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अमर उजाला

Sat, 18 Nov 2023

DRDO: घातक क्रूज मिसाइल विकसित कर रहा डीआरडीओ, पनडुब्बी से जमीन और पोत पर हमला करने में होगी सक्षम

रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) पनडुब्बी से लॉन्च की जाने वाली एक क्रूज मिसाइल बना रहा रहा है, जो जमीन और पोत पर हमला करने में सक्षम होगी। मिसाइल का परीक्षण इस साल फरवरी में 402 किलोमीटर की रेंज पर किया गया था और इसने परीक्षण में मिशन के सभी लक्ष्यों को हासिल किया था।

स्वदेशी जैमर पॉड विकसित करने की परियोजना काम कर रही आईएफ

भारतीय वायु सेना (आईएफ) एलसीए मार्क 1 ए लड़ाकू विमान के लिए एक स्वदेशी जैमर पॉड विकसित करने की परियोजना पर काम कर रही है। वायुसेना के अधिकारियों ने बताया कि उसके बेस रिपेयर डिपो को अपने लड़ाकू और परिवहन विमानों और अन्य हथियार प्रणालियों पर आवश्यक कई उपकरणों का स्वदेशीकरण करने और आयात में कटौती करने का काम सौंपा गया है।

निजी उद्योग ने भारतीय सेना को सौंप मल्टीमोड हैंड ग्रेनेड

सोलर ग्रुप इकोनॉमिक एक्सप्लोसिवलिमिटेड के वाइस प्रेसीडेंट कर्नल विक्रम ने कहा, मल्टीमोड हैंड ग्रेनेड पहला उत्पाद है जिसे एक एक निजी उद्योग ने स्वदेशी रूप में निर्मित किया और ऑर्डिनेंस फैक्ट्रियों अलावा भारतीय सेना को सौंपा। हमने पहले ही दस लाख की मात्रा में इन्हें बनाया है और इन्हें सफलतापूर्वक भारतीय सेना को सौंपा है। यह एक हैंड ग्रेनेड का बहुत ही सुरक्षित और उन्नत प्रोटोटाइप है।

उन्होंने कहा, इसमें सुरक्षा विशेषताएं भी जोड़ी गई हैं और इसकी क्षमता पूर्ववर्ती एचई 36 हैंड ग्रेनेड की तुलना में बहुत अधिक है। इसे भारतीय सेना द्वारा अच्छे तरीके से रिसीव किया गया है और हम जल्द ही अगले ऑर्डर की उम्मीद कर रहे हैं।

सेंटर फॉर एयरबोर्न सिस्टम्स (CABS) की निदेशक डॉ. के. राजलक्ष्मी मेनन ने कहा, एयरबोर्न अर्ली वार्निंग एंड कंट्रोल सिस्टम (ईडब्ल्यू एंड सी) मुख्य रूप से एयर-टू-एयर चीजों का पता लगाने के लिए है। यह आने वाले विमानों का पता लगाएगा। जबकि आई-स्टार का इस्तेमाल मुख्य रूप से घुसपैठ की तरह है। यह मुख्य रूप से सीमा पार क्या हो रहा है इसकी निगरानी करेगा।

उन्होंने आगे कहा, अच्छे इमेजिंग रडार की मांग है..हाई रिजॉल्यूशन इमेजिंग रडार। इसलिए डीआरडीओ ने एक प्रौद्योगिकी प्रदर्शन परियोजना शुरू की थी और हम पहले ही उसमें प्रगति कर चुके हैं और जिस तकनीक की जरूरत है, वह भी प्रगति में है। समानांतर वायुसेना भी आई-स्टार कार्यक्रम को लेकर आगे बढ़ चुकी है।

<https://www.amarujala.com/india-news/drdo-is-developing-cruise-missile-capable-of-attacking-land-and-ships-from-submarines-2023-11-18>

चीन-पाक का रडार हो जाएगा फेल! DRDO ने तैयार किया खास पेंट, दुश्मनों को आसानी से देगा चकमा

रक्षा अनुसंधान और विकास संगठन (DRDO) की रक्षा प्रयोगशाला जोधपुर ने एक खास पेंट तैयार किया है। इस पेंट की खास बात यह है कि यह न केवल दुश्मन के राडार को चकमा देगा बल्कि आसानी से पकड़ में भी नहीं आएगा। चाहे वह कोई भी दुश्मन देश क्यों ना है, पाकिस्तान और चीन के रडार से बचना तो इनके लिए बहुत आसान होगा।

न्यूज एजेंसी ANI के अनुसार इस पेंट के तैयार होने के बाद अब यह दुश्मन के घर में घुसकर हवाई हमला या फिर हवाई निगरानी करने में काफी मददगार साबित होगा। सबसे खास बात है कि यह पेंट राडार की किरणों को इस तरह से सोख लेगा कि पता ही नहीं चलेगा कि यह कौन सा एयरक्राफ्ट है।

कथित तौर पर पेंट का इस्तेमाल DRDO के अपने विमानों और अन्य प्लेटफार्मों पर किया जाएगा। रडार एब्जॉर्बिंग पेंट के विकास के पीछे महत्व भूमिका निभाने वाले रक्षा प्रयोगशाला जोधपुर के वरिष्ठ वैज्ञानिक डॉ. आर नागराजन ने कहा कि स्वदेशी रूप से विकसित पेंट का उपयोग अब तक मिग -29 लड़ाकू जेट सहित भारतीय वायु सेना के प्लेटफार्मों पर किया गया है और परिणामों को उत्साहजनक बताया है।

रिपोर्ट के अनुसार पेंट के कारण लड़ाकू विमान का सिग्नल ही पूरी तरह से बदल जाएगा। किसी भी युद्ध की स्थिति में किसी लड़ाकू विमान की पहचान के लिए सिग्नल ही सबसे मुख्य पहलू होता है। इसका प्रयोग मिसाइलों में भी किया जा सकता है। इससे दुश्मन यह नहीं पहचान पाएंगी कि उनकी तरफ आ रही वस्तु आखिर क्या है? डॉ. आर नागराजन ने बताया कि इस तरह के पेंट दुनिया के कई देशों के पास है लेकिन वे अन्य देशों के साथ इस तकनीक को शेयर नहीं करते हैं। ऐसे में DRDO की यह उपलब्धि बेहद खास हो जाती है। इसे भारतीय वायु सेना के साथ-साथ कई उत्कृष्ट रक्षा संसाधनों में भी उपयोग में लाया जा सकता है।

<https://hindi.news18.com/news/nation/drdo-defence-laboratory-jodhpur-developed-radar-absorbing-paint-to-help-india-iaf-fighter-combat-aircraft-7840090.html>

DRDO Develops Radar Absorbing Paint to Help India's Warplanes Develop Greater Degree of Stealth | Check Details

The Defence Laboratory of the Defence Research and Development Organisation (DRDO) has developed a Radar Absorbing Paint that will help military aircraft reduce their radar signature, allowing them to develop a greater degree of stealth against enemy radars, news agency ANI reported on Sunday.

DRDO's Defence Laboratory, Jodhpur has developed a Radar Absorbing Paint for being applied on its own fighter aircraft and other platforms to help in reducing its radar signature and also reduce the detection capability of the enemy radars. The DL team led by Dr Nagarajan told...
pic.twitter.com/fihm6p6y0k

— ANI (@ANI) November 19, 2023

The paint will reportedly be used on DRDO's own aircraft and other platforms. Dr Nagarajan, the leader of the Defence Laboratory team behind the Radar Absorbing Paint's development, said the indigenously developed paint has so far been used on Indian Air Force's platforms including the MiG-29 fighter jets and termed the results encouraging, ANI reported.

<https://english.jagran.com/india/drdo-radar-absorbing-paint-to-help-india-iaf-fighter-combat-aircraft-develop-greater-degree-of-stealth-check-details-10114807>

ThePrint

Mon, 20 Nov 2023

DRDO to Roll out Zorawar Tank Prototype with American Engine in December, Army Trials in March

The prototype of indigenous Zorawar light tank, meant for mountain warfare, will be rolled out in December 2023, ThePrint has learnt.

It will then be put under development trials and once the prototype clears them, it will go in for user trials, sources said.

Sources in the defence and security establishment told ThePrint that the Army will likely go in for trials only in March next year.

India selected the American company Cummins for the engines of these tanks in October, after initially zeroing in on a German firm.

“The DRDO has chosen to go with the US engine now and the prototype will be unveiled with those engines. The reason for this is that earlier German companies were not given the BAFA (Federal Office for Economic Affairs and Export Control) clearance by the German government. These clearances are related to export controls,” a source in the defence establishment told ThePrint,

The Zorawar is especially designed to operate at high altitudes, countering Chinese armoured deployments in high-terrain warfare. Weighing 25 tonnes, the tank will be transportable by air.

The Indian Army has been locked in a standoff with China's People's Liberation Army (PLA) in eastern Ladakh since 2020. Reports suggest that the PLA has deployed light armoured vehicles at high altitudes. It is being said that Zorawar will have a greater mobility and accuracy of fire power in comparison with the Chinese Type 15 tanks deployed along the Ladakh border.

The need for a light tank was felt because the T72s and T90s are meant to be deployed in plains and deserts. Though the Army already operates them in Ladakh, these tanks are heavier and less manoeuvrable.

The Army had come up with a Request to Information (RFI) for the first time in April 2021. It wants the light tank to carry out amphibious operations, facilitating operation even in riverine areas.

The project to develop such a tank was given a go ahead in April last year with Defence Research & Development Organisation (DRDO) and private vendor L&T as manufacturers. Industry sources told ThePrint that L&T is the only company involved in the co-development of these tanks.

Zorawar will have a 105 mm gun made by Belgium-based firm John Cockerill. The tank will likely feature active protection against incoming attacks as well as integrated UAVs, enhancing battlefield visibility. It will be equipped with technologies such as Artificial Intelligence (AI) and situational awareness.

In December 2022, the Defence Acquisition Council (DAC) approved acceptance of necessity (AoN) to acquire 24 different types of weapons, weapon systems and platforms for the three services and the Indian Coast Guard. This included the Zorawar Light Tank project worth Rs 16,000 crore. An in-principle approval had come in March 2022 for the design and development of such a tank.

The Russians had offered the Sprut light tanks to the Indian Army, at a time when L&T was working with the DRDO to convert the tracked 155 mm howitzer Vajra into a light tank.

As reported by ThePrint, the DAC approved the initiation process for procurement of 354 light tanks of which the DRDO will manufacture 59. The rest will be manufactured under the Make-I category. Projects under the Make-I category involve government funding of 90 percent, released in a phased manner and based on the progress of the scheme, as per terms agreed between the defence ministry and the vendor.

<https://theprint.in/defence/drdo-to-roll-out-zorawar-tank-prototype-with-american-engine-in-december-army-trials-in-march/1849341/>

Defence News

Defence Strategic: National/International



Press Information Bureau
Government of India

Ministry of Defence

Fri, 17 Nov 2023

2023 Edition of the Indo-Pacific Regional Dialogue (IPRD-2023)

Concluding Day Of Indo-Pacific Regional Dialogue (IPRD-2023)

The three-day long Indo-Pacific Regional Dialogue 2023 (IPRD-2023) concluded today in New Delhi. This annual apex-level regional strategic dialogue of the Indian Navy, conducted from 15 to 17 November 2023, engaged globally renowned experts from India and abroad, senior officers from the Indian Armed Forces and the Government of India, scholars and the public-at-large in intensive deliberations in several sub-topics under the overarching theme of “Geopolitical Impacts upon Indo-Pacific Maritime Trade and Connectivity”.

Day 1 <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1977216>

Day 2 <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1977465>

The final day of the conference comprised of two professional sessions. The first session centred upon the theme “Private Industry in the Safety and Security of Indo-Pacific Maritime Trade and Shipping” and brought forth the perspectives of Indian industry in the specific areas of shipping, defence industry and space-based surveillance in the maritime domain. This session, moderated by Adm Sunil Lanba (Retd), Former Chief of the Naval Staff, also included a presentation on ‘Energy Potential and Maritime-Security Implications of new Offshore Gas Finds in and around the Mozambique Channel’.

Special Address by the Hon’ble Minister of State, Ministry of External Affairs and Minister of State for Culture

The second professional session of the day on the theme “Maintaining a Rules-based, Safe, and Secure Indo-Pacific” included a Special Address by Smt Meenakshi Lekhi, Hon’ble Minister of State, Ministry of External Affairs and Minister of State for Culture. In her speech, the Hon’ble Minister spoke about the historical importance of the region and stressed India’s inextricable linkage with the seas as an ancient civilisation with a rich maritime heritage. She emphasised the need to revive the maritime competence of Indians, which due to various reasons had been diminished in the last few centuries. Exhorting all present to ideate about the means and avenues of cooperation, the minister gave the example of the United Nations Convention on the Law of the Sea 1982 (UNCLOS 1982) when nations came together to frame rules for themselves. She said that it was important that nations abide by rules that are framed through consensus. The minister also alluded to India’s focus on promoting North-South cooperation, and its advocacy for the Global South, as exemplified by the Voice of the Global South Summit that was held under the aegis of India’s G20 presidency in January this year. On completion of her speech, the Hon’ble Minister released a book entitled ‘Maritime Perspectives 2023: Approaches to a Sustainable Marine Environment: Challenges and Solutions’, published by the National Maritime Foundation.

Professional Session six on day three of #IPRD2023 focused on 'Maintaining a Rules-based, Safe and Secure Indo-Pacific.'

The session saw a Special Address by Smt Meenakshi Lekhi (Hon'ble Minister of State, Ministry of External Affairs, Govt. of India. <https://t.co/FaKdhhlTk> pic.twitter.com/SLuZqLy9xF

— National Maritime Foundation (@nmfindia) November 17, 2023

In the ensuing discussions, moderated by VAdm Biswajit Dasgupta (Retd), eminent panellists from India, Malaysia, Singapore, the United States and Vietnam, discussed contemporaneous topical issues under the theme of “Maintaining a Rules-based, Safe, and Secure Indo-Pacific”. The specific deliberations focussed upon - Operationalising a Regional MDA Network in the Indo-Pacific; Cooperative Regional Solutions to Address Disruptions of the Maritime Rules-based Order; Staunching the Proliferation of Maritime Lawfare in the Indo-Pacific; Enhancing Underwater Domain Awareness across the Indo-Pacific; and, Building a Consensual Rules-based Maritime Order in Indo-Pacific through Multilateral Engagement of Minilateral Constructs.

The penultimate event of the day was a Valedictory Address by His Excellency Mr Vincenzo de Luca, the Ambassador of Italy to India, and the IPRD-2023 concluded with a Closing Address by VAdm Tarun Sobti, Deputy Chief of the Naval Staff, Indian Navy. VAdm Sobti also released a Symposium Report titled ‘Addressing Climate Change Threats to National and Regional Holistic Maritime Security in the Indo-Pacific’.

The IPRD-2023 was organised by the National Maritime Foundation (NMF), New Delhi, as the Indian Navy’s knowledge partner. During the course of the three-day conference, the NMF signed

MoUs of cooperation with four prominent think-tanks in the Indo-Pacific, namely: the Nepal Institute for International Cooperation and Engagement (NIICE), Nepal; the Global Centre for Policy and Strategy (GLOCEPS), Kenya; the Diplomatic Academy of Vietnam (DAV), Vietnam; and The Energy and Resources Institute (TERI), New Delhi.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1977716>



Press Information Bureau
Government of India

Ministry of Defence

Sun, 19 Nov 2023

General Manoj Pande, Chief of the Army Staff Embarks on an Official Visit to the Republic of Korea

General Manoj Pande, the Chief of the Army Staff (COAS) proceeded on an official visit to the Republic of Korea (ROK) today. The aim of the visit is to further reinforce the robust defence ties between the two nations. The visit commences on 20th November, a momentous day in the history of India-ROK relations. On 20th November 1950, 73 years back, 60 Para Field Ambulance of Indian Army landed in Busan, to provide much-needed medical support during the Korean War.

Itinerary of the COAS includes interactions with the senior military leadership of ROK and visits to defence formations and establishments. The key highlights of the tour include a bilateral meeting with General Park An-su, Chief of Staff, ROK Army besides a dialogue with General Kim Seung-kyum, Chairman of Joint Chief of Staff of ROK Armed Forces. The interactions will be aimed to foster mutual understanding, exchanging views on regional security situation and contribute to strengthening bilateral defence cooperation.

General Manoj Pande will also visit the National Cemetery and War Memorial and lay wreath in remembrance of the fallen heroes. He will pay a special visit to the Indian Section of the War Memorial in honour of the Indian soldiers who played a significant role in the Korean War.

The COAS is scheduled to visit establishments such as Defence Acquisition Programme Administration (DAPA), Korean Army Centre for Future and Innovation (KARCFI) and the Agency for Defence Development at Daejeon. He will receive briefings on issues of mutual interest and also visit a Drone Combat Unit. In addition, a tour of the Border Management and Surveillance Facility is also planned.

India and ROK celebrate 50 years of diplomatic ties in 2023. This visit underscores the commitment of both nations to strengthen the special strategic partnership. Demonstrating the enduring camaraderie that has flourished between India and the ROK over the years, the visit will further boost bilateral cooperation on a host of strategic issues particularly in defence collaboration.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1978076>



Press Information Bureau
Government of India

Ministry of Defence

Sat, 18 Nov 2023

Raksha Mantri & External Affairs Minister along with their Australian Counterparts to Co-chair 2nd India-Australia 2+2 Ministerial Dialogue in New Delhi on November 20, 2023

Shri Rajnath Singh & Mr Richard Marles to also hold a bilateral meeting

Australian Deputy Prime Minister & Minister for Defence Mr Richard Marles will visit India from November 19 to 20, 2023 to co-chair the 2nd India-Australia 2+2 Ministerial Dialogue with Raksha Mantri Shri Rajnath Singh. A bilateral meeting on defence cooperation will be held between Minister Marles and Raksha Mantri on November 20 followed by the 2+2 Dialogue.

The 2+2 dialogue will be co-chaired by Raksha Mantri Shri Rajnath Singh and Minister of External Affairs Dr S Jaishankar along with their Australian counterparts, Deputy Prime Minister & Minister for Defence Mr Richard Marles and Minister for Foreign Affairs Ms Penny Wong. The inaugural 2+2 ministerial dialogue took place in New Delhi in September 2021.

India and Australia are pursuing a Comprehensive Strategic Partnership and the visit of Minister Marles is expected to give further impetus to the collaboration as well as bilateral defence cooperation. The two countries are expected to discuss wide-ranging issues of mutual interest during the 2+2 dialogue and the bilateral Defence Ministers' meeting.

During his visit, Minister Marles will also attend the Cricket World Cup Final between India and Australia in Ahmedabad, Gujarat on November 19.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1977792>

THE TIMES OF INDIA

Sat, 18 Nov 2023

Armed Forces must Operate in Environment Rapidly Reshaped by Turn of Geopolitical Events, Tech Advancements: CDS Anil Chauhan

The Indian armed forces will have to operate in an environment that is rapidly reshaped by turn of geopolitical events and advancements in technologies that will require flexibility in organisational structures as well as in mindsets, chief of defence staff General Anil Chauhan said on Saturday. Virtually delivering the keynote address on Global Future Security Challenges at the Synergia Conclave 2023, he said the path taken today will decide where India will be in 2047.

Chauhan said the Indian armed forces will have to operate in an environment that is rapidly reshaped by the turn of geopolitical events and advancements in technologies.

"This will require flexibility in our organizational structures as well as in our mindsets," he said.

Reflecting on the need for a comprehensive approach, Chauhan stated, "We should be able to usher a thorough Revolution in Military Affairs (RMA) along with other nations to remain ahead or at par with this transformative curve."

"Our organisational structures must be capable of multi-domain operations... They must be structured for integrated rapid response through a correct balance between contact, non-contact, kinetic, as well as non-kinetic options. They must be flexible and adaptive enough to absorb and harness niche, emerging, and destructive technology," he said.

Chauhan also addressed the increasing proclivity among nations to enter into conflicts to protect perceived national interests.

He pointed out the challenges associated with conflicts initiated by major powers, citing examples like Afghanistan, Iraq, and Ukraine, where clear end stages or exit strategies were often lacking.

"In my understanding, the US cannot simultaneously meet the commitments of the Indo Pacific, Europe and Asia. It accordingly has shifted its focus. from what they called a global war of terror being conducted in the Middle East and Afghanistan towards the Indo-Pacific where they're calling it as grey zone conflicts," he said.

He stressed the importance of managing differences and resolving disputes, particularly noting the potential polarization of the world due to ongoing conflicts like the Israel-Hamas situation, which could usher in new geopolitical alignments.

Discussing global trends, Chauhan noted that the trajectory of ongoing unprecedented nature of change in global geopolitics and technology will drive future security challenges.

He highlighted the interconnectedness of geopolitical events and technology, both inducing behavioural changes at the national and individual levels.

"The trajectory of ongoing unprecedented nature of change in global geopolitics and technology will drive future security challenges," he stated.

Geopolitical events, according to Chauhan, influence national ideologies, geoeconomics, and the global geoeconomic order.

Anticipating a shift from unipolarity to a multipolar global order, he emphasized the potential for stability as new poles balance each other, though acknowledging the likelihood of low-intensity conflicts and proxy wars.

He noted that new alliances and partnerships among nation-states would undergo frequent realignments to meet evolving challenges.

Turning to technology, Chauhan emphasized its role as a currency of power and a driver of military advancements.

He discussed the race among nations to retain a technological edge, foreseeing a new revolution in military affairs termed "convergence warfare".

He underlined the critical need for adaptability and foresight in navigating the complex future security landscape, urging comprehensive changes in military strategies and structures to meet evolving challenges successfully.

<https://timesofindia.indiatimes.com/india/armed-forces-must-operate-in-environment-rapidly-reshaped-by-turn-of-geopolitical-events-tech-advancements-cds-anil-chauhan/articleshow/105312402.cms>

Indian Air Force to Develop Indigenous Jammer Pod for LCA Mark 1A Fighter Aircraft

The Indian Air Force is working on a project to develop an indigenous jammer pod for the homegrown LCA Mark 1A fighter aircraft, IAF officials said on Saturday.

"IAF's Base Repair Depots have been tasked to indigenise many of the equipment required on its fighter and transport aircraft and other weapon systems and cut down imports," officials added.

Meanwhile, Vice President of Solar Group Economic Explosives Limited, Colonel Vikram said that the multimode hand grenade is the first product that a private industry manufactured indigenously and handed over to the Indian Army other than the ordinance factories.

"We have already manufactured a quantity of 10 lakh and handed it over to the Indian Army successfully. This is a very safe prototype and advanced prototype of a hand grenade. It has added safety features as well and its efficacies are much more than the erstwhile HE 36 hand grenade.

"It is very well received by the Indian Army and we are expecting the next order soon," he added.

The LCA Mk1A is an improved variant of the indigenously developed LCA MK1. It has additional features and improvements such as a Self Protection Jammer.

<https://economictimes.indiatimes.com/news/defence/indian-air-force-to-develop-indigenous-jammer-pod-for-lca-mark-1a-fighter-aircraft/articleshow/105323904.cms>



Air Chief Marshal Vivek Ram Chaudhari Emphasises Vital Role of Private Sector in Boosting IAF's Capability

Private industries will play a very important role not only in enhancing Indian Air Force capabilities but also in increasing the productivity and production ability of defence public sector units, Air Chief Marshal Vivek Ram Chaudhari said on Sunday.

Responding to a question during a session at the Synergia Conclave 2023, he said the private industry also needs to ensure that they match up with the production capability to ensure that the rollout of fighters that the Air Force orders takes place on time.

He said there is definitely a huge role for the private industry to enhance IAF's capability by helping the lead integrators roll out aircraft. "Without doubt, the private industry will play a very important role, not only in enhancing our capability but also in enhancing the productivity or the production capability of the defence PSUs," the IAF chief said.

"What we have to understand is that though we place the order on the defence PSU for any equipment, they (the private sector) will perform primarily the role of being lead integrators. "The large number of components and spare parts that go into making the aircraft as a whole come from many private industries in the country," he added.

Responding to a question on the indigenous capacity of India, he said huge steps are being taken to ensure the indigenisation of key components. He said the ongoing indigenisation efforts cover key components such as radars, avionics systems and Electronic Warfare (EW) systems, fostering self-reliance.

“The reliance on some foreign OEMs (original equipment manufacturers) will probably remain for a few years... Hopefully after that we should be completely independent of the foreign OEMs for niche technologies also,” he said.

He said the Indian Air Force operates fleets from the vintage to the cutting edge. Three fleets are over 60 years old. He said the Indian Air Force has adopted a strategy of integration to keep them pertinent alongside newer platforms.

“We clearly understand that we cannot phase out older technology platforms and systems. We need to keep them relevant by integrating them along with the newer platforms. “We have done a lot in this regard in terms of integrating weapon systems, particularly EW systems of newer generation onto old generation platforms,” he said.

He said the Air Force approach revolves around the ABCD framework: Acquire, Boost capabilities of existing systems, Conserve current assets and Develop new technologies.

“This framework reflects the intrinsic DNA of the Indian Air Force, emphasising the need for a continuous cycle of acquiring, enhancing, preserving, and innovating technologies,” he said.

In envisioning the future of military capabilities, Chaudhari articulated the transformative role of AI and machine learning in shaping the next generation of warfare.

He underscored the imperative of these technologies, saying this will be an absolute must and will require AI and machine learning infused technology.” Delving into the realm of advanced weaponry, Chaudhari highlighted the pivotal role of cutting-edge armaments, singling out hypersonic weapons as game-changers with the ability to evade ballistic missile defences.

<https://www.financialexpress.com/business/defence-air-chief-marshal-vivek-ram-chaudhari-emphasises-vital-role-of-private-sector-in-boosting-iafs-capability-3311164/>



Fri, 17 Nov 2023

Army Chief Visits Western Front in Rajasthan; Inspects Ongoing Joint Military Exercise Trishakti Prahar

Army Chief General Manoj Pande on Friday visited the Western Front in Rajasthan's Jaisalmer to take stock of the ongoing joint military exercise 'Trishakti Prahar', sources said. Army Chief Manoj Pandey reached the battle site and had a first hand experience of the ongoing Trishakti Prahar being carried out by the Indian Army in the Thar Desert.

A Defence spokesman said that during the Army chief's visit to the joint military exercise, the GOC-in-Chief of South Western Command gave a detailed briefing about the training of the soldiers. The Chief of the Army Staff praised the soldiers for their professionalism and dedication

towards operational readiness as well as their alertness towards the target during the exercise, the Defence Spokesman said.

The Army chief also interacted with the soldiers during his visit. Army chief Gen Manoj Pande also inspected the state-of-the-art weapons and technology during the maneuvers. The joint military exercise Trishakti Prahar which started in the Thar Desert on the 13th of November, will continue till 25th of November.

About 25,000 soldiers are taking part in this exercise, which is being held in the backdrop of prolonged Russia-Ukraine war and the most recent Israel-Hamas war. The Indian Air Force is conducting this exercise with the Indian Army and Navy in mutual coordination. In this exercise, live practice of actual war conditions is being carried out with complete coordination by all three wings of the Indian Army. The ongoing exercise Trishakti Prahar of all three parts of the Indian Army continues in the Thar Desert adjacent to the India-Pakistan border. During this exercise, the Indian Air Force, Army and Navy are showcasing their war skills and military might.

<https://www.etvbharat.com/english/state/rajasthan/army-chief-visits-western-front-in-rajasthan-inspects-ongoing-joint-military-exercise-trishakti-prahar/na20231117164453995995142>



Sat, 18 Nov 2023

Vajra Prahar 2023: Strengthening Bonds and Security through India-US Special Forces Collaboration

In Meghalaya's Umroi cantonment, next week the 14th edition of the "Vajra Prahar" exercise is set to bring together India and US special forces. This 21-day bilateral event focuses on Counter-terrorism Operations, Airborne Operations, and Special Operations, split into combat conditioning and tactical training in the first phase, followed by a 48-hour validation in the second phase.

With the previous editions held in Himachal Pradesh and Washington (USA), this collaborative drill not only addresses security challenges but also strengthens the enduring friendship between the Indian and US Special Forces. The exercise aims to foster increased bilateral defense cooperation, highlighting the significance of joint efforts in tackling common threats.

Furthermore, emphasizing international partnerships, the Indian Army recently engaged in the joint bilateral training exercise "Harimau Shakti" with the Malaysian Army at Umroi in Meghalaya. This interaction showcased the collaboration between the soldiers from the 5th Royal Battalion of the Malaysian Army and the Battalion of The Rajput Regiment from the Indian Army.

In a broader context, such collaborations extend beyond the borders, as seen in the 19th edition of Exercise Yudh Abhyas in Alaska, USA. The participation of a 350-strong Indian Army contingent in this exercise further underscores the commitment to strengthening military ties and sharing expertise in various strategic areas. These joint endeavors not only enhance the capabilities of the participating forces but also contribute to fostering international cooperation and understanding in addressing global security challenges.

<https://www.financialexpress.com/business/defence-vajra-prahar-2023-strengthening-bonds-and-security-through-india-us-special-forces-collaboration-3310634/>

All US Clearances Received: HAL, GE to Produce Jet Engines for LCA Mark2, AMCA Fighter Jets in India

In a significant boost to India's defence sector, the engines for the LCA Mark 2 and the first two squadrons of the indigenous Advanced Medium Combat Aircraft (AMCA) will be domestically produced, DRDO chief Dr Samir V Kamat on Saturday.

"The engines of LCA Mark 2 and the first two squadrons of the indigenous Advanced Medium Combat Aircraft would be produced within the country together by American GE and Hindustan Aeronautics Limited as all the clearances have been received from the US," DRDO chief Dr Samir V Kamat told ANI.

The HAL and GE from the US would be producing these engines jointly in a facility in India.

On August 30, the Cabinet Committee on Security cleared the development of LCA Mark 2 fighter aircraft, which would be a replacement for the Mirage 2000, Jaguar and MiG-29 combat aircraft in the Indian Air Force (IAF).

"LCA Mark 2 fighter aircraft development project has been cleared by the government. This would pave the way for designers to develop an advanced 17.5-tonne single-engine aircraft. Development of new aircraft is to be completed by 2027," Aeronautical Development Agency chief Girish Deodhare told about the project.

He said the government has cleared the development of prototypes of which, the first is likely to roll out in a year and the project is scheduled to be completed by the year 2027 after extensive flying trials and other related work.

The DRDO feels that the aircraft would be in the category of the Rafale class aircraft in terms of avionics and capabilities but lighter in weight.

The government has also cleared that the engines to be used in the aircraft should be Made in India after the initial development phase.

DRDO would be developing the aircraft with a GE-414 engine, which is the advanced version of the GE-404s that power the existing LCAs in service and the 83 LCA Mark 1As which would start getting inducted into IAF in the next couple of years.

At present, 30 LCAs are in service with the IAF and two are being used by the HAL to develop the Mark 1As.

The AMCA aircraft development proposal is also with the government and is expected to be approved in the near future but with a lot of Indigenisation inputs from the government.

<https://economictimes.indiatimes.com/news/defence/all-us-clearances-received-hal-ge-to-produce-jet-engines-for-lca-mark2-amca-fighter-jets-in-india/articleshow/105314974.cms>

Indian Military Helicopters in Maldives Used for EEZ Surveillance and Training

The handful of Indian military personnel in the Maldives are stationed for training of local armed forces and joint EEZ surveillance, contrary to claims made by the newly sworn in administration in Male that the Indian military is violating sovereignty of the island nation.

Indian military presence in the atoll state includes two Dhruv Advanced Light Helicopters operating in Male, and a Dornier aircraft given to the Maldives National Defence Force (MNDF), with the condition that while it will operate under the command and control of MNDF, the running costs will be borne by India, sources said.

On Saturday, India told the Maldives that it will find a "workable solution" to its President Mohamed Muizzu's formal request to withdraw Indian "military personnel" from the southern Indian Ocean country.

Muizzu formally made the request when he met India's minister of earth sciences Kiren Rijiju at the President's Office on Saturday.

As Muizzu took oath on Friday, he reiterated that he was firmly committed to ensuring that the Maldives remains "free" of any "foreign military presence" to preserve its independence and sovereignty.

Muizzu, however, acknowledged the contribution of the Indian helicopters and aircraft in medical evacuation of Maldivian citizens. He also appreciated their role in monitoring and combating drug trafficking.

The Dornier has been assisting in the joint surveillance activities by India and the Maldives of the exclusive economic zone (EEZ) of the Indian Ocean Region atoll state, according to persons familiar with the issue.

The larger view is that India provides the largest number of training opportunities for MNDF, meeting around 70% of their defence training requirements, sources said. India has trained over 1,500 MNDF personnel over the past 10 years. In February 2021, India had extended a \$50 million line of credit to the Maldives for defence projects. It also signed a deal with Male to construct and maintain a naval facility.

<https://economictimes.indiatimes.com/news/defence/indian-military-copters-in-maldives-used-for-eez-surveillance-and-training/articleshow/105337332.cms>

Pakistan Explores Supersonic L-15 Trainer from China to amid Air Force Modernization

In a significant development at the 2023 Dubai Air Show, the Hongdu Aircraft Company of China has confirmed formal negotiations with Pakistan regarding the acquisition of advanced light attack

aircraft. This move by Pakistan aims to replace its aging F-7PG fighters, currently utilized for combat pilot conversion within the Pakistan Air Force.

The aircraft under consideration for this strategic acquisition is the Chengdu J-7, known by its NATO reporting name "Fishcan." As a licensed-built version of the Soviet Mikoyan-Gurevich MiG-21, the J-7 boasts capabilities tailored for short-range air-to-air combat and close air support. This makes it a versatile choice for the operational needs of the Pakistan Air Force.

Pakistan has a historical association with the F-7, having procured around 120 F-7P and 60 F-7PG fighters over the years. Despite past initiatives like Project Sabre II in the 1980s aimed at enhancing the effectiveness of the F7 fleet, economic sanctions imposed by the US led to the abandonment of these efforts. The desire to replace the entire F-7 fleet persisted, and the JF-17 emerged as a solution to meet the modern combat aircraft requirements.

Reports suggest that Pakistan is specifically interested in acquiring a light attack aircraft version of the L-15 trainer. Developed by Hongdu Aviation Industry Corporation (HAIC), the Hongdu JL-10, also known as Hongdu L-15 Falcon, is a supersonic advanced jet trainer and light combat aircraft. The People's Liberation Army Air Force (PLAAF) utilizes the JL-10 as a lead-in fighter trainer (LIFT).

Enhanced ground attack capabilities

The armed variant of the L-15 is equipped with nine hardpoints, enabling it to carry approximately three tons of weaponry. Its arsenal includes the versatile HJ-10 anti-tank guided missiles and the LS series of 250-500kg laser- and satellite-guided bombs, significantly bolstering its ground attack capabilities.

Setting itself apart with a suite of Chinese lightweight aircraft sensors, the L-15 features multi-mode targeting pods and electronic jammers. The aircraft's electronically scanned array radar facilitates an anti-aircraft role, complemented by the integration of PL-12 long-range air-to-air missiles and PL-10 infrared-guided short-range missiles.

Moreover, the L-15 offers range extension options through fuel drop tanks, expanding its combat radius to 500km for increased operational efficiency and extended on-station flight duration. The potential acquisition of the L-15 by Pakistan underscores the nation's commitment to modernizing its air force capabilities and aligning with cutting-edge technological platforms to meet evolving defense requirements.

<https://www.republicworld.com/defence/global-defence-news/pakistan-explores-supersonic-l-15-trainer-from-china-to-amid-air-force-modernization.news>



Fri, 17 Nov 2023

Russian Parliament Passes Record Budget, Boosting Defence Spending and Shoring up Support for Putin

The lower house of Russia's parliament, the State Duma, on November 17 approved its biggest-ever federal budget which will increase spending by around 25% in 2024, with record amounts going to defence.

Defence spending is expected to overtake social spending next year for the first time in modern Russian history, at a time when the Kremlin is eager to shore up support for President Vladimir

Putin as Russia prepares for a Presidential election in March. Record low unemployment, higher wages and targeted social spending should help the Kremlin ride out the domestic impact of pivoting the economy to a war footing, but could pose a problem in the long term, analysts say.

Russian lawmakers said the budget for 2024-2026 was developed specifically to fund the military and mitigate the impact of “17,500 sanctions” on Russia, the chairman of the State Duma, Vyacheslav Volodin, said.

“In these difficult conditions, we have managed to adopt a budget that will not only allocate the necessary funds for our country's defense, but which will also provide all the required funds to guarantee the state's social obligations,” First Deputy Chairman of the State Duma Alexander Zhukov said, according to Russian state news agency Tass.

The Russian Communist Party voted against the budget because it provides “low pensions” and not enough financial support for elderly people, Tass said. The budget will now be passed to the Federation Council — the upper chamber of Russia's parliament — for approval before it is signed by President Vladimir Putin.

The draft budget “is about getting the war sorted in Ukraine and about being ready for a military confrontation with the West in perpetuity,” Richard Connolly, an expert on Russia's military and economy at the Royal United Services Institute in London, has said.

“This amounts to the wholesale remilitarization of Russian society,” he said.

Russia's Finance Ministry said it expects spending to reach 36.66 trillion rubles (around \$411 billion) in 2024 with a predicted budget deficit of 0.8% of Russia's gross domestic product.

Part of the Russian budget is secret as the Kremlin tries to conceal its military plans and sidestep scrutiny of its war in Ukraine. Independent business journalists Farida Rustamova and Maksim Tovkaylo said on their Telegram channel Faridaily that around 39% of all federal spending will go to defense and law enforcement in 2024.

<https://www.thehindu.com/news/international/russian-parliament-passes-record-budget-boosting-defence-spending-and-shoring-up-support-for-putin/article67543880.ece>

Science & Technology News



Press Information Bureau
Government of India

President's Secretariat

Sat, 18 Nov 2023

President of India Graces an International Conference cum Exhibition on ‘Aerospace & Aviation in 2047’

The President of India, Smt Droupadi Murmu graced an International Conference cum Exhibition on ‘Aerospace & Aviation in 2047’, organised by the Aeronautical Society of India to commemorate its 75th Anniversary, in New Delhi today (November 18, 2023).

Speaking on the occasion, the President said that from its humble beginnings in 1948 till today, the Aeronautical Society of India has worked tirelessly to ensure that not only the aeronautics as a knowledge-system grows by leaps and bounds, but it also impacts life of every citizen in a substantial manner. She appreciated all for their outstanding contribution to the advancement and dissemination of the knowledge of aeronautical sciences and aircraft engineering that has made the aeronautical profession as one of the most sought-after and glamorous careers.

The President said that aviation is a remarkable feat of human ingenuity that brings the imaginative power to reality with seamless fusion of technology. Aerospace and aviation are simultaneously humbling and almost superhuman activities that afford us the vast global connection of the planet we inhabit and exploration of space and beyond.

The President said that as we celebrate the journey of the Aeronautical Society of India, we cannot help but marvel at the achievements and breakthroughs our nation has made in the fields of aviation and aerospace, space technology, missile technology and aircraft technology. Whether it is the feat of successful completion of the Mars mission or showcasing the end-to-end capability in safe landing and roving near the Moon's South Pole - a place considered beyond human endeavour, India has proved that it has the willpower, potential, and capacity to accomplish what it sets out to achieve. The highest standards of quality, cost-effectiveness and punctuality have been the hallmarks of all of our projects.

The President said that though we have made long strides, there also remain many challenges. The aerospace sector has been undergoing a transformative phase by bracing up for speed and runway-independent technologies for defence purposes, air mobility and transportation. There is also the demanding task of cultivating human resources well-versed and ready to tackle these issues in right earnest. At the same time, there is also a need for upskilling and reskilling of the current workforce.

The President said that the decarbonization of aero-propulsion is an onerous task we will have to undertake because climate change and global warming are threatening the very existence of humans. She stated that the development of sustainable jet fuels is one of the much-needed steps to decarbonize the economy but it is hardest to achieve because traditional fuels are of very high density. Finding non-fossil sustainable resources which could replace these traditional fuels should be the priority objective because we are approaching a climate tipping point. To reduce our carbon footprint, we need to rapidly adopt new propulsion technologies at a large scale, such as electric, hydrogen, and hybrid. She expressed confidence this Conference would provide valuable solutions to many of the challenges.

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1977868>

THE  HINDU

Sun, 19 Nov 2023

ISRO Plans Mission to Bring Soil Samples from Moon to Earth: All you Need to Know

The Indian Space Research Organisation (ISRO) is planning an 'ambitious' move that will see the national space agency attempt to collect soil or rock samples from the Moon, and bring these to Earth, in what will be its first such exercise.

The proposed mission is called the Lunar Sample Return Mission (LSRM), the Indian Express reported.

“ISRO is now planning a bigger mission, where we will try to bring back soil or rock samples. Hopefully, in the next five to seven years, we will be able to meet this challenge,” the English daily quoted Nilesh Desai, Director, Space Application Centre (SAC), ISRO, as saying.

All you need to know about ISRO's proposed LSR Mission:

(1.) Under the project, which has an expected launch date in 2028, soil/rock samples will be collected from the Shiv Shakti point on the lunar surface.

(2.) In a departure from the norm, two separate launch vehicles will be used to carry out the mission, said ISRO's Desai. This, he explained, is because the exercise involves four modules: Transfer, Lander, Ascender, and Re-entry.

(3.) The Geosynchronous Satellite Launch Vehicle (GSLV) Mark-II will be used for the Transfer and Re-entry modules, while GSLV Mark-III be used for the Ascender and Lander modules.

(4.) The project, like August's highly-successful Chandrayaan 3, is planned for one lunar day (14 days on Earth). Also, thus far, the agency's three Chandrayaan missions have studied Moon's surface, soil, and samples, at the site itself.

(5.) The LSRM is on the same lines as NASA's collection of the first-ever samples from Bennu, the near-Earth asteroid. The US space agency achieved this in September with its OSIRIS-REx spacecraft, which returned to the Earth's atmosphere after completing a journey that spanned seven years.

<https://www.hindustantimes.com/technology/isro-plans-mission-to-bring-soil-samples-from-lunar-surface-to-earth-all-you-need-to-know-101700370380727.html>

