

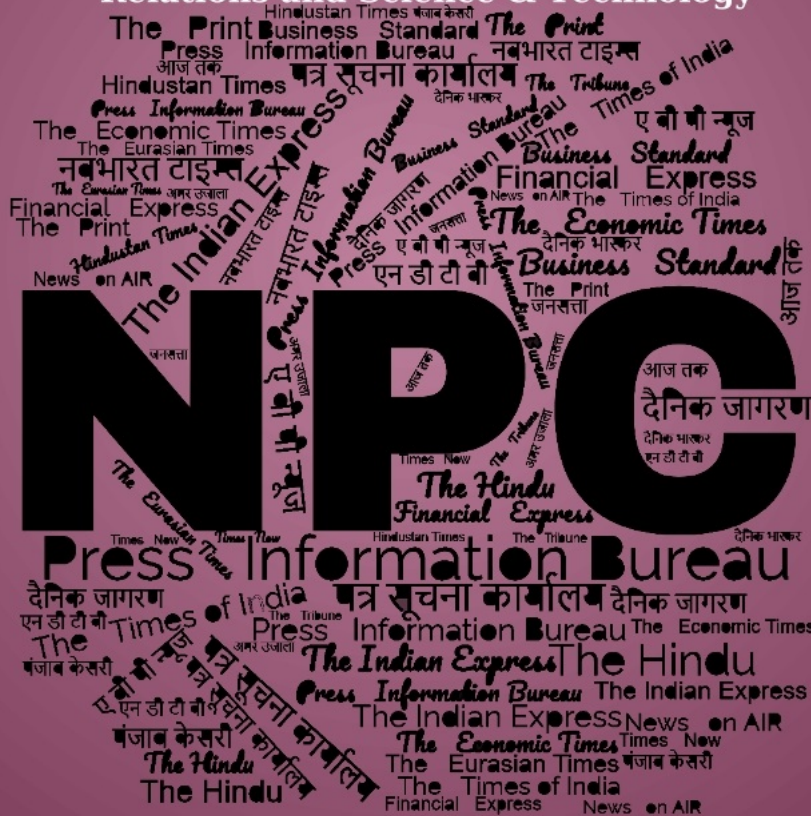
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समाचार पत्रों से चयनित अंश Newspapers Clippings

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

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Mon, 14 Oct 2024

आंध्र प्रदेश में नई मिसाइल स्टेटिंग रेंज की होगी स्थापना, क्यों अहम है ये प्रोजेक्ट? DRDO बना रहा बड़ा प्लान

भारतीय रक्षा क्षेत्र के अनुसंधानकर्ता बड़े पैमाने पर टेक्टिकल मिसाइल प्रणालियों को विकसित कर रहे हैं। ऐसे में सुरक्षा पर कैबिनेट कमेटी (सीसीएस) ने आंध्र प्रदेश में एक नई मिसाइल टेस्टिंग रेंज को विकसित करने को मंजूरी दी है। इसके चलते आंध्र प्रदेश के नागायालंका क्षेत्र में नई मिसाइल टेस्टिंग रेंज की स्थापना होगी।

2018 में ही मिल चुकी मंजूरी

सरकार के सूत्रों ने रविवार को बताया कि प्रधानमंत्री नरेन्द्र मोदी की अध्यक्षता में सीसीएस ने पिछले हफ्ते ही यह फैसला लिया है। आंध्र प्रदेश में नागायालंका क्षेत्र में राज्य सरकार और वित्त मंत्रालय के सहयोग से इससे जुड़ी अन्य प्रक्रियाओं को 28 जून, 2018 को ही मंजूरी दे दी गई थी।

इन मिसाइलों को होगा परीक्षण

नई मिसाइल परीक्षण रेंज में सतह से हवा में मार करने वाली मिसाइल, एंटी टैंक मिसाइल और डीआरडीओ के सामरिक मिसाइल सिस्टम का परीक्षण किया जाएगा।

अमेरिका से खरीदे जाएंगे 31 ड्रोन

इससे पहले सुरक्षा मामलों की कैबिनेट समिति ने नौसेना, सेना और वायुसेना के लिए दो परमाणु पनडुब्बियों के निर्माण और अमेरिका से 31 प्रीडेटर ड्रोन खरीदने की मंजूरी दी थी। इस बैठक में 80 हजार करोड़ रुपये के प्रमुख सौदों को पारित किया गया था। 31 ड्रोन में से भारतीय नौसेना को 15 और सेना व वायुसेना को 8-8 ड्रोन मिलेंगे। सेना और वायुसेना इन्हें यूपी में अपने दो स्टेशनों में तैनात करेंगी।

बड़े स्तर पर मिसाइल परीक्षण करेगा DRDO

रक्षा अनुसंधान और विकास संगठन (डीआरडीओ) नई पीढ़ी की मिसाइलों के टेस्ट की तैयारी कर रहा है। डीआरडीओ ने बड़े स्तर पर मिसाइल परीक्षण कार्यक्रम तैयार किया है। इस दौरान पारंपरिक और स्ट्रैटेजिक मिसाइलों का परीक्षण किया जाएगा। इन परीक्षणों से देश की रक्षा क्षमताओं में अभूतपूर्व बढ़ोतरी होगी।

क्यों जरूरी हैं परीक्षण

ये परीक्षण न केवल मौजूदा मिसाइल सिस्टम के अहम पड़ाव साबित होंगे बल्कि नई पीढ़ी की मिसाइलों की भी नींव रखेंगे। हाल ही में बदली भू-राजनीतिक पारिस्थितियों के चलते ये परीक्षण आवश्यक हो गए हैं। यह परीक्षण कार्यक्रम भारत की प्रतिरोध क्षमताओं को और मजबूत करेगा।

परमाणु क्षमता से लैस भारतीय मिसाइलें

मौजूदा समय में भारत के पास 40 से अधिक तरह की मिसाइलों का जखीरा है। भारत अपनी अधिकांश मिसाइलों का परीक्षण अब्दुल कलाम द्वीप और ओडिशा के चांदीपुर परीक्षण रेंज से करता है। मगर अब आंध्र प्रदेश में नई टेस्टिंग रेंज

विकसित की जाएगी। भारत की कुछ प्रमुख मिसाइलों में ब्रह्मोस, पृथ्वी-2, अग्नि-1, अग्नि-2, अग्नि-3, धनुष और प्रहार शामिल हैं। खास बात यह है कि भारत की सभी मिसाइलें परमाणु क्षमता से लैस हैं।

<https://www.jagran.com/news/national-new-missile-stating-range-to-be-set-up-in-andhra-pradesh-23815256.html>

THE ECONOMIC TIMES

Sun, 13 Oct 2024

India to develop new missile testing range on east Coast, CCS gives approval

At a time when the Indian defence researchers are developing a large number of tactical missile systems, the Cabinet Committee on Security (CCS) has given approval for setting up a new missiles testing range in Andhra Pradesh.

The proposal was cleared by the CCS headed by Prime Minister Narendra Modi last week as per which the new missile range will come up in the Nagayalanka area of Andhra Pradesh, government sources told ANI.

The new missile testing range will be used for test firing of tactical missile systems like the surface to air missile systems, anti tank missiles and various other projects being developed by the Research and Development Organisation, they said.

The CCS in its meeting last week gave clearance to major proposals of the armed forces including that of buying 31 Predator drones from the US and two nuclear submarines to be built by the Project ATV for developing strategic submarines for the Indian Navy, they said.

The proposals for building roads for the forces along with space based capabilities were also given a go ahead.

The DRDO is at an advanced stage of developing a large number of weapon systems for the defence forces including the Very Short Range Air Defence Systems, man portable anti tank guided missiles, anti tank guided missiles, quick reaction surface to air missile systems, vertical launched short range air defence systems and many other systems in the tactical domain.

The DRDO would also be playing a big role in the construction of the nuclear submarines that have been cleared by CCS.

<https://economictimes.indiatimes.com/news/defence/india-to-develop-new-missile-testing-range-on-east-coast-ccs-gives-approval/articleshow/114193411.cms?from=mdr>

DRDL programme director gets NIT-Warangal DDA award

Defence Research & Development Laboratory (DRDL) programme director Jaiteerth R. Joshi has been conferred with the Distinguished Alumnus Award (DAA) 2024 by NIT, Warangal during its 66th Foundation Day celebrations for his significant contributions towards skill development of engineering students to make them industry-ready.

The award was presented by NIT-Warangal director Prof. Bidyadhar Subudhi in the august presence of Director General, Missiles & Strategic Systems, DRDO U. Raja Babu. Prof. Subhudhi gave a welcome address and Mr. Raja Babu gave a foundation day lecture on 'New trends in technology in warfare'.

Early during the course of the day, Mr. Joshi delivered a lecture on 'Missile Programmes — Academia and Industry Outreach' and emphasised the collaborative approach among R&D Institutions, academia and the industry. Other awardees were Glory Swarupa, Nagarjuna Venna, Veerachary, M Shivajiand and Singh, said a press release.

<https://www.thehindu.com/news/national/telangana/drdl-programme-director-gets-nit-warangal-dda-award/article68748800.ece>



Press Information Bureau
Government of India

Ministry of Defence

Fri, 11 Oct 2024

Raksha Mantri Addresses The Senior Leadership Of Indian Army During Army Commanders' Conference

The second Army Commanders' Conference of year 2024, commenced in a hybrid format on 10 Oct 2024 in a forward location at Gangtok. Conduct of the Senior Commanders Conference at a forward location underlines Indian Army's focus on ground realities. During the event, Indian Army's apex leadership comprehensively deliberated upon all aspects of existing security scenarios, situation along the borders and in the hinterland and challenges for the present security apparatus.

In addition, the conference is also focusing on issues pertaining to organisational restructuring, logistics, administration and human resource management. The main highlight of the second day of the conference was the address by the Hon'ble Raksha Mantri, Shri Rajnath Singh, to the senior leadership of the Indian Army, which was preceded by a brief on "Security Dynamics in the Regional Context: Challenges and mitigation measures". Owing to the bad weather at Gangtok the address of the Hon'ble Raksha Mantri was in Virtual mode from Army Location at Sukhna.

The Raksha Mantri reasserted the faith of entire Nation in the Indian Army as one of the most trusted and inspiring organisations in the country. He highlighted the significant role being played by the Army in guarding our borders and fighting terrorism apart from providing assistance to the civil administration in every need of hour. Hon'ble Raksha Mantri commended every soldier for his contribution and saluted the Brave ones who laid down their lives in the service of the nation.

He expressed his elation to be present in the Army Commander's conference and applauded the Army leadership for successfully taking ahead the 'Defence and Security' vision of the Nation and the Hon'ble Prime Minister. Raksha Mantri stated that he has been attending the Army Commander Conference for over 5 years now and commended that these higher leadership conferences are not only beneficial for the Armed Forces but also for the nation as a whole. He

also complimented the Indian Army's approach on the infusion and absorption of cutting edge technology.

The Hon'ble Raksha Mantri stressed upon the present complex and ambiguous world situation which affects everyone globally. He stated that "Unconventional and asymmetric warfare, including hybrid war will be part of the future conventional wars and the same is evident in the recent conflicts happening in various parts of world. This necessitates that Armed Forces should keep all these facets in consideration while planning and formulating strategies. We must keep learning from the incidents to include the global ones, happened in present as also in past, so as to avert the damage control. Be alert, regularly modernise and prepare continuously for various contingencies".

Commenting on the current situation along the Northern borders, the Hon'ble Raksha Mantri expressed full confidence in the Army for any contingency though, the ongoing talks for peaceful resolution will continue at all levels. The Raksha Mantri complimented the efforts of BRO, which has led to the incomparable improvement of road communication in the borders both Western and Northern, while working under difficult conditions and the improvement must continue.

Referring to the situation along the Western borders, he complimented the Indian Army's response to cross border terrorism, however the proxy war by the adversary continues. The Hon'ble Raksha Mantri said "I compliment the excellent synergy between the CAPF/ Police forces and the Army in tackling the menace of terrorism in Jammu and Kashmir. The synergised operations in the Union Territory of Jammu and Kashmir are contributing to increased stability and peace in the region which was also evident in the recently conducted elections in the UT of Jammu and Kashmir, and for this I again compliment the Indian Army".

The Raksha Mantri commended the Army for the high standard of operational preparedness and capabilities which he has always been experiencing first hand during his visits to forward areas. He also paid tributes to all the brave hearts for making the ultimate sacrifice in the defence of the motherland.

He complimented the significant contributions made by the Army in military diplomacy to further our national security interests by creating sustainable cooperative relationships with foreign Armies. He also applauded Indian Army for a great performance by the Army Sportspersons in the recent Olympic Games 2024. The Raksha Mantri also commended the Army and Armed Forces for their contribution towards Swatchta Abhiyaan over the years and stated that the same should be a motivation for others as well.

The Hon'ble Raksha Mantri stressed upon the technological advancement taking place in every sphere of our life and applauded the Armed Forces for aptly incorporating them. He appreciated the Army's efforts to develop niche technologies in collaboration with civil industries, including premier educational institutions and thereby progressing towards the aim of 'Modernisation through Indigenisation' or 'Atmanirbharta'.

Raksha Mantri stated that modernisation of weapons for every soldier through Atmanirbharta is the key focus of the government and the government is completely with the Armed Forces in this aspect.

He concluded by saying that issues related to “Defence diplomacy, indigenisation, information warfare, defence infrastructure and force modernisation should always be contemplated in such a forum. War preparedness should be a continuous phenomena and we should always be ready for unpredictables for the uncertainties that may crop up any time. We should always be strengthening our fighting skills and weapons technologies so as to act effectively wherever called for. The Nation is proud of its Army and the Government is committed to facilitate the Army in their forward movement, on the road to reforms and capability modernisation”.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2064159>



**Press Information Bureau
Government of India**

Ministry of Defence

Fri, 11 Oct 2024

3rd Edition Of Indian Navy's Naval Innovation And Indigenisation Seminar (Swavlamban – 2024)

The 3rd edition of the Indian Navy's Naval Innovation and Indigenisation (NIIO) Seminar, Swavlamban 2024, is scheduled to be conducted at Bharat Mandapam on 28 - 29 Oct 24.

Over the last two editions of Swavlamban, the Indian Navy has received more than 2000 proposals from the Indian industry that have been converted into 155 challenges to facilitate development of prototypes. This initiative has enabled collaboration with more than 200 MSMEs/ Startups under the iDEX Scheme.

Swavlamban 2024 is expected to build on the experiences and insights gained through the conduct of previous editions of the seminar, and provide new and substantial impetus to the innovation and indigenisation endeavour.

The event will showcase products of niche technologies such as air and surface surveillance, autonomous systems in surface, aerial and underwater domains, AI and quantum technologies on 28 and 29 Oct 24 at Hall 14, Pragati Maidan. Domain specific interactive sessions on 29 Oct 24 at Bharat Mandapam shall provide an opportunity for interaction among policy makers, innovators, startups, MSMEs, financial institutions and venture capitalists to discuss and deliberate on issues such as emerging technologies, future warfare, indigenisation, boosting innovation ecosystem and inculcating an innovative culture.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2064075>



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Government of India**

Ministry of Defence

Fri, 11 Oct 2024

Launch Of LSAM 12 (Yard 80)

The launch of 'Missile Cum Ammunition Barge, LSAM 12 (Yard 80)', the Sixth Barge of 08 x Missile Cum Ammunition Barge project, built by MSME Shipyard, M/s SECON Engineering Projects Pvt Ltd (SEPPL), Visakhapatnam for Indian Navy, was undertaken on 10 Oct 24 at M/s Vinayaga Marine Petro Ltd, Mira Bhayandar, Maharashtra (launch site of M/s SECON Engineering Projects Pvt Ltd). The launching Ceremony was presided over by Cmde MV Raj Krishna, CoY(Mbi).

The contract for building 08 x Missile Cum Ammunition Barge was signed between MoD and M/s SECON Engineering Projects Pvt Ltd, Visakhapatnam on 19 Feb 21. The availability of these Barges would provide impetus to operational commitments of IN by facilitating Transportation, Embarkation and Disembarkation of articles/ ammunition to IN platforms both alongside jetties and at outer harbours.

These Barges are indigenously designed and built under relevant Naval Rules and Regulation of Indian Register of Shipping. The model testing of the Barge during design stage were undertaken at Naval Science and Technological Laboratory, Visakhapatnam. These Barges are proud flag bearers of Make in India initiative of Government of India.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2064036>



**Press Information Bureau
Government of India**

Ministry of Defence

Sat, 12 Oct 2024

First Training Squadron Concludes Visit To Muscat, Oman

Indian Naval Ships Tir and Shardul along with Indian Coast Guard Ship Veera of the First Training Squadron (1TS) concluded visit to Muscat, Oman on 09 Oct 24. During the four day visit, the Indian Navy engaged with Royal Navy of Oman on various fronts, forging deeper bonds and strengthening the Bridges of Friendship between two maritime nations.

VAdm V Srinivas, Flag Officer Commanding-in-Chief, Southern Naval Command (FOCINC, South) along with Commanding Officers of visiting ships called on VAdm Abdullah Bin Khamis Bin Abdullah Al Raisi, Chief of Staff Sultan's Armed Forces (COSSAF) and RAdm Saif bin Nasser bin Mohsen Al- Rahbi, Commander of Royal Navy of Oman (CRNO). The discussions were focused on enhancing defence cooperation through avenues of training exchanges, shared knowledge and joint training exercises.

During the visit, FOCINC (South) emphasised the importance of growing strategic partnership, greater engagement & interoperability between the two Navies.

The Indian Naval delegation visited Said Bin Sultan Naval Base and were conducted on a guided tour including ships, maintenance units and medical setup. The sea trainees of 1TS visited various facilities and simulators including Sports complex at Sultan Qaboos Naval Academy.

The trainees had the opportunity to visit Fleet Maintenance Unit and troop carrier ship Al Naasir of Royal Navy of Oman. Personnel of Royal Navy of Oman visited ships of 1TS as part of cross deck visit and held interactions, exchanging best practices and fostering goodwill & camaraderie.

In a school outreach event undertaken by 1TS, the young minds were provided glimpses of the role and capabilities of the Indian Navy. In another event, the Indian Naval Symphonic Band captivated the audience at Oman Avenues Mall showcasing a vibrant display of music transcending language and cultural boundaries.

Mrs Vijaya Srinivas, President, Navy Welfare and Wellness Association (Southern Region) visited an Early Intervention Centre, A.B.L.E in Indian School Wadi Kabir. She interacted with the faculty & differently abled children and appreciated the school for their initiatives.

During the port call, school children, members of the Indian Embassy at the Sultanate of Oman and the Indian diaspora visited the ships. Shri Amit Narang, Ambassador of India to the Sultanate of Oman, visited the ships of 1TS and engaged in an interactive session with the sea Trainees.

A formal reception was hosted by VAdm V Srinivas, FOCINC (South) onboard ships of 1TS. Shri Amit Narang, Ambassador of India to Sultanate of Oman and Cmde Ali Al Balushi, Asst Chief of Staff, Sultan's Armed Forces (Admin and Logistics) attended the reception. The event was also attended by diplomats, Omani dignitaries and other esteemed guests.

The visit of Indian Naval Ships to the Sultanate of Oman concluded on a high note, having significantly strengthened bonds and fostering deeper and long-lasting ties between the two seafaring nations.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2064412>



**Press Information Bureau
Government of India**

Ministry of Defence

Sat, 12 Oct 2024

Harbour Activities Of Malabar- 2024

As part of the ongoing harbour activities during the Multilateral Maritime Exercise Malabar 2024, participating navies - India, Australia, Japan, and the United States - have been actively engaged in various collaborative events since 09 Oct 24, at Visakhapatnam, coordinated by the Eastern Naval Command. These activities include Key Leadership Engagement (KLE), Subject Matter Expert Exchange (SMEE), cross-deck visits, sports fixtures, and pre-sailing discussions, all aimed at enhancing maritime cooperation, building camaraderie, and fostering operational synergy.

Key leadership engagement of the senior naval hierarchy has been a special feature of the exercise, with Vice Admiral Rajesh Pendharkar, Flag Officer Commanding-in-Chief (FOC-in-C), Eastern Naval Command, Admiral Stephen Koehler, Commander US Pacific Fleet, Vice Admiral Katsushi Omachi, Commander-in-Chief, Self-Defense Fleet, Japan, and Rear Admiral Chris Smith, Commander Australian Fleet, meeting to discuss ways to strengthen mutual naval interoperability and cooperation in the Indo-Pacific region, as well as the future of Malabar exercises.

Further reinforcing this bond, the Subject Matter Expert Exchanges and cross-deck visits have provided valuable opportunities for the participating nations to exchange knowledge and best practices towards promoting deeper engagement and understanding. These interactions have highlighted the importance of collaboration to enhance maritime security and achieve shared goals in maritime operations.

The crews from Australia, India, Japan and the United States participated in friendly sports fixtures, further reinforcing the camaraderie and bonhomie among the teams. From the seas to the fields, the spirit of teamwork and friendship embodied the theme of Stronger Together, exemplifying the spirit of Malabar 2024 beyond naval operations. The crews also enjoyed a memorable Indian dinner, with the rich flavors of Indian cuisine setting the stage for enhancing cultural familiarity between the navies.

As the harbour phase of Malabar 2024 draws to a close, pre-sailing discussions have taken center stage, focusing on strategies to ensure maximum operational synergy during the upcoming sea phase in the Bay of Bengal, scheduled from 14 Oct 24. The multifaceted interactions at various levels have all been instrumental in cementing cooperation, sharing expertise, and enhancing maritime security.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2064361>



**Press Information Bureau
Government of India**

Ministry of Defence

Sat, 12 Oct 2024

Raksha Mantri Shri Rajnath Singh virtually dedicates to the nation 75 BRO infrastructure projects, worth Rs 2,236 crore, across 11 States/UTs

Raksha Mantri Shri Rajnath Singh, on October 12, 2024, virtually dedicated to the nation 75 infrastructure projects of Border Roads Organisation (BRO) at a cost of Rs 2,236 crore. These projects - 22 roads, 51 bridges & two others - are spread across 11 States/Union Territories. Nineteen (19) are in Jammu & Kashmir, 18 in Arunachal Pradesh, 11 in Ladakh, nine in Uttarakhand, six in Sikkim, five in Himachal Pradesh, two each in West Bengal & Rajasthan and one each in Nagaland, Mizoram and Andaman & Nicobar Islands.

Raksha Mantri inaugurated the projects from the Headquarters, Trishakti Corps in Sukna, West Bengal. One of the main highlights was the inauguration of the Kupup-Sherathang Road in Sikkim which serves as a crucial link between Jawahar Lal Nehru Marg and Zuluk axis.

In his address, Raksha Mantri termed the projects as a testament to the Government's unwavering resolve to keep strengthening the border infrastructure and ensuring socio-economic progress of these areas. He added that these projects will go a long way in enhancing the defence preparedness of the country. Prime Minister Shri Narendra Modi's vision of 'Viksit Bharat by 2047' can be realised through such infrastructure projects, he said.

With the inauguration of these 75 projects, BRO has completed a total of 111 infrastructure projects in 2024 at an overall cost of Rs 3,751 crore. This includes 36 projects worth Rs 1,508 crore, such as the state-of-the-art Sela Tunnel in Arunachal Pradesh, inaugurated by the Prime Minister earlier this year. Last year, 125 infrastructure projects of BRO were dedicated to the nation at a cost of Rs 3,611 crore.

Raksha Mantri commended the grit and determination of the BRO personnel for completing the projects in a time-bound manner even in most challenging terrains and harsh weather conditions, adding that the government, in its third term, aims to further bolster the border infrastructure with more promptness. Referring to the increased allocation of Rs 6,500 crore for BRO in Union Budget 2024-25, he expressed hope that it would not only contribute to strategic infrastructure development, but will also prove helpful in socio-economic progress in the border areas, including the North East region.

Raksha Mantri pointed out that the governments before 2014 were of the view that the development of border areas can have an adverse impact as it may be used by the country's adversaries. He emphasised that border infrastructure development has been the priority area of PM Modi-led Government ever since it came to power as these regions, especially the North-east,

is crucial from the socio-economic & strategic perspectives. “In the last decade, we have built a vast network of roads from villages to cities, which has resulted in the country witnessing progress at an unprecedented pace,” he said.

Shri Rajnath Singh assured the people that new dimensions will be added to the development of border areas. India will be one of the safest and strongest nations in the times to come, he said.

Chief of the Army Staff General Upendra Dwivedi, Defence Secretary-designate Shri RK Singh, General Officer Commanding-in-Chief, Eastern Command Lt Gen Ram Chander Tiwari, DG Border Roads Lt Gen Raghu Srinivasan, General Officer Commanding, Trishakti Corps Lt Gen Zubin A Minwalla were present with Raksha Mantri during the virtual inauguration, while Sikkim Chief Minister Shri Prem Singh Tamang was at the main site in Sherathang.

Governors of Sikkim, Arunachal Pradesh, Rajasthan, Himachal Pradesh, Nagaland and Mizoram; Lt Governors of Jammu and Kashmir & Ladakh; Chief Ministers of Arunachal Pradesh & Uttarakhand; Union Minister of State (Independent Charge) of Science & Technology and Earth Sciences & MoS in Prime Minister’s Office and Personnel & Public Grievances and MoS of Law & Justice and Parliamentary Affairs attended the event virtually.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2064340>



Press Information Bureau
Government of India

Ministry of Defence

Sat, 12 Oct 2024

Visit Of First Training Squadron To Bahrain And UAE

Continuing with the Long Range Training Deployment in the Persian Gulf, INS Tir and ICGS Veera of First Training Squadron (1TS) arrived at the Port of Manama, Bahrain on 12 Oct 24. Aimed at enhancing Naval cooperation and augmenting interoperability, Indian Navy is set to engage with the Royal Bahrain Naval Forces (RBNF) on various domains of maritime ops and best shared practices. Professional interactions, cross ship visits, joint training sessions, yoga sessions, band concerts, friendly sports fixtures, social interactions and community welfare activities are planned during the port call. The sea trainees of Indian Navy will be visiting various training facilities and establishments of RBNF.

A coordination meeting between the operational teams of both the Navies towards planning and conduct of a Maritime Partnership Exercise is also scheduled. Training interaction with the partners of CMF as part of cooperative engagement and reaffirming maritime security in the region will also feature during the visit.

In another port visit, INS Shardul of 1TS entered Port Rashid, Dubai at UAE. The ship was received by the Defence Attaché at the Embassy of India and officials of the UAE Navy. During

the visit, the ship will engage with the UAE Navy on multiple training activities and harbour interactions.

The deployment of 1TS to Bahrain and UAE is aimed not only at exposing the sea trainees towards various Naval training activities but also endeavours to further the socio-political, military and maritime linkages. The visit is indicative of growing defence relations of India with Bahrain and UAE while boosting maritime security cooperation and enhanced synergy amongst the Navies.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2064549>

THE ECONOMIC TIMES

Fri, 11 Oct 2024

Army Chief launches 'Agniastra' multi-target detonation device during Gangtok conference

The Army Chief, General Upendra Dwivedi on Friday, officially launched "Agniastra," a portable multi-target detonation device, during the Army Commanders Conference in Gangtok.

This device was developed by Major Rajprasad RS from the Indian Army's Corps of Engineers and is seen as a major advancement in both conventional and counter-terrorism operations.

According to Indian Army officials, the device holds "tremendous potential" for use in room interventions, remote bunker or hideout destruction, and reserve demolitions. Speaking about its capabilities, they added, "It has tremendous potential in both conventional and counter-terrorist operations like room intervention, remote bunker/hideout bursting, and reserve demolition."

This device builds upon previous milestones achieved earlier this year.

On March 19, Major Rajprasad's innovation was granted a patent. The Portable Multi-Target Detonation Device, also known as WEDC, was specifically designed to improve the safety and reliability of multiple-target detonations, overcoming the limitations of the previously used Exploder Dynamo Capacitor, which had a limited range of 400 metres.

The new system is a microprocessor-based electronic device that can operate in both wired and wireless modes with a much-improved range of 2.5 kilometres. It allows for selective and simultaneous firing of multiple targets, making it highly effective for demolition operations from a safe distance. Major Rajprasad's innovation offers a key advantage in counter-terrorism operations and IED destruction, ensuring greater safety for troops in critical missions.

On Thursday, Gen Diwedi presided over the Army Commanders' Conference (ACC) in Sikkim, marking the first time this event was being held outside Delhi in a strategically important location.

The conference is taking place in a hybrid format, with the first phase in Gangtok and the second phase scheduled for October 28-29 in New Delhi.

According to the Indian Army, the conference aimed to "review current operational preparedness, deliberate on critical strategies, and outline future directives," with a focus on national security and technological advancements in the Indian Army. Further discussions will continue in the upcoming phase.

<https://economictimes.indiatimes.com/news/defence/army-chief-launches-agniastra-multi-target-detonation-device-during-gangtok-conference/articleshow/114157028.cms>

THE ECONOMIC TIMES

Sun, 13 Oct 2024

India unleashed major defence orders in September; paving way for military modernisation, space exploration

The month of September 2024 witnessed a series of significant defence procurement and development initiatives by the Government of India (GoI), aimed at bolstering the country's military capabilities and enhancing its strategic position in the global defence landscape.

One of the key highlights of September was the Defence Acquisition Council (DAC) approving 10 capital acquisition proposals worth Rs 145 billion.

The approvals include the procurement of Future-Ready Combat Vehicles (FRCVs), which will significantly enhance the Army's mobility and firepower.

In addition to the FRCVs, the DAC approved seven Project 17B stealth frigates for the Indian Navy, at an estimated cost of Rs 700 billion. The frigates will strengthen the Navy's maritime defence capabilities and improve its surface warfare tactics.

The Cabinet Committee on Security (CCS) cleared a major contract with Hindustan Aeronautics Limited (HAL) for the supply of 240 units of AL-31FP jet engines, valued at Rs 260 billion, for the Indian Air Force's Sukhoi Su30MKI aircraft.

This deal, executed at a production rate of 30 engines per year, aims to ensure the fleet's sustained operational readiness and reduce dependency on foreign suppliers.

In a significant boost to India's space ambitions, the government approved a budget of Rs 227.5 billion for upcoming space missions.

This includes the next lunar mission, Chandrayaan-4, a Venus exploration mission, and the establishment of an Indian space station.

Additionally, the government has given the green light for the development of a next-generation launch vehicle to support these ambitious projects, signalling a major step forward for India's space capabilities.

Naval advancements also featured prominently in September, with Cochin Shipyard launching two anti-submarine warfare shallow watercraft for the Indian Navy.

The Ministry of Defence (MoD) approved the construction of extra-large unmanned underwater vehicles for the Navy, with a budget of Rs 25 billion.

Strategic collaborations marked another aspect of the month's defence activities. Bharat Electronics Limited (BEL) formed a new joint venture with Israel Aerospace Industries (IAI) to provide maintenance, repair, and overhaul (MRO) services for the Medium-Range Surface-to-Air Missile (MRSAM) systems in India.

Additionally, India has signed an implementing agreement with the South African Navy for submarine rescue assistance, ensuring a robust framework for mutual support in underwater emergencies.

An order was also secured by PTC Industries to supply titanium cast components to Israel Aerospace Industries, furthering India's role in the global defence supply chain.

Several contracts and new orders were finalized in September, reflecting the ongoing modernization efforts. Furthermore, Dassault Aviation announced plans to establish an MRO facility for Rafale and Mirage fighter jets near Noida, signifying a strategic move to support India's air combat capabilities locally.

In another significant move, the Defence Research and Development Organisation (DRDO) awarded a contract worth Rs 154 million to MTAR Technologies for the manufacture of full-scale and sub-scale combustors for air-breathing engines, underlining India's focus on advancing propulsion technology.

Adding to the month's developments, India overtook Japan to become the third-largest power in the Asia Power Index, reflecting its growing economic and military influence in the region.

Domestic defence manufacturing also saw new milestones, with the Small Arms Factory securing a significant export order for 2,000 medium machine guns from a European country. The Indian Army also placed a substantial order for 700 Trinetra drones, underscoring the focus on indigenous drone technology.

<https://economictimes.indiatimes.com/news/defence/india-unleashed-major-defence-orders-in-september-paving-way-for-military-modernization-space-exploration/articleshow/114187307.cms>

THE ECONOMIC TIMES

Mon, 14 Oct 2024

Lessons from Iran missile attacks for defending against China's advanced arsenal

Iran's missile barrage this month against Israel, after a similar large-scale attack in April, shows the value, as well as the shortcomings, of U.S and allied missile defences in a potential IndoPacific conflict with China, analysts say.

Although differences between the two scenarios limit the lessons that can be learnt, the nearly 400 missiles of different types that Iran has fired at Israel this year offer the United States and China some idea of what works and what does not.

For Washington, the main takeaway from Iran's Oct. 1 attacks - the largest sample yet of ballistic missiles fired against modern defences - could be that Beijing's missiles would be more difficult to intercept than Iran's and that the ability to strike back would be needed to deter a mass attack, said Collin Koh of the S. Rajaratnam School of International Studies in Singapore.

"If we look purely through the lenses of deterrence, no longer can one pin hopes on deterrence by denial only - that is, the hope that effective defences can blunt the efficacy of missile strikes," Koh said. "Deterrence by punishment might have to become normative going forward."

There is no immediate threat of missile conflict in the Indo-Pacific region. The distances, thousands of kilometres, are greater than in the Middle East. China's weapons are more advanced, including manoeuvring warheads and precision guidance. And the target areas are scattered across the region, making a massed attack more difficult.

The United States has developed and deployed new weapons in the region this year to counter China, including the AIM-174B air-to-air missile and the ground-based Typhon missile battery in the Philippines, which can launch SM-6 and Tomahawk missiles.

The U.S. Indo-Pacific Command and China's Ministry of Defence did not immediately respond to requests for comment.

China's Missiles Longer-Range, Less Accurate

On the other hand, simply being better informed about how offensive and defensive systems perform after Iran's missile fusillades - many were intercepted - may reduce the chance of conflict, said Ankit Panda of the U.S.-based Carnegie Endowment for International Peace.

"Any military force planning long-range missile strikes will need to plan around the possible effects of missile defences," Panda said. "Of course, without clarity on how well a given missile defence system might perform, this could lead to massive escalation."

Israel's layered air and missile defences - from its long-range Arrow systems to the Iron Dome shield meant to handle slower, less complex threats - are tailored to the threats it faces: guided ballistic missiles from powers such as Iran mixed with unguided rockets launched from just over Israel's borders.

The picture is much different in the Indo-Pacific region for the U.S. and its allies, which use the Lockheed Martin and Raytheon Patriot, THAAD and seabased Aegis systems for missile defence.

The accuracy of China's DF-26, its most numerous conventional intermediaterange ballistic missile, is estimated to be as good as 150 m (500 feet), according to the Center for Strategic and International Studies' Missile Defense Project. Its DF-21 is shorter-ranged, though some variants have an accuracy of 50 m.

Both can hit most U.S. and allied targets in the region. The DF-26 can reach Guam, the site of major U.S. military facilities. The Pentagon has estimated that China may have several hundred of the missiles.

By contrast, Iran's missiles such as the Fattah-1 are theoretically more accurate - within tens of metres - but are much shorter-ranged. The number of these newer missiles is not public, but U.S. Air Force General Kenneth McKenzie told Congress last year that Iran had more than 3,000 ballistic missiles of all types.

China's capabilities outstrip Iran's in other ways, said Malcolm Davis, a senior analyst at the Australian Strategic Policy Institute. Missile attacks would most likely be coordinated with anti-satellite strikes and cyberwarfare, both designed to complicate defence.

"Western (integrated air and missile defence) systems in the Indo-Pacific would have a much tougher time defeating a large Chinese missile strike, comprising hundreds or even thousands of missiles, compared to what the Iranians are capable of," Davis said.

<https://economictimes.indiatimes.com/news/defence/lessons-from-iran-missile-attacks-for-defending-against-chinas-advanced-arsenal/articleshow/114199642.cms>



Mon, 14 Oct 2024

With 90% of budget spent, Defence Ministry seeks additional funds to expand its flagship scheme for innovations

The Ministry of Defence is seeking to expand the scope of its flagship Innovations for Defence Excellence (iDEX) scheme and has sought additional funds from the Finance Ministry to keep it going, The Indian Express has learnt.

As per senior government officials, the Department of Defence Production (DDP) under the Ministry of Defence has already exhausted around 90% of the total Rs 498.78 crore approved for the scheme for a period of five years — from 2021-22 to 2025-26. The iDEX scheme aims to provide financial support to nearly 300 startups, MSMEs and individual innovators and about 20 partner incubators for the development of niche defence and aerospace technologies.

As per official data, till August this year, procurement of 37 products successfully developed under iDEX worth Rs 2,370 crore have been approved, of which procurement contracts of 21 products worth Rs 800 crore have already been signed. More challenges are being launched under iDEX. As per the data, over 300 of them have been declared iDEX winners.

Earlier this month, Defence Minister Rajnath Singh at an event said 26 products have been developed under the iDEX initiative, for which procurement orders worth more than Rs 1,000 crore have been placed.

Senior government officials said the exhaustion of funds is in line with the steady and fast uptake of the scheme and its success has encouraged its scaling up and that it needs additional funds and other resources, including manpower.

An official said around 90% funds of the approved budgetary outlay have already been committed against the ongoing projects, adding that for further signing of contracts with iDEX winners, additional funds of Rs 497.15 crore is required.

The official added that commitment of additional funds from the government is essential to continue further engagement of iDEX with startups and this has also been highlighted in a recent communication to the Finance Ministry by Defence Secretary Giridhar Aramane.

An official said the need for additional funds had also been recommended by the Revised Cost Committee (RCC) in 2023 and the process for third-party evaluation of the scheme has already been initiated for completion within the current financial year.

Once approved, it will take the total cost of the central sector scheme to around Rs 996 crore.

Initially, the grant provided to iDEX winners was Rs 1.5 crore, but the iDEX scheme was expanded to iDEX Prime later, with the assistance increasing from Rs 1.5 crore to Rs 10 crore. This is because several stakeholders felt that despite having the capability and the technical knowhow, the ceiling of Rs 1.5 crore was a constraint in developing advanced and complex systems in the niche domain of defence and aerospace.

Earlier this year, the Defence Minister launched another initiative — the Acing Development of Innovative Technologies with iDEX (ADITI) scheme — to promote innovations in critical and strategic defence technologies under which start-ups are eligible to receive grant-in-aid of up to Rs 25 crore for their research, development and innovation endeavours in defence technology.

The ADITI scheme worth Rs 750 crore for the period 2023-24 to 2025-26 falls under the iDEX framework and aims to develop about 30 deep-tech critical and strategic technologies in a proposed timeframe, while bridging the gap between the expectations and requirements of the modern Armed Forces and the capabilities of the defence innovation ecosystem.

As per a government statement, in the first edition of ADITI, 17 challenges – three for the Indian Army, five each for the Navy and the Indian Air Force and four for the Defence Space Agency — were launched.

Earlier this month, Singh launched the ADITI 2.0, featuring 19 challenges from the armed forces and allied agencies in the domains of artificial intelligence (AI), quantum technology, military communication, anti-drone systems customised for military platforms and adaptive camouflage among others.

This scheme offers a grant of up to Rs 25 crore to iDEX winners, focusing on critical technological areas crucial for strengthening the defence ecosystem of the country.

He also launched the 12th edition of Defence India Start-up Challenges (DISC 12), which presents 41 challenges across key technology domains, including unmanned aerial vehicles (UAVs), AI, networking and communication, with grants up to Rs 1.5 crore.

To provide momentum to the iDEX initiative, DISC was launched in partnership with Atal Innovation Mission, aimed at supporting start-ups, MSMEs, innovators to create prototypes and commercialise products or solutions in national defence and security.

As per the Defence Minister, iDEX has received over 9,000 applications so far, and is currently collaborating with more than 450 start-ups and MSMEs.

<https://indianexpress.com/article/india/defence-ministry-additional-scope-idex-scheme-9618622/>



Sun, 13 Oct 2024

Army looks to hire civil choppers for logistics on northern borders

The Indian Army is looking to hire helicopters from civil agencies to carry out a range of jobs along the country's northern borders such as logistics supplies, carrying troops to forward locations and casualty evacuation when needed, The Indian Express has learnt.

It plans to deploy these single-engine helicopters in specific sectors in Jammu and Kashmir and Ladakh, such as Drass, Kargil, Batalik, Doda, Kishtwar and Gurez. Barring the specific sectors, the helicopters will be mostly deployed during the winters — from November to April — for stocking of ration, fuel, other stores and operational purposes.

Bids have been invited from potential service providers for details of helicopters available for the purpose, including their rate per flying hour and additional flying hours.

According to officials, this is a rare instance when the Army will hire helicopters for winter stocking, carrying out logistics work and supplies and other operational purposes.

There are plans for the Armed Forces to increasingly move towards outsourcing of major platforms and equipment instead of buying them — these need massive capital expenditure — and the Army's move to hire the helicopters reflects that.

It is learnt that the helicopters will be used to fill in for the ageing Chetak and Cheetah fleet with the Army, which continue to face serviceability issues due to their long, extended years of service and the fact that many of them will begin completing their total technical life in the next three years. The Army plans to eventually replace them with the indigenous light utility helicopters.

“Apart from serviceability issues of the Cheetah fleet, big helicopters cannot land in several high-altitude forward locations due to lack of large helipads, and these smaller choppers will be able to perform a variety of roles, particularly in the transportation of all things for sustenance in the forward locations,” an official said.

The hiring will also offer larger maintenance time for the Army's helicopters which will continue to be used for operational duties. The IAF also pitches in with its bigger helicopters like Chinooks and smaller helicopters to carry out a range of operational duties for the Army in forward locations.

An official said this move is another initiative which will ease stocking and assist in quick de-induction of soldiers from high altitude areas. It will also help soldiers going on emergency leave to come down from the higher reaches.

“The strain on service aircraft and pilots will be reduced, permitting them to focus on operational tasks and winter air surveillance sorties. It will also ease the maintenance schedules of the Army helicopters as their flying hours will comparatively go down,” the official said.

The hiring of helicopters will be done under the Delegation of Financial Powers to Defence Services (DFPDS-2021) which was unveiled by Defence Minister Rajnath Singh.

The DFPDS is the only document which lays out the financial powers of the three services for defence revenue procurements. All defence capital procurements are governed by the Defence Acquisition Procedure 2020.

Other than increasing the number of Armed Forces officers who can take financial calls on major revenue procurements, the revised DFPDS-21 also had a provision to hire aircraft, mid-air refuellers and associated equipment for a short time for operational emergencies. Earlier, the IAF was also considering hiring mid-air refuellers under this DFPDS provision.

According to officials, the service provider or the civil agency selected will need to provide fully functional helicopters along with pilots and crew members and maintenance personnel, who have to be competent for high altitude flying operations.

The service provider will also provide the maximum number of helicopters at each location, transport cargo load or troops and carry out casualty evacuation on requirement basis.

<https://indianexpress.com/article/india/army-looks-to-hire-civil-choppers-for-logistics-on-northern-borders-9617495/>



Mon, 14 Oct 2024

Indigenous Bofors guns delivery to miss '26 deadline

Going by the tardy delivery of the indigenously produced advanced Bofors gun Dhanush to the Indian Army, it will be difficult to meet the March 2026 dateline, officials said.

The Dhanush is the country's first indigenously built artillery gun, being manufactured by Advanced Weapons and Equipment India Limited (AWEIL), previously a part of the Ordnance Factory Board (OFB).

“The first gun was inducted in April 2019 and till now not even two regiments have become operational. Going by the speed of delivery, it is unlikely that all the guns might be delivered in the remaining time,” said a top defence officer. One regiment comprises 18 guns.

The initial plan is to induct 114 guns with 80% indigenous content by 2026. Its indigenous content makes its maintenance easier in terms of spare parts' availability.

The cost of each gun, which also has electronic sites, is about `14 crore, much lower than the per unit cost of Bofors. Dhanush can travel through difficult terrains and target enemy targets during the day and night.

These guns, with upgrades, have been deployed along the LAC in Ladakh. The old Bofors gun was 155 mm 39 calibre with a firing range of around 30 kms. Dhanush which fires up to 36 kms has around 877mm longer barrel. The system also has many more modern equipment and technology onboard helping in precise targeting with heavier ordnance.

In addition, the artillery is in the process of inducting other 155 mm gun systems, including 300 Advanced Towed Artillery Gun System (ATAGS), 300 Mounted Gun Systems (MGS) and 400 Towed Gun System (TGS). The Army has inducted 100 155mm/52 calibre K9 Vajra-T guns for which a \$720 million contract was signed in 2017.

The plans of the Army include inducting 100 more K9 Vajra-T guns. "The Army aims to standardise its bulk of the guns to 155mm/52 calibre," said Lieutenant General Adosh Kumar, DG, artillery. He said 155mm guns will be the standard calibre of all artillery guns by 2042. Lt Gen Kumar said, "The Army has prepared plans for the next 25 years. We have a plan for 2027, for 2047, and even for 2042."

<https://www.newindianexpress.com/nation/2024/Oct/14/indigenous-bofors-guns-delivery-to-miss-26-deadline>

THE TIMES OF INDIA

Mon, 14 Oct 2024

Navy setting up base to control submarines on longrange patrols

With India recently commissioning its second nuclear-powered submarine INS Arighaat as part of the plan to expand both the strategic as well as conventional underwater combat fleets, the Navy is now setting up a new advanced facility to seamlessly communicate with its stealthy predators out on long-range patrols. The project for the very low frequency (VLF) transmitting station at Vikarabad in Telangana is slated for inauguration by defence minister on October 15.

"The strategically-important VLF facility, once it becomes fully operational in two-three years, will provide round-the-clock encrypted communication connectivity to submerged submarines across India's entire area of interest," a source told TOI.

"VLF radio waves, which operate in a frequency band of 3 to 30 Kilohertz, can penetrate seawater to a certain depth for such purposes," he added. Only a few nations have such VLF capabilities,

which are especially critical for “command and control” of nuclear submarines deployed on long-range deterrent patrols.

The Navy has been running a VLF station at Tirunelveli in Tamil Nadu since 1990. The new state-of-the-art VLF facility at Vikarabad is necessary for “maintaining 24x7x365 communication” for the planned induction of both diesel-electric as well as nuclear submarines, with an eye firmly on China’s increasing naval forays into the Indian Ocean Region (IOR).

On Aug 29, India had inducted its second 6,000-tonne SSBN (nuclear-powered submarine with nucleartipped ballistic missiles) INS Arighaat, which is also capable of carrying some 3,500-km range K-4 missiles. Her forerunner INS Arihant is armed only with the 750-km range K-15 missiles.

India plans to induct the third SSBN, with a displacement of 7,000-tonne, as INS Aridhaman early next year, while a fourth is also under construction under the secretive advanced technology vessel (ATV) project. There is also the plan to eventually build 13,500-tonne SSBNs, with much more powerful 190 MW pressurised light-water reactors, as reported by TOI earlier.

Moreover, the PM-led cabinet committee on security on Oct 9 also cleared the long-pending Rs 40,000 crore 'Project-77' to construct two nuclear-powered attack submarines (called SSNs in naval parlance). It will take 10-12 years to build these SSNs, with 190 MW reactors and displacement of 9,800-tonne, meant for conventional (non-nuclear) warfare.

On the diesel-electric front, the Navy will commission the sixth French-origin Scorpene submarine 'Vagsheer' in Dec under the over Rs 23,000 crore 'Project-75' underway at Mazagon Docks (MDL). While the Navy has six old Russian Kilo-class and four German HDW submarines, India is now finalising with France the construction of another three Scorpenes at MDL for over Rs 30,000 crore.

Then, Germany and Spain are in contention for the long-pending over Rs 42,000 crore 'Project-75-India' to build six advanced diesel-electric submarines, with AIP (air-independent propulsion) for greater underwater endurance and land-attack cruise missiles.

<https://timesofindia.indiatimes.com/india/navy-sets-up-base-to-control-submarines-on-long-range-patrols/articleshow/114196990.cms>

The Tribune

Sun, 13 Oct 2024

China on mind, IAF in talks with Uttarakhand to take over 3 airstrips

In a bid to match China in airfield infrastructure along the Line of Actual Control (LAC), the Ministry of Defence and the Indian Air Force are planning to take over three existing airstrips in Uttarakhand and come up with a new one in the Spiti area of Himachal Pradesh.

Sources said talks were at an advanced stage for the three airstrips in Uttarakhand — at Pithoragarh, Gauchar and Dharasu — while a team of the MoD had carried out a feasibility study for a new airstrip at Rangrik in Spiti.

Air Chief Marshal AP Singh had last week stated that infrastructure on the other side (China) was coming up rapidly. “We are matching up; we are beefing up capacities of airfields and also plan to utilise civil infrastructure and landing grounds in the central sector,” he had stated, adding that the IAF was in touch with state governments to either take over these airfields or to get an assurance that these would be made available to the IAF for use.

In military terms, the central sector “defines the LAC with China in Himachal and Uttarakhand”. Pithoragarh in Kumaon — the eastern flank of Uttarakhand — already has an operational civilian runway. Gauchar in the central part of Uttarakhand is close to Kedarnath while Dharasu is on the route to the Gangotri glacier in the north-western part of the state.

Special operations planes such as the C-130J have landed at these locations in the past. These landing strips have been made on land owned by the state government.

The sources said there was also the option of using fully paved operational civilian runways in Himachal — Jubbarhatti in Shimla, Kangra and Bhuntar in Kullu — in case of an exigency. All three are capable of C-130J operations.

Several airbases in the plains such as at Adampur and Ambala cater to security on two fronts — western and China. Chandigarh ensures supplies to eastern Ladakh. In Uttar Pradesh, the airbases at Bareilly and Sarsawa near Saharanpur look after the China front.

The proposed airfield at Rangrik is an important project. Across the LAC is Chepzi in Tibet. Chinese troops come for patrolling close to Chumar and Demchok in India. If the airfield comes up, it can also connect civilian flights as the Spiti valley gets blocked due to snow in winters.

<https://www.tribuneindia.com/news/india/china-on-mind-iaf-in-talks-with-uttarakhand-to-take-over-3-airstrips/>

नवभारत टाइम्स

Sat, 12 Oct 2024

जर्मन चांसलर और स्पेन के पीएम आ रहे भारत, सबसे बड़े पनडुब्बी प्रोजेक्ट **PI-75** के लिए लगाएंगे दांव, जानें प्लान

भारतीय नौसेना इस समय एयर इंडिपेंडेंट प्रोपल्शन (AIP) प्रणाली की पनडुब्बी हासिल करने के लिए तेजी से जोर लगा है। भारतीय नौसेना के इस सबसे बड़े पनडुब्बी अधिग्रहण कार्यक्रम को प्रोजेक्ट 75 या PI-75 नाम दिया गया है, जिसके लिए दो देशों जर्मनी और स्पेन के बीच कड़ी प्रतिस्पर्धा है। इस महीने के अंत में होने वाले जर्मन चांसलर ओलाफ स्कोल्ज और स्पेन के प्रधानमंत्री पेड्रो सांचेज के भारत दौरे को इसी नजरिए से देखा जा रहा है।

भारत में होंगे जर्मनी और स्पेन के नेता

द प्रिंट की रिपोर्ट के मुताबिक, जर्मनी के चांसलर स्कोल्ज सबसे पहले 25 अक्टूबर को एक बड़े प्रतिनिधिमंडल के साथ नई दिल्ली पहुंचेंगे, जिसमें जर्मनी के रक्षा मंत्री बोरिस पिस्टोरियस भी शामिल होंगे। द प्रिंट ने सूत्रों के हवाले से बताया है कि पीएम मोदी के साथ द्विपक्षीय और प्रतिनिधिमंडल स्तर की वार्ता के बाद स्कोल्ज अगले दिन रवाना होंगे। वहीं, स्पेन के प्रधानमंत्री 27 अक्टूबर को तीन दिवसीय यात्रा पर आएंगे।

दोनों देश भारतीय नौसेना के छह नई पारंपरिक पनडुब्बियों के निर्माण की मेगा डील के लिए प्रतिस्पर्धा कर रहे हैं। जर्मन फर्म टीकेएमएस ने भारत के सरकारी शिपयार्ड मझगांव डॉक शिपबिल्डर्स लिमिटेड (MDL) के साथ समझौता किया है, जबकि स्पेनिश फर्म नवंतिया ने निजी फर्म एलएंडटी के साथ समझौता किया है।

स्पेन और जर्मनी दोनों चाहते हैं भारत से डील

भारत में जर्मनी के राजदूत फिलिप एकरमैन ने द प्रिंट को बताया कि स्कोल्ज की नई दिल्ली यात्रा के दौरान रक्षा और सैन्य रणनीति पर चर्चा होगी। दोनों देश भारत के साथ सहयोगी की मांग कर रहे हैं। ऐसा समझा जाता है कि स्पेन और जर्मनी दोनों ही पनडुब्बी परियोजना के लिए सरकार से सरकार के बीच सौदे पर विचार कर रहे हैं।

प्रोजेक्ट-75 में कहां तक पहुंची बात?

शुरुआत में टीकेएमएस ने भारतीय पनडुब्बी परियोजना के लिए बोली लगाने में दिलचस्पी नहीं दिखाई थी, लेकिन जर्मन सरकार के इशारे पर फर्म ने नरम रुख अपनाया। टीकेएमएस और नवंतिया दोनों को भारतीय नौसेना के फैसले का इंतजार है। बताया गया है कि नौसेना ने एआईपी प्रणाली का क्षेत्र मूल्यांकन परीक्षण (FET) पूरा कर लिया है।

नवंतिया ने अपनी एआईपी प्रणाली का प्रदर्शन किया है, जिसमें एफईटी के लिए भूमि और जहाज पर मौजूद प्रणालियों के मिश्रण का उपयोग किया था। अब यह भारतीय नौसेना पर निर्भर करता है कि वह इसे उपयुक्त मानती है या नहीं। नवंतिया की एपीआई का 50,000 घंटे से अधिक परीक्षण हो चुका है और इसे स्पेनिश नौसेना ने अपने लिए चुना है।

वहीं, टीकेएमएस ने जिस एआईपी का प्रदर्शन किया है, वह भारतीय नौसेना की अपेक्षा से छोटा था। एआईपी को टाइप 214 पनडुब्बियों पर लगाया जाता है, जो नौसेना की आवश्यक सबमरीन से छोटी होती हैं। इसलिए उन्हें एआईपी सिस्टम के छोटे पैक की आवश्यकता होती है।

<https://navbharattimes.indiatimes.com/world/rest-of-europe/indian-navy-submarine-project-75-german-chancellor-and-spanish-pm-to-visit-india-focus-submarine-deal/articleshow/114174021.cms>



Sun, 13 Oct 2024

What are 'dragon drones', the latest weapon being used in Russia-Ukraine war?

A deadly new weapon has taken to the skies in the Russia-Ukraine war. Both sides have posted visuals of drones appearing to rain down fire — earning this weapon the moniker of “dragon drone”.

What these drones are spewing, however, is a molten metal that burns at 2,427 degrees Celsius.

What are 'dragon drones'?

Dragon drones essentially release a substance called thermite — a mixture of aluminium and iron oxide — developed a century ago to weld railroad tracks.

When ignited (usually with the help of an electrical fuse), thermite triggers a self-sustaining reaction that is quite difficult to extinguish. It can burn through almost anything, from clothes to trees to military-grade vehicles, and can even burn underwater. On humans, it causes severe, possibly fatal, burns and bone damage.

“Combining thermite with high-precision drones that can bypass traditional defences makes dragon drones ‘highly effective’ and ‘dangerous,’” Al Jazeera quoted the United Kingdom-based anti-war advocacy organisation Action on Armed Violence (AOAV) as saying.

Dragon drones are believed to have been first deployed in the Russia-Ukraine war around September. According to a report by The New York Times, Ukrainian forces used them to “ignite the vegetation that Russian troops use for cover and burn it out, exposing them and their equipment to direct attack.” Soon, the Russians too began to produce and deploy their dragon drones.

Has thermite been used in weapons before?

Yes. Thermite was used in both world wars. During World War I, German zeppelins dropped thermite-laden bombs which were considered an innovation at the time.

By World War II, thermite-laden high incendiary explosives became a part and parcel of both the Allies and Axis forces’ aerial bombing campaigns. According to some estimates, the Allies dropped some 30 million 4-pound thermite bombs on Germany and another 10 million on Japan during World War II. Thermite hand grenades were also used during the war to disable artillery pieces, without an explosion.

In modern conflict, thermite is most often used by espionage agents, or special operations teams due to its ability to burn intensely but without a bang.

Is it legal to use thermite in weapons?

The use of thermite in war is not prohibited under international law. However, the use of such incendiary weapons against civilian targets is barred under the Convention on Certain Conventional Weapons — Cold War-era guidance issued under the auspices of the United Nations.

“The problem with thermite is that it is rather indiscriminate,” Marina Miron, a military expert from King’s College London, told DW. “Therefore, while it is not banned per se, Protocol III of the Convention on Certain Conventional Weapons actually limits its use to strictly military targets, given the fact that this munition can produce severe burns and respiratory injuries.”

<https://indianexpress.com/article/explained/explained-global/dragon-drones-russia-ukraine-war-9618024/>

Explained: What is THAAD air defence system that Israel prefers over USA's 'Patriot' to challenge Iranian missiles?

The United States are likely to station its Terminal High Altitude Area Defense (THAAD) air defence batteries in Israel in the backdrop of tensions with Iran. THAAD possesses the ability to fend off ballistic missiles, which Tehran's proxies have also launched at Israel in recent months, in mid-air and is among the most effective air defence systems in the world.

The THAAD is a highly advanced defence system, and if decided to deploy in Israel, it will need the deployment of US soldiers as well. The natively designed system is operated by US personnel alone.

Why THAAD?

According to the latest reports, the Biden administration is considering setting up the air defence system to enable its ally to deal with ballistic missile threats from Iran. With Israel vowing to respond to Iran's missile strikes following the killing of Hamas chief Hassan Nasrallah, the tension in the area is expected to escalate. Iran has warned that any such aggression from Israel, including the suspected targeting of Tehran's nuclear power plants, would attract retaliation.

Benjamin Netanyahu has reportedly asked the US to provide Israel with the necessary ammunition to prepare for the worst. However, Washington is yet to make a call on the matter.

THAAD and Patriot

When it comes to US air defence, the go-to phrase is 'Patriot.' For the unversed, Patriot (MIM-104 Patriot) is the US Army's primary air and missile defence system that is deployed across the globe in support of its allies including the Middle East and Ukraine. Patriot are capable of engaging ballistic and cruise missiles and got five variants -- all mobile surface-to-air missile (SAM) in nature.

Although "considered complementary to the Patriot", THAAD can defend more area and intercept targets at ranges of 150-200 kilometers, The Times Of Israel said in a report. The range of the THAAD system is superior to that of the Patriot.

What is THAAD?

The name THAAD comes the way the air defense system operates -- intercepting incoming ballistic missiles during their final phase of flight -- which is called the "terminal phase." It has the ability to intercept targets within (endoatmospheric) and outside (exoatmospheric) the atmosphere. THAAD can fend off short, medium, and intermediate-range ballistic missiles, the CSIS Missile Defense Project website said.

The standout feature of THAAD systems is that they don't carry warheads. Instead, it relies on its kinetic energy of impact to destroy the incoming rockets. THAAD radars are capable of detecting and tracking approaching missiles at ranges of 870 to 3,000 km, CSIS data showed.

The US Army has seven THAAD batteries in its possession. Apart from radar and radio facilities, each system consists of six truck-mounted launchers and 48 interceptors and requires 95 soldiers to operate it.

THAAD incorporates four main components: the interceptor, launch vehicle, radar, and fire control system. Each launcher carries up to eight interceptors and a typical THAAD battery includes 6 launchers, and each launcher takes up to 30 minutes to reload.

<https://www.theweek.in/news/defence/2024/10/13/explained-what-is-thaad-air-defence-system-that-israel-prefers-over-usa-patriot-to-challenge-iran-missiles.html>

Science & Technology News



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Making another stride towards making India global leader in economy and frontline player in ensuring greener, cleaner planet, Minister Dr Jitendra Singh inaugurates India's first Demonstration Facility for Biopolymers in Pune

Making yet another stride towards making India a global leader in economy and a frontline player in ensuring greener and cleaner planet, Union Minister of State (Independent Charge) for Science and Technology, Minister of State (I/C) for Earth Sciences, MoS PMO, Department of Atomic Energy, Department of Space, Personnel, Public Grievances and Pensions, Dr Jitendra Singh today inaugurated India's first Demonstration Facility for Biopolymers in at Jejuri in Pune from New Delhi today. The facility has been built by Praj Industries.

Addressing the audience, Dr Jitendra Singh said, "This 'First-of-its-kind Demonstration Facility for Biopolymers in India' is a pioneering effort in developing indigenously integrated technology for the production of Polylactic Acid (PLA) bioplastic. This marks a pivotal development for India's commitment to sustainable solutions. This demonstrates India's resolve to transition from

fossil-based plastics to eco-friendly alternatives, crucial for addressing the global plastic pollution crisis.”

Speaking about India’s advancement in the field of science and technology, he said, “India has emerged as a highly alluring destination on a global scale, propelled by Prime Minister Shri Narendra Modi's visionary endeavour to establish the country as “Atmanirbhar”. Our Bioeconomy has grown more than \$150 billion in 2023, and is expected to achieve \$300 billion by 2030.”

The emphasis on Green Growth in the Union Budget (2023-2024); Prime Minister Shri Narendra Modi’s vision to make India a ‘Net Zero’ carbon economy and ‘Lifestyle for the Environment (LiFE)’ launched by the PM in October 2022. This will also enable dual goals of ‘Atmanirbhar Bharat’ and ‘Make-in India’ with a foundational focus on biosafety, ethics and inclusive growth. He emphasised that the Union has approved the BioE3 (Biotechnology for Economy, Environment and Employment) Policy of DBT. The BioE3 Policy is an important step forward towards sustainable growth in the backdrop of climate change, depleting non-renewable resources and unsustainable waste generation.

Dr Jitendra Singh further said, “India now ranks 12th in the world in biotech and 3rd in Asia-pacific. We are the largest vaccine manufacturer and the 3rd largest Startup ecosystem,” adding, the Biotech ecosystem in the country is emerging at a rapid pace with the setting up of 95 bio incubators and increasing numbers of Biotech Startups. The Biotech Startups have experienced remarkable growth, increasing from just about 50 in 2014 to over 8,500 in 2023. The rise of Biotech Startups is pivotal for our future economy. These efforts place India at the forefront of the global bioplastics movement, showing the world how biotechnology can contribute to a cleaner, more sustainable future.

Speaking about the partnerships between industry, academia, and government, he said, it is crucial for translating innovative ideas into real-world solutions and fostering innovation through research and development. This facility symbolises a new chapter for India’s bioeconomy. It showcases our ability to lead in technological innovation and offers a sustainable pathway to reducing Environmental impact. He concluded by saying, "It is time for broader synergy among all professions to achieve the “Amrit Kaal” goals over the next 25 years for advancements in the biotechnology sector which underscores India’s potential as a global player in the field.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2064526>

THE ECONOMIC TIMES

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India's space strategy: Harness data and tiny satellites to capture market beyond SpaceX

India has a plan to carve out a beachhead in the battle for commercial space, officials say: crunching space data, building small satellites and launching them cheaply into orbit rather than

challenging heavyweights such as SpaceX head-on. In particular, it is taking aim at providing cost-effective services and hardware to sectors such as communications, agriculture and commodities, where high-quality data is a precious resource. At stake is a launch market worth \$14.54 billion by 2031, and a related data services market pegged at \$45 billion by 2030.

"The world has gone from satellites the size of a Boeing plane to the size of a laptop," said AK Bhatt, director general of the Indian Space Association, an industry body. "This is a sector that India can win, instead of challenging heavy launches where Elon Musk has dominance. The country already has an historical advantage in data mining and interpretation."

Since February, India has opened its space sector to private players and created a 10 billion rupee (\$119 million) venture fund to support space startups. It has also unveiled plans for crewed space exploration and a mission to Venus, but the focus is on developing commercial ventures. In many ways it will be an uphill fight.

Other countries such as Japan and China have advanced space industries, and designs on cheap launches. Spaceflight itself is difficult; the startup landscape globally is littered with failed boosters and satellite designs. For India, "the tech is there and the ability is there... but space is tricky and very competitive, and while private companies have shown that they can create a niche for themselves, we need more proof of concept," said Namrata Goswami, a space policy expert at Arizona State University. She added that the Indian government must be an "anchor customer" for private industry.

Most of the revenue growth is expected to come from so-called downstream data applications, said Pawan Goenka, chairman of IN-SPACe, India's space regulatory body. Those involve crunching data from orbit to help improve crop yields on earth, build more accurate navigation systems, bolster telecommunications, tighten border security and fight climate change, Goenka said. Indian companies such as Bellatrix Aerospace, Pixxel, Agnikul Cosmos, Dhruva Space and others are already building or have launched small satellites or satellite components.

India's space agency, ISRO, last month completed the third and final developmental flight for its Small Satellite Launch Vehicle. The design will then be handed to private companies. "The end uses of Earth observation are vast," Goenka said.

"What we are doing is address various parts of the puzzle." Bengaluru-based SatSure, for example, has been providing real-time satellite data to the Airports Authority of India to enhance air traffic management and safety, helping planes avoid weather hazards.

The project is expected to save 37.5 billion rupees (\$446 million) in fuel costs for airlines annually by 2025 and result in a roughly 70% reduction in airport process planning timelines, the authority said. Earth observation (EO) satellites - orbiting cameras and sensors - can unlock similar savings in other areas, said the company's chief executive, Prateep Basu. "EO is solving problems that span across utilities, navigation, trading, industries, helping save millions of dollars," Basu said.

Government Push

Since the government opened up the market, companies big and small have jumped in, with legacy IT firms like Infosys investing in satellite imaging company GalaxEye Space Solutions, Google-backed Pixxel signing contracts with NASA, and Baring- and Promus-backed SatSure taking on

clients such as HDFC Bank and global seed company Syngenta. Dhruva Space became one of the first to be handed a permit to operate satellite communication centres on earth - to date the dominion of ISRO.

"India is a software powerhouse and produces some of the best minds in the world in data science, machine learning, and artificial intelligence. The space downstream market is, at the end of the day, a software play," said Aravind Ravichandran, founder of France-based advisory firm Terrawatch Space.

The consultancy Euroconsult forecasts that between 2023 and 2032, about 26,104 small satellites - weighing less than 500 kilogrammes (1,100 lb) - will be put in orbit, averaging 1.5 tons of daily launch mass. The firm expects the overall small satellite industry to be worth \$110.5 billion in the next decade.

Indian space companies have already seen an influx of funding - \$126 million in 2023, a 7% increase from the \$118 million raised in 2022 and an increase of 235% from the \$37.6 million raised in 2021, according to Tracxn data. But India has only about 2% of market share in commercial space activities, demand is still largely dependent on global clients, and well-established U.S., Russian and Chinese companies are formidable rivals.

"To truly make a dent, (Indian) solutions have to scale to the rest of south Asia and then to the rest of the world," said Pixxel founder and CEO Awais Ahmed.

<https://economictimes.indiatimes.com/news/science/indias-space-strategy-harness-data-and-tiny-satellites-to-capture-market-beyond-spacex/articleshow/114201649.cms>

THE ECONOMIC TIMES

Sun, 13 Oct 2024

SpaceX's towering 400 ft Starship rocket successfully caught by mechanical arms

SpaceX celebrated a significant achievement in rocket technology on Sunday with the successful launch of its Starship rocket and the innovative catch of the returning booster using mechanical arms. This historic test flight, conducted from Texas, highlighted the company's commitment to advancing reusable rocket technology and pushing the boundaries of space exploration.

A Bold Launch

The Starship rocket, towering almost 400 feet (121 meters), lifted off at sunrise from the southern tip of Texas near the Mexican border. This launch marks SpaceX's boldest test yet, building on previous attempts where four Starships ended in destruction shortly after liftoff or during ocean splashdowns. The most recent flight in June was the most successful to date, completing its flight without exploding.

Engineering Breakthrough

During this flight, SpaceX founder and CEO Elon Musk increased the challenge by successfully landing the first-stage booster back at the launch pad just seven minutes after liftoff. The launch tower featured enormous mechanical arms, dubbed “chopsticks,” designed to catch the 232-foot (71-meter) booster as it descended. Musk exclaimed, “The tower has caught the rocket!!” via X, expressing his excitement over the achievement.

Dan Huot, a member of the SpaceX team, shared his enthusiasm, stating, “Are you kidding me? I am shaking right now.” Kate Tice, another SpaceX employee, added, “This is a day for the engineering history books,” reflecting the monumental significance of the event.

Real-Time Decision Making

The decision to attempt the booster landing relied on real-time assessments made by the flight director, who had to ensure both the booster and launch tower were in good, stable condition. If conditions were unfavorable, the booster would have ended up in the Gulf of Mexico, similar to previous missions. Fortunately, everything was deemed ready for a successful catch, and the mechanical arms executed the operation flawlessly as company employees cheered in joy.

Controlled Splashdown

After the booster was detached, the retro-looking stainless steel spacecraft continued its journey around the globe, targeting a controlled splashdown in the Indian Ocean, where it was expected to sink upon landing. The entire flight was designed to last just over an hour. SpaceX has been recovering the first-stage boosters of its smaller Falcon 9 rockets for nine years, delivering satellites and crews to orbit from Florida and California. Unlike Falcon 9, which typically lands on floating ocean platforms or concrete pads several miles from the launch site, the successful catch of the Starship booster signifies a new capability that could enhance the speed and cost-efficiency of future space missions.

Future Plans

Elon Musk's vision for the Starship program aims to replicate the success of Falcon 9's reusable boosters. Starship is the largest and most powerful rocket ever built, featuring 33 methane-fueled engines on the booster alone. NASA has ordered two Starships to land astronauts on the Moon later this decade, and SpaceX intends to utilize Starship for transporting people and supplies to the Moon and, eventually, Mars.

This recent test flight underscores SpaceX's dedication to revolutionizing space travel and establishing sustainable practices within the aerospace industry, marking a significant step forward in achieving ambitious goals for future exploration.

<https://economictimes.indiatimes.com/news/science/spacexs-towering-400-ft-starship-rocket-successfully-caught-by-mechanical-arms/articleshow/114191273.cms>

