्यता भी प्रदान करता है।

<https://www.jagran.com/uttar-pradesh/kanpur-city-drdo-made-indigenous-parachute-setu-for-warship-deployed-in-sea-also-prepared-container-23434982.html>



Wed, 07 Jun 2023

Agni-Prime Missile का सफल परीक्षण, एक साथ दुश्मन के कई टारगेट को तबाह करने की है ताकत

भारतीय डीआरडीओ ने अपने मिसाइल परीक्षण कार्यक्रम के तहत बुधवार रात, 7:40 बजे अब्दुल कलाम द्वीप से लंचिंग कंपलेक्स 4 से अग्नि प्राइम नामक मिसाइल का सफलतापूर्वक परीक्षण किया है।

अत्याधुनिक साजो सामान से सुसज्जित यह मिसाइल अपने लक्ष्य या टारगेट को पूरी तरह से ध्वस्त करने में कामयाब रही है। यह मिसाइल अग्नि सीरीज की आधुनिक, घातक, सटीक और मीडियम रेंज की परमाणु संपन्न बैलिस्टिक मिसाइल है।

रक्षा अनुसंधान और विकास संगठन में आज यानी कि 7 जून 2023 को रात के वक्त ,अग्नि प्राइम मीडियम रेंज परमाणु बैलिस्टिक मिसाइल का सफल परीक्षण किया , जो(अग्नि पी)के नाम से भी जाना जाता है।

क्या है मिसाइल की खासियत?

इस मिसाइल को चलाने का फैसला भारत की स्ट्रेटेजिक फोर्सज कमांड लेती है। अग्नि प्राइम मिसाइल अग्नि सीरीज की ही नई जेनरेशन की मिसाइल है।

11000 किलोग्राम वजन की यह मिसाइल 2000 किलोमीटर की दूरी तक किसी भी लक्ष्य को टारगेट करने की क्षमता रखती है।

34.5 फिट लंबी मिसाइल पर एक या मल्टीपल इंडिपेंडेंटली टारगेटेबल रीएंट्री व्हीकल (MIRV) वारहेड यानी हथियार लगाए जा सकते हैं ।

परमाणु हथियार ले जाने में है सक्षम

इस मिसाइल से कई टारगेट पर हमला हो सकता है । यह उच्च तीव्रता वाले विस्फोटक थर्मोबेरिक या परमाणु हथियार ले जाने में सक्षम है ।

अग्नि प्राइम 2 स्टेज की मिसाइल है , इस पर 1500 किलोग्राम से 3000 किलोग्राम वजन के हथियार लगाए जा सकते हैं । यह 2 स्टेज के रॉकेट मोटर पर चलने वाली मिसाइल है।

तीसरा स्टेज (MaRV) है , यानी मैनुबरेबल रीएंट्री व्हीकल, यानी तीसरे स्टेज को दूर से नियंत्रित करके दुश्मन के टारगेट पर सटीक हमला किया जा सकता है । इसे बीईएमएल टेट्रा ट्रांसपोर्टर इरेक्टर लांचर से दागा जाता है ।

आज इस परीक्षण के मौके पर रक्षा अनुसंधान और विकास संगठन तथा अंतरिम परीक्षण परिषद से जुड़े वरिष्ठ अधिकारियों और वैज्ञानिकों का दल मौके पर मौजूद था।

यह सूचित करना उचित होगा कि अग्नि सीरीज की सभी मिसाइलों का परीक्षण अब्दुल कलाम द्वीप से ही किया जाता है।

रात में भी होंगे मिसाइलों के परीक्षण

दूसरी बात सुबह के वक्त इन मिसाइलों का परीक्षण कर अपार सफलता पाने के बाद अब भारतीय वैज्ञानिक रात के वक्त अग्नि सीरीज की सभी बैलेस्टिक मिसाइलों का परीक्षण करने में लगे हैं।

सूत्रों की मानें तो आने वाले दिनों में और कई बैलेस्टिक सीरीज और क्रुज सीरीज मिसाइलों का परीक्षण रात के वक्त किए जाने की संभावना है।

<https://www.jagran.com/odisha/bhubaneswar-agni-prime-missile-test-successful-has-power-to-destroy-multiple-enemy-targets-simultaneously-23435157.html>



Wed, 07 Jun 2023

Varunastra Torpedo to Enhance Indian Navy's Anti-Submarine Warfare Capabilities, Know All about its Powerful Features here

In a significant development for the Indian Navy the indigenously developed Varunastra a ship-launched anti-submarine heavy weight torpedo (HWT) was successfully test fired on June 6, 2023. This indigenous HWT will enhance the Navy's anti-submarine warfare capabilities and make it a formidable force.

The torpedo was fired from a submarine and successfully hit a target at a range of 40 kilometers. The test was conducted in the Arabian Sea in the presence of senior officials from the Indian Navy and the Defence Research and Development Organisation (DRDO).

Vizag-based Naval Science and Technological Laboratory (NSTL) of the Defence Research and Development Organisation (DRDO) designed the Varunastra missile system and Bharat Dynamics Ltd (BDL) is responsible for its production.

About the indigenous Torpedo

After numerous trials, the induction of the Varunastra torpedo has commenced. This torpedo shall be the go-to anti-submarine torpedo for all naval warships, according to a source in the defence and security establishment. Additionally, the source noted that it will replace the aging torpedoes currently installed on naval vessels that are capable of firing Heavyweight Torpedoes.

The Defence Ministry's annual report for the 2015-16 fiscal year reveals that the Naval Science & Technological Laboratory (NSTL) under DRDO and the Indian Navy have worked together to undertake 130 technical trials to appraise the weapon's qualities.

The report stated that a total of 14 user trials, including trials conducted during January 2015 and March 2015 with a variety of scenarios, were completed. The final approval for Varunastra User Evaluation Trials (UETs) was granted in September 2015, and IHQ MoD (Navy) accepted it for induction into Services.

The Varunastra HWT is an electrically-powered torpedo capable of anti-submarine and anti-ship operations. It has a maximum strike range of 40 kilometers and can travel at speeds of more than 70 kilometers per hour at a maximum depth of 600 mts. The torpedo is equipped with an active-passive acoustic homing system and a low-drift inertial navigation system.

The successful test-firing is a major milestone for the Indian Navy and it marks the completion of the development of the torpedo and its readiness for induction into service. The induction of the Varunastra HWT will significantly enhance the Navy's anti-submarine warfare capabilities.

The Varunastra HWT is the first indigenously developed heavyweight torpedo that is capable of meeting the Navy's operational requirements. It will reduce the Navy's dependence on foreign weapons systems and help to make the Navy more self-reliant.

Varunastra Torpedo: A Powerful New Weapon for the Indian Navy

The Varunastra A is a heavyweight torpedo that can be launched from surface ships, submarines, and aircraft.

It is a highly sophisticated weapon that features a number of advanced technologies. It has an active-passive acoustic homing system that allows it to track and engage enemy submarines even in noisy underwater environments. It also has a low-drift inertial navigation system that ensures high accuracy even at long ranges.

The successful trial is a major technological achievement for the Indian Navy. It is the first indigenously developed heavyweight torpedo that is capable of meeting the Navy's operational requirements.

Features of the Varunastra Torpedo

It is a powerful and sophisticated weapon that features a number of advanced technologies. These include:

Active-passive acoustic homing system: This system allows the torpedo to track and engage enemy submarines even in noisy underwater environments.

Low-drift inertial navigation system: This system ensures high accuracy even at long ranges.

Conformal array transducer: This transducer enables the torpedo to look at wider angles than most common torpedoes.

Advanced autonomous guidance algorithms: These algorithms allow the torpedo to operate in various combat scenarios.

Insensitive warhead: This warhead is less likely to detonate accidentally, making it safer to operate and transport.

Benefits of the Varunastra Torpedo

Increased anti-submarine warfare capabilities: The Varunastra is a powerful and sophisticated weapon that will significantly enhance the Navy's ability to detect, track, and engage enemy submarines.

Increased range: The Varunastra has a range of up to 50 kilometers, which gives the Navy a significant advantage over enemy submarines.

Indigenously developed: The Varunastra is the first indigenously developed heavyweight torpedo that is capable of meeting the Navy's operational requirements. This will reduce the Navy's dependence on foreign weapons systems.

Cost-effective: The Varunastra is a cost-effective weapon that will save the Navy money in the long run.

<https://www.financialexpress.com/business/defence-varunastra-torpedo-to-enhance-indian-navys-anti-submarine-warfare-capabilities-know-all-about-its-powerful-features-here-3117020/>

German Conglomerate, India's MDL Ink Pact to Bid for Submarine Project worth ₹43k-cr

German conglomerate ThyssenKrupp Marine Systems (TKMS) and Indian shipyard Mazagon Dock Shipbuilders Limited on Wednesday signed a memorandum of understanding (MoU) in Mumbai to bid for a ₹43,000-crore project to build six advanced submarines in India under the government's strategic partnership (SP) model.

The project, called P-75 India, is one of the biggest Make in India programmes.

The MoU was signed in the presence of visiting German defence minister Boris Pistorius who on Tuesday held talks with his Indian counterpart Rajnath Singh in Delhi and pitched for building the submarines in India with German collaboration. HT reported on Tuesday that the MoU would be a step towards the two firms bidding for the multibillion-dollar submarine deal.

"I am pleased I was present at the MoU signing ceremony. This partnership between TKMS and MDL for the possible construction of six submarines is an important milestone in a key technology domain," Pistorius told German reporters accompanying him. The Indian partners praised German technology, its reliability and the longevity of equipment, he said.

Four HDW Class 209 submarines built in the 1980s have already proved to be a successful model of Indo-German cooperation, TKMS said in a statement after the MoU was signed. The first and second of those submarines were built in Germany while the remaining two at Mazagon Dock Shipbuilders Limited in Mumbai. The four submarines continue to serve the Indian Navy.

TKMS has now offered India the advanced HDW Class 214 submarines.

"We look back on a trusting and decades-long partnership with India. The boats we built in the 1980s are still in service today. We are very proud of that and would be delighted to continue contributing to India's national security in the future. We are ready when India calls," said TKMS CEO Oliver Burkhard.

Both parties can draw on many years of expertise, knowledge and professional competence in fulfilling this project to everyone's satisfaction, TKMS officials said.

India cleared the estimated ₹43,000 crore project two years ago to strengthen the navy's capabilities and provide momentum to the defence indigenisation drive, one of the government's key priorities.

The SP model envisages indigenous manufacturing of major defence platforms by an Indian strategic partner who will collaborate with a foreign original equipment manufacturer (OEM) to set up production facilities in the country.

“It remains to be seen how the process will take its course over the next few months. I also specifically campaigned for it on Tuesday during my talks with defence minister Singh,” the German minister said.

In January 2020, the defence ministry cleared two Indian and five foreign shipbuilders, including TKMS, to take part in P-75I.

The Indian strategic partners cleared to collaborate with the foreign OEMs are Mazagon Dock Shipbuilders Limited and L&T. The foreign yards cleared for partnerships include the French Naval Group, Russia’s Rubin Design Bureau, Spain’s Navantia and South Korea’s Daewoo Shipbuilding & Marine Engineering Company.

P-75I, first talked about more than two decades ago, has moved at a notoriously slow pace. It was a part of the 30-year submarine-building programme approved by the Cabinet Committee on Security in 1999.

The German side believes TKMS is one of the main contenders for the submarine deal following the withdrawal of France’s Naval Group and Russia’s Rubin Design Bureau a year ago, as reported by HT on Wednesday. South Korea’s Daewoo is also in the fray, but the submarine pitched by it is reportedly based on a German design.

Submarines built under P-75I will be equipped with air independent propulsion (AIP) systems that will enable the vessels to stay underwater for longer periods and enhance their combat capabilities. A minimum 45% indigenisation has to be ensured by the strategic partner in P-75I in the first submarine, with the indigenous content going up to 60% in the sixth, the officials said.

With P-75I being cleared in 2021, the country took a step forward towards achieving the goals of its 30-year submarine construction programme. The navy plans to operate a fleet of 18 new conventional submarines and six nuclear-powered boats. The government approved the plan to build six nuclear-powered submarines in 2015, tweaking the 1999 submarine-building programme. Also, it plans to operate a fleet of four nuclear-powered ballistic missile submarines.

<https://www.hindustantimes.com/india-news/german-conglomerate-india-s-mdl-ink-pact-to-bid-for-submarine-project-worth-43kcr-101686165358601-amp.html>

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Wed, 07 Jun 2023

Indian Navy MARCOS Arrive in Maldives for Sixth Edition of Exercise 'Ekatha'

The Indian Navy has dispatched its Marine Commandos (MARCOS) and divers to participate in the sixth edition of Exercise Ekatha with the Maldives National Defence Force (MNDF). The exercise is scheduled to run from June 4 to July 3, 2023. Conducted on an annual basis, Exercise Ekatha aims to enhance interoperability between the two navies, especially in diving and special operations. Counter-terrorism, maritime security, humanitarian assistance and disaster relief operations are also incorporated under Exercise Ekatha.

The fifth edition of the bilateral naval exercise was held in Maldives from September 5 to October 3, 2022. It was observed by Defence Minister of Maldives Mariya Didi and Major General Abdulla Shamaal, Chief of Defence Force. Furthermore, India’s High Commissioner to the Maldives, Munu Mahawar and Vice Admiral M. A. Hampiholi, the Flag Officer Commanding-in-Chief of Southern

Naval Command handed over certificates to the Marines of MNDF's Special Operations Group (SOG) during the fifth edition of Exercise Ekatha.

Divator diving & Demolition: What is special about the exercise?

The training regimen of Exercise Ekatha includes Joint Drills, Workshops, Seminars, Tabletop Exercises and specialized training in various combat-related activities. Indian Navy MARCOS and the Marines from the MNDF undergo the practice of combat shooting, demolition, Close-quarter battle, and diving operations including divator and rebreather diving. Moreover, Visit, board, search, and seizure (VBSS) is also practised during the bilateral exercise.

Previously, 10 MARCOS from the Indian Navy and 30 marines from MNDF's Special Operations Group participated in the exercise. Exercise Ekatha is significant as it presents an opportunity for the participating forces to simulate complex scenarios and test the decision-making and coordination abilities of the troops. These exercises involve the development of operational plans, communication protocols, and coordination mechanisms to address potential security threats.

Notably, India was one of the first nations to recognize Maldives' independence in 1965 and establish diplomatic relations with the nation. Meanwhile, Maldives established a High Commission in New Delhi in November 2004. This was one of four diplomatic missions of Maldives at the time. The training regimen of Exercise Ekatha is designed to promote mutual learning, enhance operational capabilities, and strengthen the professional bond between the Indian Armed Forces and the Maldivian National Defence Force. It helps foster a spirit of cooperation, interoperability, and regional security in the Indian Ocean region.

<https://www.republicworld.com/india-news/general-news/indian-navy-marcos-arrive-in-maldives-for-sixth-edition-of-exercise-ekatha-articleshow.html>



Wed, 07 Jun 2023

On Way Back from US, PM Narendra Modi to Make a Long Overdue Visit to Egypt

Prime Minister Narendra Modi is expected to visit Egypt this month, on his way back from a trip to the US, to take forward cooperation in areas ranging from security to renewable energy, people familiar with the matter said on Wednesday.

The proposed visit is expected to build on the momentum generated by Egyptian President Abdel Fattah El-Sisi's trip to India in January when he was the chief guest at the Republic Day celebrations.

The visit, the dates and agenda for which are being locked down by the two sides, is set to be a short affair. The prime minister is expected to travel to Egypt immediately after the conclusion of his state visit to the US on June 24, the people said.

Sisi was the first Egyptian leader to be hosted by India for the Republic Day celebrations though the two countries have enjoyed close relations in past decades, especially as founding members of the Non-Aligned Movement (NAM) in 1961.

A high-level visit from the Indian side has been overdue as Sisi has travelled to India three times in recent years – in October 2015, to attend the third India-Africa Forum Summit, in September 2016 for his first state visit, and again in January this year.

A planned visit to Egypt by the prime minister in 2020 fell through because of the Covid-19 pandemic. "The upcoming visit will be an opportunity to maintain the momentum created by Sisi's visit this year and to take stock of progress in relations since then," one of the people cited above said.

Cooperation in defence and security and renewable energy, especially green hydrogen, have emerged as key pillars in bilateral relations. The two sides signed a memorandum of understanding on enhancing defence cooperation last year and agreed to bolster joint exercises. Egypt is eyeing India's home-grown light combat aircraft Tejas for a plan to acquire 70 fighter jets.

The Egyptian side has concluded three agreements with Indian firms, with planned investments in excess of \$21 billion, to produce green hydrogen.

As part of efforts to foster inter-faith dialogue and tackle issues such as radicalisation and extremism, the Grand Mufti of Egypt, Shawki Ibrahim Abdel-Karim Allam, visited India in May and held a series of meetings with religious leaders.

<https://www.hindustantimes.com/india-news/on-way-back-from-us-pm-narendra-modi-to-make-a-long-overdue-visit-to-egypt-101686145798201.html>

THE ECONOMIC TIMES

Wed, 07 Jun 2023

Sri Lanka is India's 'Priority Partner': Defence Secretary Giridhar Aramane

Sri Lanka is India's "priority partner" and it stands committed to ensuring capacity building of the armed forces of the neighbouring country, Defence Secretary Giridhar Aramane said on Wednesday. He made the comments while speaking virtually at a seminar organised by the Indian High Commission in Colombo.

The defence secretary highlighted the common security challenges such as terrorism, piracy and drugs and arms trafficking facing the Indian Ocean region and called for enhancing collaboration to deal with them.

His comments came amid China's increasing forays into the Indian Ocean region.

Aramane emphasised that the Indian defence sector stands at the cusp of a major revolution and the focus is to establish a robust and indigenous manufacturing ecosystem.

"He underlined that knowledge sharing in these areas would help strengthen ties between the two countries," the defence ministry said in a statement.

It said Aramane described the island nation as India's "priority partner", noting that as part of its 'Neighbourhood First' policy, New Delhi stands committed to ensuring capacity and capability building of the armed forces of that country.

He termed Prime Minister Narendra Modi's vision of SAGAR (Security and Growth for All in the Region) as the underlying theme of India's maritime policy.

This vision is rooted in advancing cooperation within the region through inclusivity and using India's capability to benefit its friendly countries in the common maritime neighbourhood, he said.

<https://economictimes.indiatimes.com/news/defence/sri-lanka-is-indias-priority-partner-defence-secretary-giridhar-aramane/articleshow/100826230.cms>

First India-Sri Lanka Defence Exhibition in Colombo for Boosting Bilateral Relations

The High Commission of India organised the first India-Sri Lanka Defence Seminar and Exhibition in Colombo on June 7 to promote and identify newer areas of cooperation and collaboration between the two countries in the defence sector.

The event will witness participation from the Indian Defence Industry, Sri Lankan entrepreneurs, Sri Lanka Armed Forces, Police and Special Task Force, the High Commission said on Wednesday.

"The grand event includes a seminar highlighting the capability and capacities of the two countries in defence equipment manufacturing and would also exhibit a wide variety of defence products," the release said.

The exhibition organised with the aim to deepen ties with Sri Lanka through inclusive and collaborative engagement, aims to identify newer areas of cooperation for economic revival whilst ensuring capacity building of Sri Lanka Armed Forces.

The High Commission also said that the Sri Lanka Armed forces have been successfully operating a wide range of Indian defence equipment such as Indra Radar, Advanced Offshore Patrol Vessels, L70 Guns, Dornier Aircraft and Army training simulators.

Similarly, Indian armed forces use Fast Interceptor Crafts and refit of Floating Dock at Colombo.

"More recently, the Government of India committed to the supply of Floating Dock, Maritime Rescue Coordination Centre and Dornier aircraft which would ensure capacity building of Sri Lanka Armed Forces", the release added.

<https://www.thehindu.com/news/international/first-india-sri-lanka-defence-exhibition-in-colombo-for-boosting-bilateral-relations/article66941402.ece>

In Defence of a New US-India Collaboration

Opinion

An agreement over joint manufacturing of GE F414 jet engines for fighter aircraft by Hindustan Aeronautics Limited (HAL) and General Electric (GE) is among the early harvest of closer India-US defence ties that may remove restrictions on armaments sales and technology transfer. India has been seeking access to military technology while ramping up US arms purchases. The US, on its part, regards India as a strategic counterweight to China in the Indo-Pacific. Washington is also seeking resilience in defence production. New Delhi has made a strong case of how this can be achieved through modernisation of India's indigenous defence capacity. This expands the role of industrial collaboration that has been limited by rules governing transfer of technology.

The US is scaling up its defence engagement from purchase to co-production at a time India is trying to increase its role in global manufacturing through import protection and export incentives.

The world's largest buyer of arms has ambitious plans to cut dependence on foreign vendors through initiatives that tap into design and manufacturing capabilities of public enterprises, large business conglomerates, and even startups. GoI has widened the list of items for indigenous procurement. Core weapons systems still need to be imported, a big chunk of them from Russia. But India is seeking greater self-reliance in peripheral military production that can also feed export markets. The initial thrust of India-US military cooperation is maritime, of which the GE engines - to be used in naval fighter jets - are a component. The two sides are seeking closer ties in the undersea domain, in air combat and land mobility systems. Talks are on for collaboration in emerging areas like space, cyberspace and artificial intelligence (AI). The low-hanging fruit is local maintenance facilities for equipment and platforms purchased from the US. This can be scaled up to producing spares for domestic consumption and, eventually, exports. India and the US need a new roadmap for defence collaboration.

<https://economictimes.indiatimes.com/opinion/et-editorial/in-defence-of-a-new-us-india-collaboration/articleshow/100829667.cms>



Wed, 07 Jun 2023

India-US Defence Ties can be a Game-Changer

By Sreeram Chaulia

The announcement of a paradigm-changing roadmap for defence industrial co-production, co-development and technology transfer between India and the United States (US) is a milestone in the evolution of the comprehensive global strategic partnership between the world's two top democratic powers. It has laid an institutional foundation for deepening bilateral military cooperation to maintain a favourable balance of power in Asia and keep a check on authoritarian China's push for hegemony in the Indo-Pacific.

The willingness of the US to share advanced hi-tech military knowhow with India to co-produce weapons and systems in critical defence domains spanning air, land and sea, and the launch of the India-US Defence Acceleration Ecosystem (INDUS-X) for closer integration of private sectors of both countries, indicate a long-term blueprint to significantly boost India's defence capabilities while generating healthy profits for corporations on both sides.

Indian companies such as Hindustan Aeronautics Limited, Tata Advanced Systems, Mahindra Aerostructures and Godrej & Boyce have been partnering with US defence giants such as GE in manufacturing marine turbines and commercial aircraft engines in India. Now, with the green signal given by the US to GE to co-produce military jet engines with Indian partners, the two countries finally have a demonstrable poster child project that can generate all-round momentum to strategic ties. Engine technology for fighter jets is a rare cutting-edge field in which India once attempted a purely indigenous programme called Kaveri but could not get optimal results. Now, with the spree of new defence deals and the related US-India Initiative on Critical and Emerging Technology (iCET) – entailing joint scientific efforts in artificial intelligence (AI), quantum computing, 5G and 6G, and semiconductors – an accelerated pathway has opened up for Prime Minister Narendra Modi's ambitious Make in India scheme in defence. For India to become a world-class military power that matches China in all dimensions, this is exactly the big shot in the arm that was needed.

Should the new India-US defence industrial roadmap fulfil its potential, it will have far-reaching strategic effects, dwarfing the limited gains obtained from the 2008 bilateral civil nuclear deal. Cognisant of the pitfalls of bureaucratic blockages and regulatory bottlenecks which previously yielded disappointing results in bilateral defence trade and technology transfers, New Delhi has asked Washington to clear “hurdles that stand in the way” for purchase and transfer of technology.

Top-level political clearance and facilitation is a key catalyst for fast-forwarding the exciting joint military capacity-building plans to be implemented by private corporations. New Delhi and Washington need to quickly join hands if they are to stall China’s march throughout Asia. An India-US strategic partnership that is half-baked and laden with half-measures will open the door for Beijing to punch its way through creaky defences and establish a Sino-centric order in the Indo-Pacific. Apart from capability enhancements, the other dimension in the maturing India-US partnership is operational collaboration to beef up India’s role as a net security provider in the Indo-Pacific. The two sides have to move beyond occasional joint military exercises and show off their combined presence in the Indo-Pacific alongside Quad partners Japan and Australia. For the India-US strategic partnership to have a deterrent effect on Chinese misconduct, it will need to venture further.

While proposals for the US navy or air force to access India’s strategically located Andaman and Nicobar Islands may sound a tad too much to New Delhi, which prizes its sovereign strategic autonomy and shies away from formal military alliances, creative workarounds that have a deterrent effect without calling it permission to use Indian territory as a base are possible. When the adversary, China, is a master at fuzzy grey zone warfare, we should be able to pay it back in the same coin. There are voices of caution that argue India should not allow itself to be dragged into a war with China to serve American interests. But appeasing China by going light on India-US defence cooperation is no solution. It would be tantamount to an acceptance of China’s right to redraw borders using force. The notion that upsetting or provoking China too much is risky is based on a fundamental misreading of Chinese intentions, which are to impose a Sino-centric order in Asia, come what may.

Special forces of the US and India are already exercising jointly close to the Line of Actual Control (LAC). American real-time intelligence is reportedly helping the Indian military thwart Chinese aggression at LAC. A higher degree of India-US integration in the maritime domain is a logical next step, given that India’s natural sphere of influence in the Indian Ocean is under direct challenge from an intrusive Chinese navy. The US has already strengthened the Indian navy’s sea and undersea surveillance capabilities. It is time to also step up with greater jointness and fusion in the operational sphere so that China is deterred by concrete action and not just accumulation of capabilities.

<https://www.hindustantimes.com/opinion/indiaus-defence-ties-can-be-a-gamechanger-101686146301514.html>



Wed, 07 Jun 2023

NSAs Doval, Sullivan to Take forward US-India Defence Tech Talks Next Week, Ahead of Modi Visit

The US is leaving no stone unturned to make sure that India reduces its dependency on Russian weaponry system as Washington is all set to go for full transfer of defence technology with New

Delhi for which US President Joe Biden will be dispatching his National Security Advisor (NSA) Jake Sullivan on a two-day trip to India.

The main agenda of the two-day visit, which is expected to take place on June 12-14, will seek to give a “new dimension” to the US-India defence relationship by way of setting the ball rolling to have the basic framework ready so that the big-ticket future arms deals can go through smoothly, multiples sources told ABP Live.

While this is going to be a long-drawn process, both countries are making sure that Washington and New Delhi are on the “same page” when it comes to finalising the terms of defence technology sharing across all the platforms, the sources said.

Sullivan, who will be meeting NSA Ajit Doval and other senior officials during his India visit, will pave the way for Prime Minister Narendra Modi’s first ever state-level visit to the US, during which New Delhi and Washington will be firming up “game changing” defence deals under the ‘defence innovation bridge’ under the US-India initiative on Critical and Emerging Technology (iCET), which was announced on May 2022.

The first round of talks on iCET was held between NSAs Doval and Sullivan in January this year in Washington. The second round is expected to take place next week. The technological collaboration between both sides will help India procure as well as produce more and more American weaponry, thereby reducing its dependence on Russian platforms.

Doval and Sullivan had last met in May in Jeddah along with the Saudi Prime Minister and Crown Prince Mohammed bin Salman, UAE National Security Advisor Sheikh Tahnoun bin Zayed Al Nahyan.

Big-Ticket Defence Deals Between India And US

Sullivan’s visit will also enable both sides to firm up some of the big-ticket defence deals that will bring both countries strategically closer giving a fillip to the Indo-Pacific policy. These deals are General Electric’s plans to transfer its sensitive jet engine technology to India for their production here as well as procurement of armed drones under the government-to-government deal.

However, it is the US Congress that will have to give its final green signal to the deal. During his visit from June 20-24, Modi will also address a joint session of the Congress on June 22, where he is expected to talk about growing US-India bilateral ties and how crucial it is for New Delhi to have a bipartisan support even as both countries promote ‘Comprehensive Global Strategic Partnership’ between them.

Modi is going to become the first Indian Prime Minister to address a joint meeting of the Congress twice.

Yet another deal that will witness finalisation is the sale of 30 MQ-9B Predator armed drones for the Indian Army, Navy and Air Force, manufactured by General Atomics Global Corporation. The deal was approved under the Donald Trump administration in 2018.

These deals are expected to give a major boost to India’s military capabilities while standing up against China.

Earlier this week, US and India finalised a roadmap for the US-India Defence Industrial Cooperation while kick-starting the talks for having agreements on Security of Supply Arrangement and a Reciprocal Defense Procurement in an effort to establish stable supply chains of arms and equipment. This was done during the visit of US Defence Secretary Lloyd Austin to India.

On Tuesday, the inaugural India-US Strategic Trade Dialogue (IUSSTD) was launched in Washington DC by Foreign Secretary Vinay Kwatra and Alan Estevez, Under Secretary for

Industry and Security in the US Department of Commerce and Ambassador Victoria Nuland, Under Secretary of State for Political Affairs in the US Department of State.

<https://news.abplive.com/india-at-2047/pm-modi-united-states-visit-nsas-ajit-doval-jake-sullivan-to-take-forward-us-india-defence-technology-transfer-talks-1607508>



Wed, 07 Jun 2023

South Korea to Acquire New AEW&C Aircraft to Track North Korean Missiles

Increasing North Korean ballistic missile activity has prompted South Korea to proceed with the planned acquisition of additional airborne early warning and control (AEW&C) aircraft.

The Republic of Korea Air Force (RoKAF) already operates four Boeing E-7A 'Peace Eye' AEW&C aircraft, according to Janes data. Seoul acquired these aircraft in 2011–12 as part of an effort to expand its airborne surveillance and early warning infrastructure.

The new acquisition is expected to enhance the RoK's "ability to monitor North Korean missiles and defend its airspace", South Korea's Defense Acquisition Program Administration (DAPA) said in a statement on 26 May. The acquisition is being planned for the country's Airborne Early Warning-II (AEW-II) programme.

North Korea's missile launches are increasing in frequency. According to information gathered by Janes, between 54 and 60 ballistic missile launches were conducted over a six-month period from 1 October 2022 to 12 April 2023. These numbers include unconfirmed or suspected missile launches. Information for a comparative six-month period from 15 September 2021 to 16 April 2022 from the Nuclear Threat Initiative showed 19 launches.

According to DAPA, the Defense Project Promotion Committee deliberated and decided on the draft purchase plan of the additional AEW&C aircraft on 25 May.

South Korea has been considering the procurement of at least two additional aircraft since 2021, according to Janes data. This initial procurement of two aircraft by 2027 had a projected budget of KRW1.59 trillion (USD1.22 billion). However, in its 26 May announcement, DAPA said the draft procurement proposal had set the total project cost at KRW3.9 trillion (USD3 billion). This suggests that the procurement number has potentially been increased to three or four aircraft, Janes assesses.

<https://www.janes.com/defence-news/news-detail/south-korea-to-acquire-new-aewc-aircraft-to-track-north-korean-missiles>

THE ECONOMIC TIMES

Wed, 07 Jun 2023

NATO Plans Record German-led Air Force Exercise, "Air Defender 23"

NATO will begin the largest air force deployment exercise in Europe in the alliance's history next week, German and US officials said on Wednesday.

The German-led "Air Defender 23" will take place over around 10 days starting Monday and include some 220 military aircraft from 25 NATO and partner countries.

Presenting the plans, US Ambassador to Germany Amy Gutmann said that while the exercise was purely defensive in nature, it was intended to send a message to countries including Russia.

"I would be pretty surprised if any world leader was not taking note of what this shows in terms of the spirit of this alliance, which means the strength of this alliance, and that includes Mr Putin," she told reporters, referring to the Russian president.

"By synchronizing together, we multiply our force."

The exercise will include operational and tactical-level training, primarily in Germany, but also in the Czech Republic, Estonia and Latvia. General Ingo Gerhartz of the German Luftwaffe said "Air Defender" was conceived in 2018 in part as a response to the Russian annexation of Crimea from Ukraine, although he stressed it was "not targeted at anyone".

"We are a defensive alliance and that is how this exercise is planned," he said.

General Michael Loh, director of the US Air National Guard, said NATO's duties were at an "inflection point". "A great deal has changed on the strategic landscape throughout the world, especially here in Europe," he said.

"This exercise focuses on supplementing the permanent United States presence in Europe" as well as providing training" on a larger scale than what was usually accomplished on the continent," Loh added.

Gutmann said that while there were no plans to make "Air Defender" a recurring exercise, she added: "We have no desire for this to be the last."

Asked about potential disruption to civilian air transport during the exercise, Gerhartz insisted the planners had done "everything in our power" to prevent flight delays or cancellations as school holidays begin in some German regions.

<https://economictimes.indiatimes.com/news/defence/nato-plans-record-german-led-air-force-exercise-air-defender-23/articleshow/100819770.cms>

Science & Technology News

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Wed, 07 Jun 2023

Beyond the Horizon: SpaceX to Propel India's Azista BST Aerospace's Maiden Satellite

By Girish Linganna

In a significant development for the Indian space industry, Elon Musk's Space Exploration Technologies Corporation, popularly known as SpaceX, is set to launch the first satellite of Indian startup Azista BST Aerospace Pvt Ltd. This announcement was made by top officials of the Indian company, marking a significant milestone in the country's space exploration journey.

Azista BST Aerospace's 80 kg satellite, named ABA First Runner (AFR), is a remote sensing satellite expected to be launched in the middle of June 2023. Sunil Indurti, the Director of Azista BST Aerospace, shared this news with the Indian News Service (IANS).

Azista BST Aerospace is an Indo-German satellite manufacturing joint venture, with India's Azista Industries Pvt. Ltd holding a 70 percent stake and Berlin Space Technologies GmbH holding the remaining 30 percent. The company is currently funded by Azista Industries and has expressed a long-term business outlook, choosing to stay away from venture capital funding.

Sunil Indurti, an engineering graduate from the esteemed College of Engineering, Guindy in Chennai, ventured into the space sector after founding and exiting an ice cream parlour chain in Hyderabad. His ambition during his college days was to build a national brand. After exiting the ice cream venture, Indurti met Srinivas Reddy Male, Managing Director and a Director with pharma company Hetero, and both decided to venture into satellite manufacturing.

The company initially started as a vendor for the Indian Space Research Organisation (ISRO) and set up a factory in Ahmedabad, Gujarat. They have also established weather stations for the Defence Research and Development Organisation (DRDO) and others.

When asked about the choice of SpaceX's Falcon 9 rocket over India's own Polar Satellite Launch Vehicle (PSLV) of ISRO, Indurti explained that SpaceX had the slot for the satellite in its rocket. At the time Azista BST Aerospace booked its slot on the Falcon 9 rocket, the Indian space sector was undergoing changes with the establishment of a regulator for private players. Unlike SpaceX, which launches several rockets in a year, ISRO's PSLV launches are relatively infrequent. However, Indurti acknowledged that ISRO is competitive in terms of launch costs.

Azista BST Aerospace is yet to decide on owning a constellation of satellites and generating revenue from selling the data. As for the challenges in local sourcing of satellite components, Indurti mentioned that semiconductor chips have to be imported and are not easy to localise. The satellite reaction wheels and other subsystems are manufactured by the company. Bharath Simha Reddy P., Business Development Manager, stated that the local content would be about 70 percent, with plans to increase it to 80 percent.

The company's target is to manufacture about 100 satellites per year, each weighing between 50-200 kg. Azista BST Aerospace also makes subsystems for other satellite makers and has decided to produce small satellites for defence and commercial usage.

The current plan is to sell the remote sensing data acquired from the first satellite to others. The success of this mission will also demonstrate Azista BST Aerospace's capability in building satellites. The company's first remote sensing satellite, AFR, will provide a panchromatic image with a five-metre resolution and a swath of 70km.

According to Bharath Simha Reddy, the company has potential customers in strategic and agriculture sectors for the data to be acquired from the first satellite, as well as analytics. Most of these customers are located in Southeast Asia and other parts, including India.

"In the next two to three years, there will be three to four missions to demonstrate our satellite payloads," Bharath Simha Reddy added.

This collaboration between SpaceX and Azista BST Aerospace signifies a new era in the Indian space industry, demonstrating the potential for private companies to make significant contributions to space exploration and technology. The launch of the AFR satellite is not just a milestone for Azista BST Aerospace, but also for the broader Indian space industry, marking a significant step towards the country's self-reliance in space technology.

The launch also highlights the global nature of space exploration, with collaboration between Indian and German companies, and the use of American launch technology. This international

cooperation is a testament to the unifying power of space exploration and its potential to foster technological advancements that transcend national boundaries.

As Azista BST Aerospace continues to develop its capabilities and expand its operations, it will be interesting to watch how this impacts the broader space industry in India and beyond. The company's focus on manufacturing satellites and selling remote sensing data could open up new opportunities for businesses and researchers across a range of sectors, from agriculture to defence.

The launch of the AFR satellite is a significant step forward, but it is just the beginning for Azista BST Aerospace. With plans to manufacture hundreds of satellites and conduct multiple missions in the coming years, the company is poised to make a significant impact on the space industry. As we look to the future, it is clear that the sky is not the limit for Azista BST Aerospace – it's just the beginning.

<https://www.financialexpress.com/business/defence-beyond-the-horizon-spacex-to-propel-indias-azista-bst-aerospaces-maiden-satellite-3116648/>

ThePrint

Wed, 07 Jun 2023

Indian-origin Professor Awarded 'Dutch Nobel Prize' for her Research on just and Sustainable world

Indian-origin professor Joyeeta Gupta is among the two scientists who have been named for the prestigious Spinoza Prize, also known as the Dutch Nobel Prize, it was announced on Wednesday.

Gupta, the faculty professor of Sustainability and professor of Environment and Development in the Global South at the University of Amsterdam, received the prize for her outstanding, pioneering, and inspiring scientific work in which she focuses on a just and sustainable world, the Dutch Research Council said.

Gupta will be officially presented with the highest distinction in Dutch science on October 4 alongside Toby Kiers, another scientist chosen for the award, the council said in a statement.

Toby Kiers is a professor of Mutualistic Interactions at the University of Amsterdam.

Gupta will receive 1.5 million euros to spend on scientific research and activities related to knowledge utilisation, the statement said.

Sometimes called the 'Dutch Nobel Prize', the Spinoza prize is the highest award in Dutch academia and is awarded each year to researchers working in the Netherlands who "according to international standards belong to the absolutely best researchers worldwide".

"The scientists who have received this award in the past represent the absolute best of Dutch academia, so I'm honoured to be considered alongside them," Gupta said.

Gupta, who is also co-chair of the Earth Commission founded by Future Earth and supported by the Global Challenges Foundation, said she would work towards implementing her ideas on sharing 'ecospace' (environmental utilisation space) globally that aims to protect environmental conditions in an equitable manner worldwide and would be a fitting way to bring global environmental and developmental issues together.

Gupta's research focused on how to solve issues arising from climate change through good governance, the statement said.

“At the core of her research is an attempt to unravel the connections between the climate crisis, global water challenges, possible solutions and justice. To this end, her work brings together various scientific disciplines, from international law and economics to political science, development studies and environmental studies,” the statement said.

Peter-Paul Verbeek, Rector Magnificus of the University of Amsterdam, said: “Justice for both people and the planet is the common thread in Joyeeta’s work. She is relentlessly committed to climate justice, always looking beyond the boundaries of disciplines, realising that this is the only way to approach the climate issue.” The Spinoza Prize has been awarded annually since 1995.

<https://theprint.in/world/indian-origin-professor-awarded-dutch-nobel-prize-for-her-research-on-just-and-sustainable-world/1616967/>

