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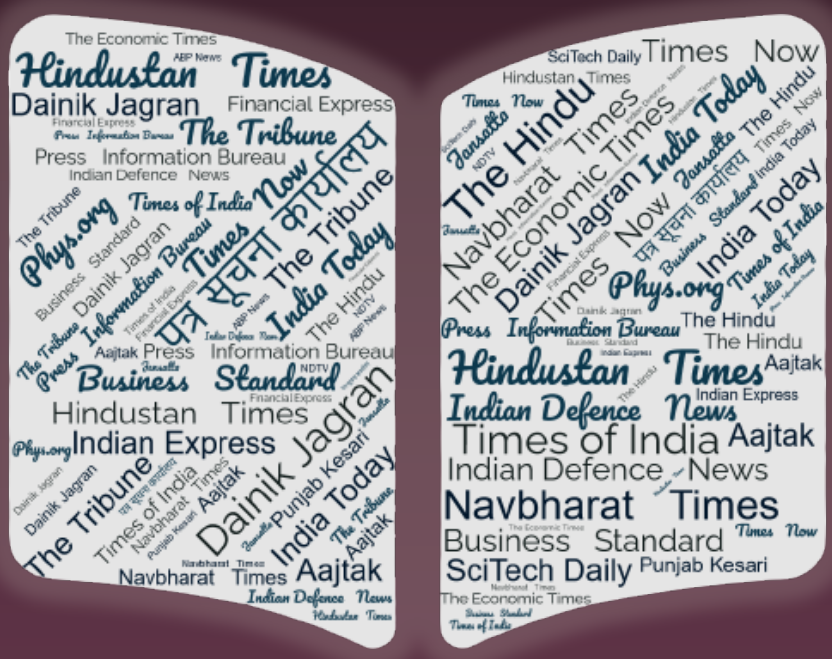

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CONTENTS

DRDO News

DRDO Technology News

FINANCIAL EXPRESS
Read to Lead

Sat, 29 Oct 2022

IIT Roorkee to Get DRDO Research Centre to Boost Innovation in Defence Sector

The Ministry of Defence, Government of India, has approved a new research centre at the Indian Institute of Technology (IIT) Roorkee keeping in tune with India's mission for technological upgradation and self-reliance in the defence sector. According to an official statement, the facility will be known as 'DRDO Industry Academia-Centre of Excellence' (DIA-CoE). The statement added that the Defence Research and Development Organisation (DRDO) with its vision and new role towards nation-building has recently entered into a Memorandum of Understanding (MOU) with six IITs including IIT Roorkee. Defence minister Rajnath Singh concurred on the important role of DRDO as a facilitator for enhancing and help developing research facilities in academic institutes like IITs. DFTM, DRDO HQrs will be steering and coordinating with academia/IITs, Industries, and DRDO labs for directed research through the DIA-CoE, the statement said.

With the establishment of the research centre, IIT Roorkee will have improved prospects and avenues to address critical and futuristic defence technology requirements of the armed forces. The facility will receive financial assistance from the DRDO, Government of India. The DIA-CoE IITR will facilitate and undertake multidisciplinary directed basic and applied research in the research verticals mutually identified by the DRDO and IITR. The Centre of Excellence (CoE) will also collaborate with the academic researchers and faculties at IIT Roorkee, startups, industries, and other institutes in the country in facilitating and progressing advanced defence technology research. It will include IITR faculty members and students, DRDO scientists, start-ups, industry, and other research organizations. Furthermore, the statement mentioned that the vertical coordinators for the DIA-CoE proposal are professor Manish Shrikhande, professor Yogesh K Sharma, professor Vimal C Srivastava, professor VipulRastogi, and professor Andallib Tariq. The DIA-CoE IITR will enable collaborative research on themes which would lead to the development of new technologies for cutting-edge future defence systems as per the research and technology roadmap of the nation.

https://www.financialexpress.com/education-2/iit-roorkee-to-get-drdo-research-centre-to-boost-innovation-in-defence-sector/2758457/

पत्रिका

शुक्रवार, 28 अक्टूबर 2022

DRDO ने तैयार किया वज्र, 200 किमी तक बिजली से मरेंगे दुश्मन

रक्षा अनुसंधान एवं विकास संगठन DRDO ने एक ऐसा हथियार तैयार किया है जो बिना बारूद के ही दुश्मन के सीमा में 200 किलोमीटर घुसकर पूरी तरह से भष्म कर देगा। यह इंद्र के वज्र की तरह इतनी बिजली पैदा करेगा कि दुश्मन का कोई भी ठिकाना पलक झपकते बर्बाद हो जाएगा। भविष्य की सुरक्षा तैयारियों के तहत भारत ऐसा घातक हथियार तैयार किया है जोकि दुश्मनों के लिए काल होगा। DRDOने इसका नाम रेलगन रखा है। यह 200 किलोमीटर दूर लक्ष्य को ध्वस्त कर सकता है। इसमें बारूद का इस्तेमाल नहीं होगा। महज एक इलेक्ट्रिक करंट से इलेक्ट्रो मैग्नेटिक फील्ड (चुंबकीय क्षेत्र) तैयार होता है। इससे फिर बिजली के गोले बरसाए जाएंगे। इन गोलों की रफ्तार ध्वनि से छह-सात गुना ज्यादा होगी। तीनों सेनाएं दुश्मन के लड़ाकू-टोही विमान,मिसाइल, जंगी जहाज, तोप और जमीनी ठिकानों को बर्बाद करने में कर सकती हैं।

अमरीका, रूस और चीन पीछे

DRDO की पुणे स्थित प्रयोगशाला आर्मामेंट रिसर्च एंड डवलपमेंट इस्टब्लिशमेंट ARDE इस हथियार प्रणाली को तैयार किया है। अभी ऐसा हथियार दुनिया में किसी भी देश के पास नहीं है। अमरीका, रूस और चीन इसे बनाने की कोशिश कर रहे हैं।

तोप से तीन गुना ज्यादा मारक

तोप की रेंज 50 से 60 किमी होती है,वहीं रेल गन 200 किमी तक मार कर सकती है। इसमें बारूद का इस्तेमाल नहीं होगा, इसलिए लागत कम होगी। यह भविष्य का हथियार है। 10 एमजे कैपेसिटर गन का सफल परीक्षण हो चुका है। एआरडीई अब 100 एमजी क्षमता की रेलगन बना रही है।

अमरीका के पास भी नहीं है तकनीक

डीआरडीओ के पूर्व वैज्ञानिक डॉ.रवि गुप्ता ने दावा किया कि यह घातक हथियार दुनिया में किसी भी देश के पास नहीं है। चीन और अमरीका इसकी प्रणाली पर काम कर रहे हैं। डीआरडीओ ने इसकी थोड़ी जानकारी दी है। रेलगन भारत के लिए बहुद्देशीय साबित होगी। इससे हवाई, जमीनी और पानी का रास्ते होने वाले हमले रोके जा सकते हैं।

ये खासियत

- ध्वनि से 7 गुना तेज रफ्तार

- बिना बारूद वज्र का प्रहार
- लागत आएगी काफी कम
- 200 किलोमीटर तक मारक
- अमरीका-रूस-चीन भी कर रहे प्रयास

https://www.patrika.com/jaipur-news/railgun-drdo-has-prepared-thunderbolt-enemies-will-die-by-lightning-7839818/

पत्रिका

शुक्रवार, 28 अक्टूबर 2022

ध्वनि से 7 गुना तेज रफ्तार से गोले बरसाने वाली रेलगन बना रहा डीआरडीओ

भविष्य की सुरक्षा तैयारियों के तहत भारत ऐसा घातक हथियार बना रहा, जो दुश्मनों के लिए काल साबित हो सकता है। इस हथियार का नाम रेलगन है, जो 200 किमी दूर लक्ष्य को ध्वस्त कर सकता है। इस गन में बारूद का इस्तेमाल नहीं होगा। इस प्रणाली में इलेक्ट्रिक करंट से इलेक्ट्रो मैग्नेटिक फील्ड (चुंबकीय क्षेत्र) तैयार होता है। बिजली के प्रवाह से रेलगन से गोले बरसाए जाएंगे। इन गोलों की रफ्तार ध्वनि से छह-सात गुना ज्यादा होगी। इसके जरिए दुश्मन के लड़ाकू-टोही विमान, मिसाइल, जंगी तोप और जमीनी ठिकाने तबाह किए जा सकते हैं। इसका इस्तेमाल हमारी तीनों सेनाएं (सेना, एयरफोर्स व नेवी) कर सकती हैं। रक्षा अनुसंधान व विकास संगठन (डीआरडीओ) की पुणे स्थित प्रयोगशाला आर्मामेंट रिसर्च एंड डवलपमेंट इस्टब्लिशमेंट (एआरडीई) इस हथियार प्रणाली पर काम कर रही है। अभी इस तरह का हथियार किसी भी देश के पास नहीं है। अमरीका, रूस और चीन इसे बनाने की कोशिश कर रहे हैं।तोप से बेहतर

पारंपरिक तोप के मुकाबले रेलगन को बेहतर माना जा रहा। क्योंकि तोप की रेंज 50 से 60 किमी होती है। दूसरी तरफ रेल गन 200 किमी तक मार कर सकती है।। चूंकि इसमें बारूद का इस्तेमाल नहीं होगा, इसलिए लागत कम होगी। यह भविष्य का हथियार है। 10 एमजे कैपेसिटर गन का सफल परीक्षण हो चुका है। एआरडीई अब 100 एमजी क्षमता की रेलगन बना रही है। जल्द ही इसका भी परीक्षण होगा।

किसी के पास नहीं

डीआरडीओ के पूर्व वैज्ञानिक डॉ. रवि गुप्ता ने दावा किया कि यह घातक हथियार दुनिया में किसी भी देश के पास नहीं है। चीन और अमरीका इसकी तकनीकी प्रणाली पर काम कर रहे हैं। डीआरडीओ ने इसकी थोड़ी जानकारी दी है। जानकारों का कहना है कि रेलगन भारत के लिए बहुद्देशीय साबित होगी। इसके

जरिए हवाई, जमीनी और पानी का रास्ते होने वाले हमले रोके जा सकते हैं। क्योंकि भारतीय सीमा में रहते हुए यह गन दुश्मन के क्षेत्र में 150 से 180 किमी तक तबाही मचा सकती है।

https://www.patrika.com/mumbai-news/drdo-is-making-a-railgun-that-fires-7-times-faster-than-sound-7839947/

THE HINDU

Sat, 29 Oct 2022

Fifth Gen Fighter AMCA can be Rolled Out in Three Years After Project Sanction: Scientists

India's ambitious effort to build an indigenous fifth generation fighter development project, the Advanced Medium Combat Aircraft (AMCA), is set to complete the Critical Design Review (CDR) by December and project approval from the Cabinet Committee on Security (CCS) is expected after that, according to officials of the Aeronautical Development Agency (ADA) which is under the Defence Research and Development Organisation (DRDO). "Once the project sanction is received, the first prototype can be rolled out in three years and the first flight in one to one and half year after that," said Dr. A.K. Ghosh, project director of AMCA speaking at DefExpo-2022 last week.

The CDR is an important aspect where the design is put through a series of tests for validation before its frozen. Hindustan Aeronautics Limited (HAL), which is the production agency for the project has initiated manufacturing activities. The AMCA is envisaged as a 25-tonne twin engine stealth aircraft with internal weapons bay and Diverterless Supersonic Intake which has been developed in India for the first time. It is intended to have an internal carriage of 1500kgs of payload and 5500kgs of external payload with 6500kgs of internal fuel. Early September, the CCS give sanction for the development of the LCA-Mk2, a bigger and more capable fighter than the present one. We will be able to deliver the first prototype in 2025-26 and have the first flight in 2026-27, C.B. Ananthakrishnan, Chairman and Managing Director of HAL said at DefExpo.

The IAF wanted a replacement for the Mirage-2000 because even its manufacturer France has phased them out and the LCA-Mk-2 is meant to be its replacement, said P. Thangavel, the project director for the Naval LCA-Mk1 project. "We should have the first prototype in another three years. It has much higher payload carrying capacity than the LCA and the engine gives enough thrust and is also very reliable," he said in a conversation at the DRDO stall at the Expo. The Mk-2 has been designed to carry 8-10 Beyond Visual Range missiles (BVR), said Dr. V. Madhusudana Rao, Project Director of LCA-MK2 stressing that no other fighter of this class can carry so many of them. The LCA-Mk2 will be a heavier and much more capable aircraft than the current LCA variants and the LCA-Mk1A, 83 of which have been contracted under a Rs. 48,000 crore deal with Hindustan Aeronautics Limited (HAL). IAF has given commitment to procure six squadrons of LCA-MK2.

The Mk2 will be powered by the General Electric GE-414 engine which produces 98kN thrust compared to 84kN thrust of the GE-404 engine powering the LCA Mk1 and MK1A. On this, Dr. Rao said a significant part of the GE-414 engine would be manufactured in India with

technology transfer from GE. The development of AMCA is to be carried out in two phases, MK1 with the GE414 engine and a Mk2 with a more powerful engine panned to be developed in collaboration. The LCA-Mk2 is 1350mm longer featuring canards and can carry a payload of 6500kgs compared to 3500kgs by the Mk1.

https://www.thehindu.com/news/national/fifth-gen-fighter-amca-can-be-rolled-out-in-three-years-after-project-sanction-scientists/article66066386.ece?homepage=true

The Tribune

Mon, 31 Oct 2022

DRDO Ex-Chief: Secure Space Communication Vital for National Security

Secure communication is vital for national security. With space becoming the fourth frontier of warfare, it is critical to have secure communication using quantum technology, said Dr G Satheesh Reddy, Scientific Adviser to Defence Minister, while speaking at the India Space Congress here. A former chairman of the DRDO, Dr Reddy said India was becoming a "space power" in designing, developing and manufacturing abilities. "With the opening of space tech to private players, participation by private organisations has brought transformative changes." A "Space for Defence in India" report was released on the occasion.

It speaks about leveraging dual use capabilities and raising investment across R&D, manufacturing, system integration, operations and delivery of services. Options in innovation for cutting-edge technologies in space for defence are also part of the report, besides the need for expanding capacities in intelligence, surveillance and reconnaissance (ISR), communications, navigation and electronic warfare. At the session "Space: The Fourth Frontier of Warfare", panelists discussed how space was defining modern warfare and the necessity to have a strong presence in space.

https://www.tribuneindia.com/news/nation/drdo-ex-chief-secure-space-communication-vital-for-national-security-445369

Defence News

Defence Strategic : National/International

पंजाब केसरी

रविवार, 30 अक्टूबर 2022

सैनिकों को 'आक्रामक'' युद्ध तकनीक की ट्रेनिंग दे रहा ITBP...गलवान जैसी झड़प का देंगे कड़ा जवाब

चीन से लगी वास्तविक नियंत्रण रेखा (LAC) की रक्षा में तैनात भारत तिब्बत सीमा पुलिस (ITBP) 2020 की गलवान घाटी झड़प जैसी प्रतिकूल स्थितियों से निपटने में बेहतर कौशल हासिल करने के लिए अपने कर्मियों को नई निरस्त्र 'आक्रामक' युद्ध तकनीक का प्रशिक्षण दे रही है। गलवान घाटी में हुई झड़पों में चीन की पीपुल्स लिबरेशन आर्मी (PLA) के सैनिकों ने भारतीय सैनिकों पर धारदार हथियारों से हमला किया था। ITBP के प्रशिक्षण में 'मार्शल आर्ट' की विभिन्न तकनीक जैसे कि जूडो, कराटे और क्राव मागा के 15-20 अलग-अलग युद्धाभ्यास शामिल हैं।

ITBP के अनुभवी प्रशिक्षक करीब तीन महीने तक चलने वाला यह प्रशिक्षण दे रहे हैं।ITBP के महानिरीक्षक ईश्वर सिंह दुहन ने कहा, ''नई निरस्त्र युद्ध तकनीक में रक्षात्मक और आक्रामक दोनों स्वरूप शामिल हैं। हमने पूर्व महानिदेशक संजय अरोड़ा के निर्देश पर पिछले साल अपने कर्मियों के लिए यह मॉड्यूल अपनाया था। ये युद्ध कौशल, विरोधियों को रोक देंगे तथा उन्हें अशक्त कर देंगे।" दुहन चंडीगढ़ से करीब 25 किलोमीटर दूर भानु में स्थित मूल प्रशिक्षण केंद्र (बीटीसी) की अगुवाई करते हैं। चीन ने भारतीय सैनिकों पर बर्बर हमले करने के लिए पत्थरों, नुकीली छड़ों, लोहे की छड़ों और एक प्रकार की लाठी 'क्लब' का इस्तेमाल किया था। भारतीय सैनिकों ने जून 2020 में गलवान (लद्दाख) में LAC पर भारतीय सीमा की ओर चीन द्वारा एक चौकी स्थापित करने का विरोध किया था।

इन झड़पों में भारत के 20 सैनिक शहीद हो गए थे, जबकि चीन ने अपने चार सैनिकों के मारे जाने की बात स्वीकार की थी। यहां प्रशिक्षण पर नजर रख रहे एक वरिष्ठ अधिकारी ने कहा कि निरस्त्र युद्ध तकनीक में सैनिकों को अपनी ताकत का इस तरीके से इस्तेमाल करने का प्रशिक्षण दिया जाता है ताकि विरोधियों को करारा जवाब मिले। दुहन ने कहा, ''हमने एक योजना बनायी है जिसमें सीमा और अत्यधिक ऊंचाई पर किसी सैनिक को 90 दिन से ज्यादा तैनात नहीं किया जाएगा। ऐसी व्यवस्था की गयी है जिससे सीमा

चौकियों से सैनिकों का समय रहते स्थानांतरण हो सकेगा।" उन्होंने कहा कि ऐसा नहीं है कि ये उपाय और निर्देश पहले नहीं थे, लेकिन अब हम इन चीजों को गंभीरता से लागू कर रहे हैं क्योंकि सीमा अब काफी सक्रिय है।

अधिकारियों ने बताया कि ITBP ने कई वैज्ञानिक मानदंडों का अध्ययन किया और उसे DRDO के डिफेंस इंस्टीट्यूट ऑफ एप्लाइड साइंसेज (DIPAS) से सूचनाएं मिली कि कैसे लंबे समय तक सैनिकों की तैनाती से मानव शरीर को ‘‘अपूरणीय क्षति" पहुंच सकती है।" उन्होंने कहा कि इसे देखते हुए यह फैसला किया गया है कि अत्यधिक ऊंचाई पर तैनात सैनिकों की तीन महीने की अवधि के दौरान अदला-बदली करने की आवश्यकता है। बता दें कि भारत और चीन के बीच पूर्वी लद्दाख पर 29 महीने से गतिरोध बना हुआ है। पैंगोंग झील इलाके में हिंसक झड़प के बाद पांच मई 2020 को पूर्वी लद्दाख सीमा पर दोनों देशों के बीच गतिरोध पैदा हो गया था।

https://m.punjabkesari.in/national/news/itbp-training-soldiers-in-aggressive-warfare-techniques-1703946

ThePrint

Sun, 30 Oct 2022

ITBP Trains Personnel in Advanced Unarmed Combat Craft Post Galwan

The ITBP that guards the LAC with China is training its personnel in a new unarmed “offensive” combat technique to gain better skills in taking on the adversary in situations like the Galwan clash of 2020 where crude weapons were used to inflict fatal injuries on Indian troops by the Chinese PLA. The training module comprises 15-20 different fight manoeuvres taken from various martial arts techniques like judo, karate and krav maga that involve moves like punching, kicking, throwing, joint lock and pinning down. The about three-month long training is being imparted by seasoned Indo-Tibetan Border Police (ITBP) trainers who hone new recruits at the basic training centre (BTC) here for battle inoculation just before getting commissioned into the border force. “The new unarmed combat technique involves both defensive and offensive moves. We brought in this module for our troops last year on the directions of our former director general Sanjay Arora. The combat skills will render the opponent immobile and can also incapacitate them,” ITBP Inspector General Ishwar Singh Duhan told PTI.

Duhan heads the BTC located in the Bhanu area here, about 25 km from Chandigarh. The Chinese soldiers used stones, nail-studded sticks, iron rods and clubs in carrying out brutal attacks on Indian soldiers after they protested the erection of a surveillance post by China on the Indian side of the LAC at Galwan (Ladakh) in June, 2020 resulting in 20 casualties on the Indian side while China belatedly claimed only four of its troops were killed. The Russian official news agency TASS had reported that 45 Chinese servicemen were killed in the Galwan Valley clash. According to an American intelligence report, the number of casualties on the Chinese side was 35. The unarmed combat technique trains the troops to channelise their power in such a manner that can land a deadly punch to the opponent, a senior officer supervising the training here said.

Duhan said the force has also introduced special training capsules aimed at enhancing the "physical capacity" of the troops deployed in some of the most arduous posts along the Line of Actual Control (LAC) that continuously face vagaries of nature like snow blizzards, avalanches and thin oxygen levels. "We have now put in place a plan where a troop deployed on the border and higher altitudes will not be deployed for more than 90 days at a stretch. Logistics have been put in place that will ensure timely replacement of troops from the border posts," the IG said. It is not that these measures and instructions were not there earlier but we are implementing these things seriously as the border is very active now, Duhan said.

Officials said the ITBP studied a number of scientific parameters and got inputs from the DRDO's Defence Institute of Physiology Allied Sciences (DIPAS) that showed how prolonged deployment of personnel can bring about "irreparable damage" to the human body. It was then decided that troops deployed at high-altitude need to be rotated within a three-month duration. Given the standoff, the ITBP has implemented the directive in letter and spirit now, the senior officer quoted above said. India and China are locked in a lingering border standoff in eastern Ladakh for over 29 months. The bilateral relationship came under severe strain following the deadly clash in Galwan Valley in Eastern Ladakh in June, 2020.

The eastern Ladakh border standoff erupted on May 5, 2020, following a violent clash in the Pangong lake areas. Both sides gradually enhanced their deployment by rushing in tens of thousands of soldiers and heavy weaponry. As a result of a series of military and diplomatic talks, the two sides completed the disengagement process last year on the north and south banks of the Pangong lake and in the Gogra area. Last month, the Indian and Chinese militaries carried out disengagement from the Patrolling Point 15 in the Gogra-Hotsprings area. However, there has been no progress yet on resolving the standoff in the Demchok and Depsang regions. The about 98,000 personnel strong ITBP is mandated to guard the 3,488 km long LAC running across from Ladakh to Arunachal Pradesh and is currently deployed along with the Army at these locations since the standoff started.

https://theprint.in/india/itbp-trains-personnel-in-advanced-unarmed-combat-craft-post-galwan/1187663/

FINANCIAL EXPRESS
Read to Lead

Sun, 30 Oct 2022

C295 could be Also Deployed for Maritime Security

The C295 which will soon be manufactured at the new facility in Vadodara, however, in (Intelligence, Surveillance, and Reconnaissance (ISR) role this aircraft won't have the range of the P-8l which the Indian Navy is already operating. With 1500km range with normal payload and crew it will still allow it to support P-8I over the Arabian Sea and Bay of Bengal and if deployed on Andaman and Nicobar islands. This C295 could provide 80 degree coverage of the Indian Ocean Region (IOR) with a fleet of 12-18 aircraft. This is an advanced multi-mission aircraft based on the CN-235 transport aircraft — which was formed from a Spanish and Indonesian partnership — is now the basis of the C295.

Integration of a simple design and robust airframe, this aircraft features a pressurized cabin and complies with the international airworthiness regulations. The cockpit enhances the situational

awareness and flight safety, while reducing the pilot workload for improving the mission effectiveness. The modular architecture concept further allows for the integration of equipment in line with the potential growth in future. The aircraft has the capability to be installed with a fully integrated tactical system (FITS) as a permanent or palletised configuration to conduct surveillance missions. The C295 (Intelligence, Surveillance, and Reconnaissance (ISR) aircraft version is provided with underwing hardpoints for the installation of anti-ship missiles, rockets, torpedoes and reconnaissance/jamming pods. The ability to have a Maritime Patrol Radar mounted on one of its hardpoints and also as a separate belly mounted radar.

Powered by

The Pratt and Whitney power-plant enables a maximum speed of 480km/h and a long endurance of up to 11 hours, which makes the bird very suitable to augment the ISR efforts taken by P8-I which are being operated by the Indian Navy. In its Airborne Early Warning version, the C295 carries state-of-the-art AESA radar for 360-degree coverage to provide a full picture of the airspace which is required by Indian Navy to support its Air Domination operations away from shores, which cannot be supported by Indian Air Force (IAF) aircraft due to various priorities.

Centre for Air Borne System (CABS), under Defence Research and Development Organisation (DRDO) , has already started testing new Active Electronically Scanned Array (AESA) radar that can carry out detection and tracking of air and sea surface targets. This would be below the nose behind the EOIR ((Electro-Optical/Infra-Red). Further, this could fill in the void of MR-MR (Maritime Reconnaissance) created by decommissioning of IL-38. C-295 can be armed with MK 54 Lightweight Torpedoes and two MBDA's Marte anti-ship missiles under wings to meet its anti-submarine warfare requirements as demonstrated by Airbus. "This aircraft is far better than the Rheinland Air Service (RAS) -72 Sea Eagle Maritime Patrol Aircraft of the Pakistan Navy," said a senior officer.

https://www.financialexpress.com/defence/c295-could-be-also-deployed-for-maritime-security/2758839/

Hindustan Times

Sun, 30 Oct 2022

$25bn Defence Output by 2025: PM at C-295 Facility

Prime Minister Narendra Modi on Sunday made a strong pitch to global manufacturers, saying that the country is moving forward with the mantra of 'Make in India, Make for the World'. The country is on its way to becoming a global hub for the manufacture of transport aircraft, the Prime Minister said after laying the foundation stone of a manufacturing facility being set up by the Tata-Airbus consortium in Vadodara for C-295 medium transport aircraft for the Indian Air Force's transport fleet. "We have taken a big step in the direction of making India the manufacturing hub of the world," he said. The Prime Minister said that India aims to scale up its defence manufacturing output to more than $25 billion by 2025. Of this, more than $5 billion will be for exports, he said, adding that the defence corridors being developed in Uttar Pradesh and Tamil Nadu will immensely help in scaling up this sector.

The C-295 aircraft manufacturing facility will be the first such facility in the private sector in the country. "Now following 'Sabka Prayas', the government has started giving equal importance to

the public and private sector... we have abandoned the makeshift approach of decision making and have come up with various new incentives for investors. Today our policies are stable, predictable and futuristic," the Prime Minister said. In September last year, the defence ministry signed a □21,935-crore contract with Airbus Defence and Space for 56 C-295 planes to give push to the government's Atmanirbhar Bharat Abhiyan. Tata Advanced Systems Limited (TASL), and Airbus Defence and Space will jointly execute the programme.

Under the contract, the country will get 16 C-295 aircraft which will be delivered by Airbus in flyaway condition from Seville, Spain, and the remaining 40 will be manufactured in India by Tata consortium of TASL and Tata Consultancy Services. The 16 flyaway aircraft are scheduled to be delivered between September 2023 and August 2025, while the first Made in India aircraft will roll out of the new facility in September 2026 and the remaining 39 by August 2030. "India presents opportunities of low-cost manufacturing and high output," Modi said after the ceremony. The C-295s will replace IAF's fleet of ageing Avro-748 planes that entered service in the early 1960s. "India is making fighter jets, tanks, submarines, medicines, vaccines, electronic gadgets, mobile phones and cars that are popular in many countries. India is moving forward with the mantra of 'Make in India, Make for the World' and now India is becoming a huge manufacturer of transport aircraft in the world. I can foresee that India will soon be manufacturing big passenger aircraft that will proudly bear the words Made in India," the Prime Minister said.

The Prime Minister said the C-295 manufacturing facility had the power to transform the country's defence and aerospace sector. "Transport aircraft, manufactured at the facility, will not only strengthen the armed forces but also help in developing a new ecosystem of aircraft manufacturing in the country," the Prime Minister said. Apart from the 56 planes already ordered, the C-295 facility at Vadodara will be capable of meeting additional requirements of the air force and also cater to export orders, HT has learnt. "The project offers a unique opportunity for the Indian private sector to enter into technology intensive and highly competitive aviation industry. It will augment domestic aviation manufacturing resulting in reduced import dependence and expected increase in exports," the defence ministry said in a statement on Sunday.

The project is expected to give a boost to India's aerospace ecosystem and generate thousands of jobs. "Vadodara, which is famous as a cultural and education centre, will develop a new identity as an aviation sector hub," the Prime Minister said in his home state of Gujarat. Elections are due in the state towards the end of the year. The Tata consortium has identified 125 domestic Ministry of Micro, Small and Medium Enterprises (MSME) suppliers spread across seven states. This will act as a catalyst for employment generation and is expected to generate 600 highly skilled jobs directly, over 3,000 indirect jobs and an additional 3,000 medium skill employment opportunities, officials in the defence ministry said. Manufacturing of more than 13,400 parts, 4,600 sub-assemblies and all major component assemblies will be carried out in the country, while some equipment such as engines, landing gear and avionics will be provided by Airbus Defence and Space, and integrated on the aircraft by the Tata consortium, the officials said.

All 56 aircraft will be fitted with indigenous electronic warfare suite developed by Bharat Electronics Ltd and Bharat Dynamics Limited. After completion of delivery of 56 aircraft to IAF, Airbus Defence and Space will be allowed to sell the aircraft manufactured in India to civil operators and export to countries which are cleared by New Delhi, the defence ministry said. At the ceremony on Sunday, the Prime Minister said, "The UDAN (Ude Desh ka Aam Nagrik)

scheme has also given our aviation sector a major boost. India will require over 2,000 aircraft in the next 15 years or so. Today, we have taken a step towards meeting this global demand. New India focuses on a competitive environment while ensuring quality in the production sector." Highlighting the investment friendly policies of the government, the Prime Minister remarked that its benefits are clearly visible in the foreign direct investment (FDI) inflows.

"In the last eight years companies from more than 160 countries have invested in India. These foreign investments are not limited to certain industries but are spread across 61 sectors and covers 31 states of India. More than $3 billion have been invested in the aerospace sector alone. Post 2014, investment in the aerospace sector saw fivefold rise as compared to the total investment in 14 years previous from 2000 to 2014," he said. "A new saga of economic reforms is being written in India today and the manufacturing sector is reaping the most benefits from this apart from the states," he said. The Avro replacement project has been in the works for more than a decade. The defence acquisition council – India's apex defence procurement body – gave its acceptance of necessity (AoN) to replace the Avro planes with 56 new aircraft in 2012. Under India's defence procurement rules, AoN by the council is the first step towards buying military hardware. It is the first Make in India aerospace programme in the private sector involving the full development of a complete industrial ecosystem; from manufacture to assembly, test and qualification, to delivery and maintenance of the complete lifecycle of the aircraft, Airbus Defence and Space and TASL had earlier said in a joint statement.

https://www.hindustantimes.com/india-news/25bn-defence-output-by-2025-pm-at-c-295-facility-101667153263367.html

Sun, 30 Oct 2022

PM Modi Calls on Global Defence Majors to Make India Manufacturing Hub

Prime Minister Narendra Modi on Sunday called on global defence majors to manufacture military hardware in India for the world after laying the foundation stone of a facility here for the production of European C-295 military transport aircraft. In his address, Modi said India is moving forward with the mantra of "Make in India and Make for the Globe" and that his government's policies are "stable, predictable and futuristic" which are boosting the overall economic growth. Under a Rs 21,935 crore deal inked in September last year, the Tata Group will manufacture 40 C-295 medium transport aircraft at the Vadodara facility in cooperation with European aerospace major Airbus. The prime minister said the manufacturing facility would help India become a hub for production of transport aircraft and that he could envision the day when big commercial planes would be made in the country bearing the words 'Make-in-India'.

"India is presenting opportunities of low-cost manufacturing and high output…. Today India is working with a new mindset, a new work-culture," he said at the event, urging defence majors to take advantage of favourable environment for manufacturing in the country. Highlighting the increasing demand for passenger and cargo aircraft in India, the prime minister said the country will need more than 2,000 planes in the next 15 years. He pointed out that today is a crucial step

in this direction and India has already begun preparations for the same. Transport aircraft manufactured in Vadodara will not only give strength to the armed forces but it will help in developing a new ecosystem of aircraft manufacturing. “Vadodara which is famous as a cultural and education centre will develop a new identity as an aviation sector hub," Modi said.

It will be the first time in the Indian private sector that an aircraft will be manufactured in-country, from parts to final assembly. In his remarks, Modi said India today has taken a “big step" to boost manufacturing, adding the country is making fighter jets, tanks, submarines, medicines, vaccines, electronic gadgets, mobile phones and cars that are popular in many countries. Defence Minister Rajnath Singh described the occasion as a milestone in India’s quest for becoming self-reliant in defence production. The aircraft will be produced by a consortium of European aerospace major Airbus and the Tata Group.

“It is a historic moment not only for the Tata Group but for the country, as it embraces the prime minister’s vision of making India a truly ‘Atmanirbhar’ (self-reliant) country," N Chandrasekaran, Chairman of Tata Sons, said. Airbus Chief Executive Officer Guillaume Faury said his company is honoured to play a role in this “historic moment for aerospace in India". “Our Airbus teams are committed to supporting the modernisation of the Indian Air Force with the C295 programme, which will also contribute to the development of the private defence manufacturing sector in the country," he said in his brief address.

https://www.news18.com/news/india/pm-modi-calls-on-global-defence-majors-to-make-india-manufacturing-hub-6272395.html

NEWS NATION

शुक्रवार, 28 अक्टूबर 2022

भारत का नया हथियार, दुश्मन के ड्रोन को कर देगा बेकार

रूस और यूक्रेन के बीच चल रहे युद्ध में सबसे ज्यादा तबाही ड्रोन ने मचाई है। ऐसे में दुश्मन के ड्रोन को रोकना कितना जरूरी है ये बात पूरी दुनिया समझ चुकी है। भारत की एक स्टार्टअप कंपनी ने एक ऐसा ही सिस्टम तैयार किया है जो दुश्मन के ड्रोन हमले को बेकार करने का दावा करती है। देश की तमाम बड़ी एजेंसियों के सामने इस एन्टी ड्रोन सिस्टम का मुम्बई में टेस्ट और ट्रायल की गया। भारत की सीमाओं की सुरक्षा के लिये आ गया है जटायू... जटायू ANTI ड्रोन सिस्टम एक ऐसा एडवांस तकनीक है जो दुश्मन के ड्रोन हमले को बेकार करने की ताकत रखता है। यानी कि एक तरफ जहां भारत ड्रोन तकनीक से लैस हथियार तैयार करने में लगा है वहीं अब दुश्मन के ड्रोन हमले को भी नाकाम करने के लिए इस एडवांस तकनीक को तैयार कर लिया गया है।

ड्रोन हमले को रोकने के लिए स्वदेशी रडार और जैमर सिस्टम का भारत के पास होना ये हमारी सुरक्षा एजेंसियों के लिए बेहद जरूरी है। यही वजह है कि जब इस एन्टी ड्रोन सिस्टम का ट्रायल और टेस्ट किया

गया तो इस मौके पर देश की सभी बड़ी एजेंसियां मौजूद थी। इस एंटी ड्रोन सिस्टम का ट्रायल रात के अँधेरे में किया गया ताकि इसकी छमता को ठीक से परखा जा सके। जटायू एन्टी ड्रोन सिस्टम के ट्रायल के दौरान DRDO, BSF के अलावा CISF और IB की टेक्निकल ऑफिसर्स भी मौजूद थे। ये एन्टी ड्रोन सिस्टम सरहद के 5 किलोमीटर की रेंज को छावनी में बदलने का दम रखता है। रूस और यूक्रेन के युद्ध में ड्रोन की ताकत को पूरी दुनिया ने देखा है। युद्ध में दुश्मन पर ड्रोन हमला करने से ज्यादा जरूरी दुश्मन के हमले को रोकना है और जटायू को इसी सोच के साथ तैयार किया गया है। इस एन्टी ड्रोन सिस्टम का इस्तेमाल सरहदों की सुरक्षा के अलावा देश के कई सेंसिटिव इलकों की सुरक्षा के लिए इस्तेमाल किया जा सकता है। इसके अलावा प्रधानमंत्री से लेकर दूसरे VVIP की सुरक्षा में भी जटायू की मदद से किसी भी अनहोनी को रोका जा सकता है।

https://www.newsnationtv.com/science-tech/news/jatayu-anti-drone-system-indias-new-weapon-315074.html

Business Standard

Sat, 29 Oct 2022

India's Defence Ministry World's Biggest Employer, Says Statista Report

India's Ministry of Defence is the world's biggest employer with 2.92 million people, which includes combined active service personnel, reservists and civilian staff, according to a report in 'Statista'. A close second to the Indian Defence Ministry is the US Department of Defense which employs 2.91 million people, according to the Statista infographic on employers with the largest workforces worldwide in 2022. Statista is a Germany-based private organisation that provides data and statistics about various issues worldwide. "At the top of the ranking for the world's largest employers is India's Ministry of Defence. Combining active service personnel, reservists and civilian staff, the total headcount comes to 2.92 million - a touch ahead of the United States equivalent, the Department of Defense," the report said.

In China, the People's Liberation Army, which doesn't include civilian positions, employs around 2.5 million people, the Hamburg-based firm specializing in market and consumer data said. "The Chinese equivalent of the U.S. Department of Defense, the Central Military Commission may have as many as 6.8 million people in its employment, though that figure was not deemed sufficiently reliable to be included in this list," the report adds. According to the report, no company in the world has more employees than Walmart. "The latest information from the US retail giant put the figure at a massive 2.3 million. Not even the behemoth that is Amazon comes close, despite being in second place with a 1.6 million-strong workforce," cites Statista

This latest infographic by Statista doesn't come as surprise after total global military expenditure reached USD 2113 billion in 2021. According to Stockholm International Peace Research Institute (SIPRI), the five largest spenders in 2021 were the United States, China, India, the United Kingdom and Russia, together accounting for 62 per cent of expenditure. US military spending amounted to USD 801 billion in 2021 while China, the world's second-largest spender,

allocated an estimated USD 293 billion to its military. Meanwhile, the SIPRI report says India's military spending of USD 76.6 billion ranked third highest in the world.

https://www.business-standard.com/article/current-affairs/india-s-defence-ministry-world-s-biggest-employer-says-statista-report-122102900109_1.html

NewsOnAIR

Fri, 28 Oct 2022

Defence Minister Rajnath Singh Dedicates 75 Border Road Projects to Nation from Country's Last Village Shyok in Leh

Defence Minister Rajnath Singh today dedicated to the nation 75 different projects of the Border Roads Organisation, BRO from the country's last village Shyok in Leh. The projects are 45 bridges, 27 roads, and two helipads covering states having international borders including Jammu & Kashmir, Ladakh, Arunachal Pradesh, Sikkim, and Rajasthan. The Defence Minister also inaugurated a carbon-neutral residential complex and two helipads in Ladakh. The Defence Minister complimented the Border Roads Organisation for touching new heights with dedication in providing last mile connectivity and fulfilling the strategic requirements for bordering states and armed forces. He said, under the leadership of Prime Minister Narendra Modi, the country has prioritised providing basic amenities to every village to uplift the living standards. He said, due to the presence of terrorism and separatists in Jammu and Kashmir, development could not reach this part of the country. He said, these union territories are now on the path of development.

AIR correspondent reports, the 120 meter Shyok bridge has replaced the earlier 20 meter bailey bridge at a height of over twelve thousand feet connecting the Durbuk – Shyok village with the Daulat Beg Oldie, DSDBO. In the challenging climatic and inhospitable conditions, the bridge has been completed in a record time of twelve months. Arunachal Pradesh Chief Minister Pema Khandu, MoS PMO Dr. Jitendra Singh, LAHDC Chief Executive Councillors of Leh and Kargil Tashi Gyalson, Fero Ahmed Khan, BRO DG Lt. General Rajeev Choudhary, Trishul Division GOC Lt Ge Mishra and several Members of Parliament were also present.

https://newsonair.com/2022/10/28/defence-minister-rajnath-singh-dedicates-75-border-road-projects-to-nation-from-countrys-last-village-shyok-in-leh/

abp न्यूज़

Sat, 29 Oct 2022

Top Naval Commanders to Review Maritime Security At 4-Day Conclave

Top commanders of the Indian Navy will carry out a comprehensive review of the country's maritime security at a four-day conclave beginning Monday in the backdrop of the geo-political turmoil triggered by the Ukraine conflict and China's increasing forays into the Indian Ocean

region. The commanders are also expected to delve into the overall situation in the Indo-Pacific, officials said. Defence Minister Rajnath Singh, Chief of Defence Staff Gen Anil Chauhan, Army Chief Gen Manoj Pande and Air Chief Marshal VR Chaudhari are scheduled to address the commanders on a range of subjects including tri-services convergence and combat readiness. "The conference would also dwell upon the dynamics of the geostrategic situation of the region and the Navy's readiness to deal with the same," the Indian Navy said.

It said the Indian Navy's standing as the 'preferred security partner' in the region has also grown concomitantly in recent times and it is poised to "counter" all maritime security challenges emerging due to uncertain geo-strategic situations in the Indian Ocean and beyond. The conference serves as a platform for naval commanders to discuss important maritime matters at the military-strategic level through an institutionalised forum. "Due to the dynamic and fast-paced developments in security imperatives in the Indian Ocean region as well as in other parts of the world, the conference has its significance and relevance," the Navy said in a statement. The conference is taking place in Delhi. It said Chief of the Naval Staff Admiral R Hari Kumar along with other commanders will review "major operational, materiel, logistics, human resource development, training and administrative activities undertaken by the Indian Navy in the last few months." The Navy said the conference will further deliberate upon plans for "important activities and initiatives".

It said the Navy has focused on being a "combat-ready, credible and cohesive force" with a future-ready outlook and continues to assiduously execute its mandate. "The Indian Navy has witnessed significant growth in its operational tasking over the years in consonance with India's rising maritime interests," the Navy said. It further said: "The Chief of Defence Staff and the Chiefs of the Indian Army and the Indian Air Force would also interact with the Naval commanders to address the convergence of the three services vis-a-vis the common operational environment, and avenues of augmenting tri-service synergy and readiness towards the defence of the nation and India's national interests."

https://news.abplive.com/news/naval-commanders-maritime-security-conclave-maritime-security-indo-pacific-defence-minister-rajnath-singh-chief-of-defence-staff-gen-anil-chauhan-1560511

Outlook

Sat, 29 Oct 2022

‘Indian Defence Industry has Potential to Evolve as a Global Manufacturing Hub’

Engaged in a confrontation on its eastern border, the Indian Army is facing a major challenge to modernise its ranks. There are concerns about the ‘Atmanirbhar’ scheme adversely affecting the Army’s procurements. Lt General Shantanu Dayal, Deputy Chief of Army Staff (Capability Development and Sustenance), spoke to Ashutosh Bhardwaj about the Army’s plans. Here are edited excerpts:

What are your modernisation plans?

The Indian Army’s modernisation plan is based on the development of critical combat capabilities and overcoming obsolescence in core capacities. The incorporation of drones,

remotely piloted aircraft, radars, counter-drones and satellite imagery has improved the lethality and accuracy of operations. A large number of capital contracts and fast-track procurements worth Rs 47,000 crore from Indian industry were concluded in 2021–22.

One hears that the 'Make in India' initiative has adversely affected the procurement of defence equipment.

The 'Atmanirbhar' vision has empowered the Army to procure diverse equipment and technologies through indigenous sources. The capital procurement pattern of the Army is inherently aligned with the 'Make in India' initiative. Of the capital acquisition contracts worth approximately Rs 90,000 crore in the last three financial years, approximately 83 per cent have been signed with Indian industry. The acceptance of necessity (AoN) obtained in the year 2021–22 worth Rs 40,000 crore went to domestic industries. The quantum of contracts that went to domestic units in the last three years has been the highest ever.

The positive indigenisation lists—released by the Ministry of Defence mandating that the armed forces will procure the listed items only from domestic manufacturers—have defined the focus area for the Indian defence industry. The industry has started evolving a dedicated defence vertical. The Army has processed 256 industry licences and 366 export licences in the last three years to boost defence production. I am confident that the Indian industry can deliver the most modern defence equipment to the Army.

What are the next-generation platforms, assets and technologies the Army is working on?

We are inducting multiple and diverse platforms and technologies in several areas. Infantry: a new generation of small arms, protection gear, night enablement of all weapons and enhanced surveillance capabilities. Mechanised forces: upgrade of existing fleet, enhanced night enablement, intelligence surveillance and reconnaissance (ISR), new generation of missiles and ammunition with increased depth of penetration and future-ready platforms. Artillery: Long-range vectors including missiles, rockets and smart munitions, recce platforms, integrated surveillance and target acquisition capabilities. Army Air Defence: Short- and medium-range surface-to-air missiles, shift from guns to missiles, better aerial targeting and counter-drone capabilities, modern fire control radars. Engineers: A new family of mines and bridges.

What is your preparedness for the new and disruptive technologies and warfare domains such as cyber, 5G, AI and Quantum?

Technologies like AI, machine learning, quantum, blockchain and 5G have vast potential in modern warfare. These niche technologies aid military decision-making, minimise human casualties and enhance combat efficiency. The Army has infused autonomous weapon systems, which would become force multipliers in future wars and be the fulcrum around which big data will be turned into actionable intelligence and bring a decision advantage. In collaboration with academia, especially IITs and MSMEs, the Army is pursuing numerous projects in the field of AI, autonomous lethal weapons, cyber, electronic surveillance, language translation and threat modelling. In quantum key distribution, India is among the few countries to have achieved a range of 119 km in a single hop. We have also established training sites for various niche technologies like AI and 5G. These modern technologies can catapult the Indian Army into a modern and futuristic force.

What are the Army's procurement, development and utilisation plans for drone systems crucial for modern warfare?

The Army has adopted a multi-pronged approach to develop its drone capability. A large number of drones and counter-drone systems have been procured, especially for the northern borders, besides the related capabilities like ISR, loitering and swarming. A variety of RPAS (remotely piloted aircraft system)/ UAV/drones are being procured. These procurements will provide greater visibility and surveillance capabilities to ground troops even in high-altitude areas. Long endurance aerial surveillance platforms and minefield/IED detection drones are being developed through Innovations For Defence Excellence (iDEX) programme. We have formed contracts for Swarm Drones, which are in the advanced stages of delivery.

How do you assess the capabilities of Indian industry? Can they meet the Make in India target?

The Indian defence industry has the potential to emerge as a serious competitor to global defence companies. To encourage indigenous capabilities, the Army has been interacting with many industries, MSMEs, startups and incubation centres. It has helped us in assessing indigenous capabilities and enabled the industry to understand our operational requirements. We would like the industry to develop consortiums and conglomerates of major military platforms like aircraft, tanks, submarines and guns. We also expect greater R&D by public and private sectors for enhancing the quality and lowering the cost of military equipment.

What are your plans to equip soldiers with the latest gadgets and enable their net-centricity? With fast evolving technologies, the weapon systems from small arms to the main battle tanks and artillery are becoming outdated soon.

The solider has always been our primary focus. We have equipped him with a family of new-generation small arms, protection gears, night-enabled weapons and enhanced surveillance capabilities. The frontline Infantry has been equipped with arms like Sig Sauer, while others will be equipped with the indigenously manufactured AK-203. In addition, each Infantry weapon system will be equipped with the latest sights to increase its accuracy and other force multipliers like drones and counter-drone equipment. To achieve greater ranges, the complete inventory of Artillery is being incrementally mediumised (the calibre of all guns is being standardised to 155 mm). The induction of K-9 Vajra, Sharang Guns, Dhanush Guns, ultralight howitzer and advance towed artillery guns paved the way for this transformation. The Artillery now has the ability to target the enemy at greater depth and accuracy by using the Brahmos missiles and the indigenous Pinaka Rocket System.

The capability of the Army Aviation has also increased exponentially in the last few years with the induction of advanced light helicopter (ALH) MK-III and IV platforms, advanced light helicopter (weapon system integrated) and light combat helicopters and Apache helicopters. It will mostly fulfill the requirement of the Army in the utility helicopter and attack helicopter streams. The requirement of reconnaissance and observation helicopters will be incrementally met with the induction of light utility helicopter beginning with 2023.

How do you see the collaboration with foreign original equipment manufacturers (OEMs)?

The Indian industry has already attained a high measure of *'atmanirbharta'* (self-reliance). However, when the equipment is required quickly, Indian industry can collaborate with foreign

OEMs, especially in the critical technology domain. The Indian defence industry has the potential to evolve as a global manufacturing hub in a decade.

https://www.outlookindia.com/national/-indian-defence-industry-has-potential-to-evolve-as-a-global-manufacturing-hub--magazine-233247

TIMESNOW

Sun, 30 Oct 2022

India Participates in First-Ever Trilateral Military Exercise with African Nations

In an effort to strengthen its defence ties with Africa, *India* recently hosted its first-ever trilateral *Navy* exercise. This week saw the trilateral drill between the *Navies of Tanzania*, Mozambique, and India, The Economic Times reported. The Gandhinagar Declaration, which was adopted at the recently concluded *India Africa Defence Dialogue* in Gandhinagar, on the margins of Defexpo 2022, was followed immediately by this exercise. While their force is currently conducting its first trilateral exercise with Tanzania and Mozambique off the east African coast, top Navy commanders will review India's maritime security and operational preparedness the following week, particularly in the Indian Ocean Region (*IOR*) where there is expanding China-Pakistan collusion.

According to officials on Saturday, the naval commanders' conference, which will take place from October 31 to November 3, will focus on "the dynamics of the geostrategic situation" in the IOR and the greater Indo-Pacific, as well as the Navy's preparation to deal with the same. The first iteration of the trilateral exercise between India, Mozambique, and Tanzania is currently taking place off *Dar* es Salaam, in keeping with the general strategy to expand military engagement in Africa, a continent where China has made significant strategic inroads.

With the INS Tarkash guided missile frigate, a *Chetak* chopper, and special marine commandos, India is participating in the exercise. The development of capabilities to counter common threats through training and the sharing of best practises, improving interoperability, and fostering maritime cooperation are the three main goals of the exercise, according to Commander *Madhwal*. He said, that the exercise underlines India's commitment to promote *SAGAR* (Safety And Growth for All in the Region) and boosting maritime security and collaboration with maritime neighbours in the IOR. China has significantly increased its naval presence in the IOR over the past few years, boasting the largest Navy in the world with 355 vessels and submarines. Then, after providing Pakistan with fighters, missiles, and other military gear and software, China is now also giving Pakistan eight Yuan-class diesel-electric submarines with air-independent propulsion (AIP) for longer underwater endurance, as well as four modern frigates.

https://www.timesnownews.com/mirror-now/in-focus/india-participates-in-first-ever-trilateral-military-exercise-with-african-nations-details-article-95181511

THE HINDU

Sun, 30 Oct 2022

U.S. Partnering with India to Enable it Play 'Broader Stabilising Role' in Indo-Pacific: Senior Pentagon Official

The U.S. wants to make sure that it is partnering with India in its defence modernisation plans and to better enable it to play a "broader stabilising role" in the strategic Indo-Pacific region, according to a senior Pentagon official. The Biden administration has taken several steps to strengthen the India-U.S. defence relationship since it assumed power in January 2021. “As India is taking a look at how it accelerates its own defence modernisation, in order to expand the role that it already plays as what I would describe as a net security provider in the Indian Ocean region, but more broadly in the Indo-Pacific, the United States wants to make sure that we are partnering with India to better enable it to play that broader stabilising role in the region,” the senior defence official told PTI on October 29.

“We have been very focused on ways that we are advancing interoperability between the U.S. and the Indian military," the official from the Pentagon said on condition of anonymity. "Obviously, the signature initiative I would highlight here is the Tri-Service exercise that we have between, which from our view is better equipping both of our militaries to be prepared for the kinds of challenges we will face in the future, which will require joint responses on both sides,” the official said. The official, however, refrained from describing the kind of responses that the two countries would have to their common challenges, amidst China's aggressive posturing in the Indo-Pacific. The militaries of the two countries have coordinated in the past during several natural disasters. “A lot of the exercises we're talking about are really focused on a lot of the disasters and other kinds of crises that we would see happening all of the time in the Indo-Pacific region," the official said.

“In addition, as we operate operationally, we are looking at what we do together in emerging technological domains, which I think we both recognise are increasingly important to the modern way of warfare,” said the senior official. For instance, emerging technologies in the domain of space and cyberspace. “We were very pleased that this past year, we've been discussing a new emerging defence capabilities dialogue that will focus on space, Artificial Intelligence [AI], cyberspace, and how we work together in those domains,” said the official. "I think, [we are] looking at how the United States and India both play an anchoring role in the broader regional architecture. So obviously, the Quad is an important part of our overall cooperation, but [we are] looking also at how we can both provide support to ASEAN and in other kinds of multilateral settings, even more informally,” the official noted.

In November 2017, the U.S., Australia, India and Japan gave shape to the long-pending proposal of setting up the four-nation Quad grouping to develop a new strategy to keep the critical sea routes in the Indo-Pacific free of any influence, amid China’s growing military presence in the strategic region and Beijing's maritime disputes with many countries in the Indo-Pacific. Giving an example, the official said the La Perouse exercise that the U.S. had with multiple countries across the region looked at ways that both the United States and India can join together in some of those groupings to support multilateral cooperation.

India and the U.S. have signed a new space situational awareness agreement, which speaks about the work that the two nations are doing to focus on new technologies and emerging domains. “Agreeing to those bilateral defence space and AI dialogues that we'll be having together, we see all of that work is really supporting the broader effort that the White House is leading on the U.S.-India work on critical and emerging technologies,” the official said. On the operational front, the Defence Department has been in particular focused on Navy-to-Navy cooperation. “This was discussed at the 2+2 dialogue last year and then we just recently saw the first fruits of that conversation with the Charles Drew [U.S. naval ship] pulling into Chennai, for mid-voyage ship repair,” the official said.

“We anticipate more of that coming up, going forward. But we think that's really going to enable greater logistical and operational cooperation between our navies, which has really been at the leading forefront of what we're doing,” the official said. India’s decision to join Combined Maritime Forces [CMF] Bahrain is another example of how the U.S. is leaning forward on more multilateral cooperation together with New Delhi. In April 2022, during the India-U.S. 2+2 dialogue, India announced that it would be joining the CMF as an associate partner to strengthen cooperation in regional security in the western Indian Ocean. The official said one of the top priorities of the United States is to ensure that it is a reliable partner to India and to make sure that as India looks at its own defence needs, Washington is providing assistance, wherever it can, as a friend and a partner.

He said the U.S. consults regularly with India about its most pressing defence needs. "In many cases, we're very pleased that the track record of defence trade and sales between the United States and India has been really solid over the last couple of decades,” the official said. “Anytime and every time our Indian friends bring requirements or near-term needs to us that they've identified, we are always working very hard to ensure that if there is a way that the United States can help fill that requirement, that we do that as quickly as possible," the official said. The official said every country has the desire to have a strong domestic industrial base. “And if anything, the combination of COVID and the war in Ukraine has reminded us all why that is so important for every country in the world. We completely understand that,” the official said, apparently referring to India's push for Aatmanirbhar Bharat (self-reliant India), including in the critical defence industry. “I think though, that it has also reminded us how important it is, whether we're talking in the commercial sector, or the defence sector, to leverage the complementary strengths of our allies and partners and find opportunities to work together,” the official said.

“That's where some of the things that are already underway, work where Indian companies and American companies have partnered together to produce defence platforms, we think is really a very promising model for the future, and one that we hope that we're going to continue to do together,” said the official. “That both supports India's desire to have growing domestic production capacity and expertise, as well as American desire to work closely with our partners,” the official added.

https://www.thehindu.com/news/international/us-partnering-with-india-to-enable-it-play-broader-stabilising-role-in-indo-pacific-senior-pentagon-official/article66072862.ece

Business Today

Fri, 28 Oct 2022

US Plans to Strengthen Defence Ties with India to Deter China

The US is planning to advance its defence ties with India. According to the US National Defense Strategy, the idea is to enhance its ability to deter Chinese aggression, address grey zone coercion and ensure free access to the Indian Ocean region. In its report, the NDS has termed China as the most consequential strategic competitor to the US for the coming decades. The report that released on Thursday added that the NDS is committed to deepening America's major defence partnership with all its allies including India. The NDS stated that the US will support allies and partners that are in "grey zone coercion" by China, an ANI report said.

The NDS document was released by the US Defence Department as an unclassified defence strategy. As per the document, China presents "the most consequential and systemic challenge", whereas Russia poses threats to US and its national interests. The NDS includes the Nuclear Posture Review (NPR) of the United States along with the Missile Defence Review (MDR). Being a legislatively mandated agency, NPR describes nuclear strategy, policy, posture, forces and outlines of the Pentagon. The report mentioned that the most comprehensive and serious challenge to US national security is the People's Republic of China's coercive and increasingly aggressive endeavour to refashion the Indo-Pacific region as it also aims to turn the international system in a way that suits PRC's interests and authoritarian preferences.

https://www.businesstoday.in/latest/world/story/us-plans-to-strengthen-defence-ties-with-india-to-deter-china-351127-2022-10-28

The EurAsian Times

Sun, 30 Oct 2022

UAE Deploys its First Indian-Israeli Missile Defense System Amid Threats from Iranian-Origin Drones & Missiles — Reports

The UAE has reportedly deployed its first-ever Indian-Israeli missile defense system, which it acquired from its new ally and military partner, Israel, to avert the threat posed by Iran-backed militia groups.Haaretz reported that the United Arab Emirates had deployed Barak-8 aerial defense system to defend itself from Iranian-origin missiles and drones. The missile battery is deployed south of Abu-Dhabi, close to the Al-Dhafra airbase. The reports confirming deployment come days after Breaking Defense indicated that the first battery of Barak-8 had already been deployed to the UAE. At the time, an unknown defense source informed the publication that the deal for Barak-8 systems would be very substantial. The Emiratis require several of these to guard some major sites where missiles have repeatedly struck. The Barak-8 was developed jointly by Israel’s Ministry of Defense and India’s DRDO. The Barak-8 can intercept aircraft, low-flying anti-ship and cruise missiles, and stealthy targets with a range of roughly 70 kilometers. The deployment by the UAE is a significant move as Iran-backed Houthi

rebels have targeted military installations and vital infrastructure in the UAE and Saudi Arabia, including air and seaports, oil depots, and ships in the Gulf of Aden.

The strikes on January 17 this year hit an industrial location outside Abu Dhabi, setting fire to fuel trucks and killing three foreign workers. Later that month, media reports suggested that the UAE had "quietly and unofficially asked Israel about acquiring missile defense systems to help protect it from Houthi missile attacks." While Barak-8 was picked first, Israel reportedly later agreed to sell the United Arab Emirates its SPYDER air defense system. EurAsian Times had reported that Abu Dhabi contemplated employing Israeli weapons as a stopgap measure before acquiring a South Korean surface-to-air missile system in 2024. The South Korean Cheongung II KM-SAM weaponry deal was signed on January 16. The UAE already has the American Patriot and Terminal High Altitude Area Defense (THAAD) interceptors. Still, they could not detect some low-flying drones and missiles that struck assets in the UAE. This is where the Israeli Barak-8, as well as the SPYDER, comes into the picture. It is pertinent to note that the Indian military also uses both systems.

Barak-8, A Potential Component Of Air Defense?

Israeli defense companies have been scouting for new clients since the Abraham Accords was signed in 2020, which restored relations between Israel, Bahrain, the United Arab Emirates, and Morocco. Not just that, since the two sides are up against a common adversary, they are also in the process of becoming parties to a missile defense alliance that's been worked on by the United States. On June 20, Defense Minister Benny Gantz stated that Israel was assisting in forming an air-defense regional coalition against Iran and that the alliance had already foiled attempted Iranian attacks. Israel has attempted to establish alliances with the Gulf Arab nations to present a unified front against Iran. Since the Houthi militias frequently launch drone and missile attacks on the two countries, the UAE and Saudi Arabia appear to be a logical alliance. However, Israel has withheld the names of the nations that could join the coalition.

Even though it wasn't a signatory to the agreements, Saudi Arabia, one of Israel's historically fiercest regional rivals, had also shown interest in Israeli systems. However, recently escalating tensions over oil production between Saudi Arabia and the US have dampened Israel's prospects in that country. The regional aerial defense alliance currently relies on weapons systems that are already in place and either belong to member nations or that the United States has placed in the region, such as the extensive radar system in Israel's Negev desert, the AEGIS weapons systems installed on US Navy ships patrolling the Red Sea and the Persian Gulf, and other aircraft and missile defense systems placed throughout the region, according to Haaretz. The first time Barak's missiles were put to use was in June when they successfully took out two of the three drones Hezbollah had fired into Israel's Karish gas field. Israeli Air Force jets destroyed the third drone. With its deployment in the UAE, the Emirati kingdom would have another air defense system to thwart the Houthi drone and missile attacks.

https://eurasiantimes.com/uae-deploys-its-first-indian-israeli-missile-defense-system-amid/?amp

Science & Technology News

ThePrint

शनिवार, 29 अक्टूबर 2022

इसरो ने अपने सबसे भारी रॉकेट के इंजन का सफल परीक्षण किया

तमिलनाडु के महेंद्रगिरि में स्थित इसरो नोदन कॉम्पलेक्स (आईपीआरसी) के 'हाई एल्टीट्यूड टेस्ट' केंद्र में 25 सेकंड की अवधि के दौरान सीई-20 इंजन का उड़ान परीक्षण किया गया। भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) ने बताया कि यह इंजन एलवीएम3-एम3 मिशन के लिए निर्धारित किया गया है, जिसके तहत वनवेब इंडिया-1 के अगले 36 उपग्रह को प्रक्षेपित किया जाएगा। सूत्रों ने बताया कि लंदन स्थित उपग्रह संचार कंपनी 'वनवेब' के इन उपग्रहों को इसरो की व्यावसायिक शाखा न्यू स्पेस इंडिया लिमिटेड (एनएसआईएल) अगले साल की शुरुआत में प्रक्षेपित कर सकती है।

एनएसआईएल द्वारा श्रीहरिकोटा के सतीश धवन अंतरिक्ष केंद्र (एसडीएससी-एसएचएआर) से 23 अक्टूबर को वनवेब के पहले 36 उपग्रहों को प्रक्षेपित किया गया था। इसके कुछ दिनों के बाद ही शुक्रवार को सीई-20 इंजन का उड़ान संबंधी परीक्षण किया गया। एलवीएम3 इसरो का सबसे भारी रॉकेट है और यह चार टन श्रेणी के उपग्रह को भूसमकालिक कक्षा में भेजने में सक्षम है। इसरो ने शनिवार को एक बयान में कहा, ''एलवीएम3 यान (सी25 स्टेज) का क्रायोजेनिक अपर स्टेज सीई-20 इंजन से चालित है जो एलओएक्स-एलएच2 नोदक संयोजन के साथ काम करता है।''

https://hindi.theprint.in/india/isro-successfully-tests-the-engine-of-its-heaviest-rocket/416711/

THE HINDU

Sat, 29 Oct 2022

CM Basavaraj Bommai Releases Biography of Former ISRO Scientist in Bengaluru

Dr. Suresh was involved in the development of Indian Launch vehicles like ASLV, PSLV, GSLV and GSLV Mk3 at Vikram Sarabhai Space Centre (VSSC) for the last four decades. The book authored by his son Sunil Suresh tracks Dr. Suresh's journey from a small village called Hoskare near the town of Koppa to overseeing the development of India's launch vehicles. Mr.

Bommai on the occasion proposed setting up an authority or a body which uses scientific knowledge that can solve the day to day problems faced by society.

“We should make an authority to interact, follow day to day problems, and use scientific knowledge to solve problems. As head of the State, I am ready to form this society or authority. People working in ISRO and even those who have retired from the space agency should come together,” he said. He added that Bengaluru is the scientific hub of the country with institutions like ISRO and DRDO and that it is the right place for this authority due to the existing ecosystem.

https://www.thehindu.com/news/cities/bangalore/cm-basavaraj-bommai-releases-biography-of-former-isro-scientist-in-bengaluru/article66070203.ece?homepage=true

Business Standard

Sat, 29 Oct 2022

India, Sweden Collaborate for Sustainable Future via Innovation Projects

The 9th annual India Sweden Innovation Day 2022 concluded successfully on October 27. The day-long event was organised in association with the Embassy of India to Sweden & Latvia, Sweden-India Business Council (SIBC), and Confederation of Indian Industry (CII). The event was a massive success with over 1,000 participants from across the globe. About 350 esteemed delegates attended the Innovation Day 2022 in person while more than 700 marked their presence online. The main highlight of the event was the implementation of the partnership, principles of co-funding, co-development, co-creation towards mutual benefits, and making full use of complementary strengths.

The 9th India Sweden Innovation Day also encompassed comprehensive sessions with relevant stakeholders in domains such as sustainable urban development and safe transportation, life science, energy, environment, health, and science and technology. Since industry 4.0 is at the forefront of driving sustainable industrial growth across the globe, the event laid considerable emphasis on exploring its potential in the development and adoption of smart technologies for enhanced efficiency and socio-environmental sustainability.

The keynote speakers during the inauguration included Tanmaya Lal, India's Ambassador to Sweden; Martin Lundstedt CEO, Volvo Group; Jitendra Singh, Indian Minister for Science and Technology; Peter Carlsson Founder and CEO, Northvolt; Anna Kinberg Batra Chairman, Swedish Space Corporation & Senior Executive Advisor, Sweden-India Business Council and Jan Thesleff, Ambassador of Sweden to India. Speaking on the occasion the new Deputy Prime Minister of Sweden and Minister for Energy, Business and Industry, Ebba Busch, said: "It's an honour to inaugurate the 9th India & Sweden innovation day & as a minister for energy business & Industry. I will look forward to future discussions on how to deepen the collaboration between our countries. The relationship between India & Sweden is stronger than ever and innovation partnership has really become a cornerstone of our bilateral collaboration. This collaboration

aims to solve bigger challenges in areas such as green transition, clean energy, health & transportation."

"India is rapidly becoming an innovation powerhouse climbing from rank 81 to 40 global innovation index in just a few years. Also, Swedish companies have been operating in India for many decades employing over 200 thousand people directly and 2.2 million indirectly. Swedish companies continue to invest and partner with the Indian research and innovation ecosystem," added Busch. Commenting on strengthening the ties between the two nations, Tanmaya Lal, Ambassador of India to Sweden and Latvia said, "Innovation is the key for not only growth and sustainability but also to manage global challenges such as pandemics to climate change. Sweden is the leader of innovation and sustainability and India too is climbing rapidly in the global innovation ratings.

India is the reservoir of engineering, Research and development and entrepreneurial talent. The scale and speed of innovative technological solutions for sustainable development that are now coming out of India offers huge possibilities of collaborations. In this context this annual day series brought together the researchers, businesses and investors and government agencies. We thank all the participants for joining this discussion and accelerating an inclusive green transition for our collective sustainable future." The India Sweden association will not only help analyse and develop technology and solutions that sustainably impact humanity in the greatest way, but will also address health, and safe transport to security and better quality of life through acceleration, innovation, and solutions between the countries with the power of technology. Jitendra Singh, Minister for Science and Technology, said: "The continuation of this event for the last 8 years itself reflects an effective partnership between India and Sweden. Both the governments and industries in the two nations are developing a technology-oriented ecosystem for a win-win situation.

"I am delighted that innovation cooperation is the fastest growing element in the world today along with bi-lateral relationship between India and Sweden. In 2018, Indian Prime Minister Shri Narendra Modi visited Sweden to deepen the collaboration through joint declaration on innovation partnership for a sustainable future. This partnership aims to increase the impact of bilateral collaboration in innovation science and technology. "The partnership highlights several areas including smart cities, transportation e-mobility energy, green technology, new materials, space, circular economy, bio-waste economy, health and life sciences. India Sweden innovation partnership bridges institutions, R&D industry and also creates entrepreneurs to address global challenges in line with the UN sustainable development goals," he further added. Speaking on lowering down the carbon footprints, Hakan Kingstedt Chairman, Sweden-India Business Council stated: "Accelerating green transitioning and driving innovation partnership to the next level is the most important agenda of this association.

We are here today to tie one more knot, taking the friendship of India and Sweden ahead. Furthermore, Sweden is a leader in innovation in Europe. We are in a transition mode to lower the carbon footprints and it is quite interesting to see that our industries are redeveloping all over Sweden. From green steel technology, hydrogen storage, electric battery systems to electric buses, cars and new traffic systems, Sweden is an exciting place to be in right now. At last, I would like to take an opportunity to wish both the countries in this association." Commenting on the successful completion of the 9th edition of the Innovation Day, 2022, Jan Thesleff, Sweden Ambassador to India said: "The vast and powerful political administrations, agencies, corporate sector, and academic sector in the event today were excellent examples of the Swedish Indian

collaboration. We are moving towards a relationship that will be driven by both parties. We assessed our accomplishments, and now, with assistance from Indian organisations and the Indian government, we are examining the possibilities of the built-up areas for future collaboration.

Our objective places a strong emphasis on innovation and sustainability. This event's goal is to create projections on how we can connect these alliances and facilitate cooperation between Indian partners and Swedish investors. Pressing on the importance on sustainable solutions, Martin Lundstedt, CEO, Volvo Group stated: "With innovation in transportation being a long-term goal of both Sweden and India, we are moving in the direction of being considerably more sustainable. It is an important factor in prosperity. Infrastructure, transportation, and logistics are essential to the plan's effective execution. "We are aware that a developing society's GDP, per capita, and economic growth are closely related to these factors. Our goal is to provide long-term solutions to development problems, such as more efficient transportation and infrastructure logistics. The two nations also agreed to fund the joint innovation projects within AI, Health, Clean Tech, Smart Cities and Safe Mobility," added Lundstedt. Commenting on the strengthening ties between India and Sweden, Robin Sukhia, President, Sweden-India Business Council SIBC said: "India Sweden Innovation Day 2022 is a testament to the commitment of both the nations to promote sustainable industrial development and green transition via technological excellence. With the world grappling with climate change today, it is imperative for governments and industry to strategically collaborate and foster innovation and technology adoption to ensure green economic development. The India Sweden Innovation Day serves as the stepping stone in this direction to strengthen government and industry collaboration for green transition."

Elaborating more on the importance of green transition and the importance of strategic events like India Sweden Innovation Day, Ludvig Lindstrom, Head of Innovation Accelerator, said: "The India Sweden innovation accelerator has been in existence for 10 years reflecting our commitment to sustainability and green transition. This is constantly being strengthened through the flow of new companies, industries and academic partners joining our initiative. We at Sweden Business center are working constantly with organisations like CII to deliver high impact value to reflect our commitment towards green transition and sustainable economic development." Commenting on the collaboration of Index, Per-Olof Marklund, CTO, SAAB, Business Area Aeronautics said: "The defence industry has been a bit conservative, but the technology which is needed today in a fighter jet is more available in the open market within the defence industry. Collaborating with a start-up and finding ideas that may be used in the defence industry and applying them in our industry is the key to be successful in the future. Index in itself is about cooperating with three other companies that are vastly different from our industry. We have a logistics industry, an agricultural company, and a defence company. "We don't have that much in common on paper but if you look at the idea that come in then we have a lot in common and we always get new ideas from each other and boost each other in this process," added Per-Olof Marklund.

The one-day event acknowledged the importance of the various facets of climate change, and both countries laid out specific actions to quicken the transition to a greener economy by putting cutting-edge digital technology and artificial intelligence to use. Furthermore, both countries had extensive discussions and used technology to develop climate-friendly solutions. The summit also concentrated on fostering rapid economic expansion and addressing the pandemic's residual

consequences. This year the summit provided an opportunity to discuss the international situation and response to the challenges towards sustainability as well as regional and global issues of mutual importance including climate action, technological development and economic growth. The event also addressed the need of rigorous work towards the UN sustainable development goals with innovation, radically improved technology, business models and work practices to bring the transformative change.

Sanjoo Malhotra, Chief Executive Director of India Unlimited, provided additional information about the 9th India Sweden Day Innovation Day 2022, stating: "The 9th Innovation Day brought together the prominent industry leaders from different verticals to connect and co-create ideas and solutions on driving green transition via digital transformation, green-oriented technologies, supportive government policies, and extensive studies on benefits of a sustainable and green future for the industry". The event was themed "Accelerating India Sweden's Green Transition", under which both the countries discussed the prospects of accelerating green transition via innovation and by harnessing the power of climate-positive technology, next-generation digitalization. India Sweden Innovation Day 2022 was hosted by India Unlimited.

https://www.business-standard.com/article/current-affairs/india-sweden-collaborate-for-sustainable-future-via-innovation-projects-122102801407_1.html