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Press Information Bureau
Government of India

Ministry of Defence

Wed, 27 Mar 2024

Army Commanders to Brainstorm Conceptual Issues, Review and Assess the Overall Security Situation

Army Commanders' Conference, first for the year 2024 will be organised in hybrid mode with the conference in virtual mode scheduled on 28th March 2024 and thereafter physical mode in New Delhi on 01st and 02nd April 2024. Shri Rajnath Singh, Hon'ble Raksha Mantri will also address and interact with senior military leadership during the conference. The conference serves as a pivotal forum for apex leadership of the Indian Army to brainstorm conceptual issues, review and assess the overall security situation. It will lay down key priorities facilitating important policy decisions, to chart the course for future direction. Starting on 28th March 2024, the conference will be chaired by the Chief of the Army Staff (COAS), General Manoj Pande at New Delhi with Army Commanders' participating in virtual mode from their respective Command Headquarters. The deliberation will be on critical agendas impacting the field army and veterans' welfare. The conference will also feature talks by distinguished Subject Matter Experts on the evolving geopolitical landscape and ramifications for national security.

During the conduct in physical mode on 01st April 2024, the Army's top leadership will engage in intensive brainstorming sessions. The sessions will be aimed at enhancing operational effectiveness, importance of fostering a culture of innovation and adaptability and investing in training and development programmes to ensure readiness for future challenges. The brainstorming session will also encompass issues concerning welfare of service personnel aimed at enhancing the quality of life for soldiers and their families. This will be followed by a meeting of the Investment Advisory Committee of the Army Group Insurance, chaired by the COAS, and attended by several experts in the field of financial management. The committee will deliberate on various welfare measures and schemes for financial security of serving soldiers, veterans and their families.

On 02nd April 2024, Shri Rajnath Singh, Hon'ble Raksha Mantri will deliver a keynote address. The senior hierarchy of the Army will also be addressed by the Chief of Defence Staff, General Anil Chauhan, the Chief of the Naval Staff, Admiral R Hari Kumar and the Chief of the Air Staff, Air Chief Marshal VR Chaudhari. The event will also be attended by the Defence Secretary and other senior officials from the Ministry of Defence. The Army Commanders' Conference, with its wide scope, ensures the Indian Army remains progressive, forward-looking, adaptive and future-ready.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2016439>

"Our Import Dependencies Need to be Near Zero": Army Chief General Manoj Pande Lays Thrust on Self-reliance in Military Production

Army Chief General Manoj Pande on Wednesday emphasised self-reliance in military production, stating that it is important that the country is able to source sustenance equipment like ammunition indigenously and develops its own capabilities and adequate thrust is being laid in this direction.

Speaking at the Times Now Summit, General Pande said the country's import dependency "should be near zero".

"It will be a strategic imperative in the future to be self-reliant. It is important that we are able to source sustenance equipment like ammunition indigenously. Even technology, if we import we will always remain one cycle behind. It is important to develop our own capabilities and adequate emphasis is being done. Our import dependencies need to be near zero," he said.

"Exercise Bharat Shakti in Pokhran was to demonstrate the ongoing efforts towards capability development through Atmanirbharta. We were able to demonstrate the robustness of our indigenous systems," he added.

General Pande also highlighted the ongoing advancements in use of technology in wars.

"Conventional combat will no longer determine victory in future - niche critical tech, unmanned weapons are out of the conventional domain. It is important how efficient we are in leveraging from the technology within our country and those available commercially."

The Army Chief said the lesson learnt from the various conflicts around the world showed that countries would not hesitate to go to war over national interests.

Responding to a question on how prepared the Army is to meet challenges on the Northern border given the Chinese presence along the border, Gen Pande said the Army was focused and had a robust system in place.

"We are very prepared, robust and balanced in terms of components that military has. We have made sure that we have adequate reserves. We have our response mechanism firmly in place. As far as talks go, there have been 21 rounds of talks at the Military Corp Commander level and 14 rounds of WMCC diplomatic talks. It is my belief that only through talks can the matter at hand be resolved," he said.

"While we are focusing on talks we are also focusing on developmental work.

Preparedness levels are very high, (there is) close watch on developments across borders," he added.

<https://economictimes.indiatimes.com/news/defence/our-import-dependencies-need-to-be-near-zero-army-chief-general-manoj-pande-lays-thrust-on-self-reliance-in-military-production/articleshow/108822736.cms>

Business Standard

Wed, 27 Mar 2024

700 Personnel Join 'Tiger Triumph'; India, US Navy Ships Sail out together

A battalion group of the Indian Army, comprising more than 700 personnel, is taking part in the ongoing bilateral tri-service exercise -- 'Tiger Triumph-24' -- between India and the US, being held on the Eastern Seaboard, sources said on Wednesday.

The exercise from March 18-31 aims at developing interoperability for conducting Humanitarian Assistance and Disaster Relief (HADR) operations and refining SOPs to enable rapid and smooth coordination between the forces of the two countries.

The Indian Army's contingent, comprising one battalion group is taking part in the second edition of the tri-service exercise, along with the Indian Navy and the Indian Air Force, sources in the defence establishment said.

The 14-day exercise is being conducted in two phases with a harbour phase at Visakhapatnam followed by a sea phase at Kakinada.

The primary focus of the exercise is to enhance interoperability, strengthen bilateral relations, and refine capabilities in HADR and sub-conventional operations.

"The exercise has witnessed the amphibious capabilities of the Indian Army in conventional and sub-conventional scenarios. The Indian Army is represented by an integrated battalion group in the exercise, with strength of over 700 army personnel, showcasing newly procured or inducted weapons and state-of-the-art technological infusions," a defence source said.

The Indian Army contingent is represented by components from infantry, mechanised infantry, Para (Special Forces), artillery, engineers and other supporting arms apart from assorted systems of multiple drones, anti-drone equipment, and ICVs (infantry combat vehicles), the sources said.

Sea Phase of #ExTigerTriumph2024 commenced with ships of the #IndianNavy & @USNavy sailing out together. The Sea Phase will witness Service personnel from both countries going through various facets of #amphibious ops incl coordinated #HADR & #MEDEVAC. @IN_HQENC... <https://t.co/2VnefHvmzW> pic.twitter.com/M5VZWpVFp9

— SpokespersonNavy (@indiannavy) March 27, 2024

The harbour phase included communication checks to ensure seamless coordination between the participating forces.

"Personnel from both countries exchanged visits to each other's ships, fostering mutual understanding and collaboration. These interactions not only strengthened interpersonal bonds but also facilitated the exchange of best practices and operational techniques," the source added.

The sea phase which commenced on Tuesday, involves a "strategic move to a simulated island country", setting the stage for a series of complex operations.

The first major operation will be a ship-to-shore move, demonstrating the precision and coordination required for amphibious operations, they said.

A Navy official on Wednesday said the sea phase of the exercise commenced with ships of the Indian Navy and the US Navy sailing out together.

This phase will witness service personnel from both countries going through various facets of amphibious operations including coordinated HADR and medical evacuation, he said.

The sea phase includes troops to swiftly disembark and establish a secure perimeter, showcasing their professionalism and readiness for challenging environments, the sources in the defence establishment said.

Establishing an internally displaced persons (IDP) camp will be a key focus of the exercise, reflecting the commitment of both forces to humanitarian assistance. The camp setup involves logistical challenges and coordination efforts, highlighting the importance of efficient planning and execution in disaster relief operations, they said.

"Sub-conventional operations and joint drills will be conducted to enhance the operational capabilities of both the forces in combating asymmetric threats. These exercises will include convoy operations, IED drills, cordon and search operations, and counter-ambush drills, demonstrating the readiness of the forces to tackle diverse challenges," the source added.

The exercise also includes subject matter expert exchanges, cross-board visits of Indian and US troops, and friendly sports matches to foster camaraderie among the troops.

https://www.business-standard.com/external-affairs-defence-security/news/700-personnel-join-tiger-triumph-india-us-navy-ships-sail-out-together-124032701166_1.html



Wed, 27 Mar 2024

Indian Army Showcases Amphibious Expertise in Exercise Tiger Triumph

A battalion group of over 700 personnel from the Indian Army is actively participating in Exercise Tiger Triumph 2024, a joint amphibious exercise involving the Indian Navy and Indian Air Force. This is the third time Indian and US forces have come together for Tiger TRIUMPH, which stands for Tri-Services India- US Amphibious Exercise.

This 14-day exercise, launched on March 18, 2024, unfolds in two phases: the Harbour Phase held in Visakhapatnam and the Sea Phase in Kakinada.

According to sources in the defence and security establishment, "The primary aim of the exercise is to bolster interoperability, fortify bilateral ties, and refine capabilities in Humanitarian Aid and Disaster Relief (HADR) as well as sub-conventional operations."

During the exercise, the Indian Army has skillfully demonstrated its amphibious capabilities in various scenarios, showcasing its strength through an integrated battalion group comprising infantry, mechanized infantry, Para SF, artillery, engineers, and other support arms. "The contingent has also unveiled newly acquired weapons and cutting-edge technological advancements," sources quoted above said.

The Harbour Phase kick-started with communication checks to ensure smooth coordination among the participating forces. Personnel from both nations engaged in ship visits, fostering mutual understanding and sharing operational techniques. "As the exercise transitions to the Sea Phase, strategic maneuvers towards a simulated island country lay the groundwork for intricate operations, notably the ship-to-shore move."

According to the sources, a significant aspect of the exercise is the establishment of an Internally Displaced Persons (IDP) camp, underscoring the commitment of both forces to humanitarian assistance. This endeavor entails logistical challenges, emphasizing the importance of efficient planning in disaster relief operations.

Furthermore, joint drills focusing on sub-conventional operations are conducted to bolster operational capabilities in countering asymmetric threats. Convoy operations, IED drills, cordon and search operations, and counter-ambush drills underscore the forces' readiness to tackle diverse challenges.

Exercise Tiger Triumph also facilitates Subject Matter Expert exchanges, cross-board visits, and friendly sports matches to foster camaraderie among troops. "Through this joint training with the US Defence Forces, both countries showcase interoperability, joint operational capabilities, and intelligence sharing, enhancing their preparedness for future challenges," they added.

<https://www.financialexpress.com/business/defence-indian-army-showcases-amphibious-expertise-in-exercise-tiger-triumph-3438086/>

THE ECONOMIC TIMES

Wed, 27 Mar 2024

Indian Air Force Prepares for Gaganshakti-2024 Wargame to Test Preparedness against Pakistan and China

The Indian Air Force (IAF) is set to conduct Gaganshakti-2024, a 10-day wargame starting from April 1st, aimed at testing its preparedness to counter potential threats from Pakistan and China simultaneously. This exercise, expected to surpass the scale of the 2018 all-air force drill, will evaluate integrated war-fighting strategies and tactics in collaboration with the Indian Army and the Indian Navy.

Enhanced Combat Capabilities

Following the aftermath of Operation Balakot and subsequent skirmishes with the Pakistan Air Force (PAF), the IAF has strengthened its arsenal with advanced weaponry. This includes the induction of French Rafale fighter jets, indigenous Light Combat Helicopters (LCH) like Prachand, and C-295 transport aircraft. The integration of BrahMos supersonic cruise missiles with Sukhoi fighter jets, along with the addition of Meteor beyond-visual-range air-to-air missiles (BVRAAM) to the Rafale fleet, has significantly enhanced the IAF's combat capabilities.

Air Defence Capabilities

Furthermore, the acquisition of Russian S-400 surface-to-air missiles and the indigenous Astra Beyond Visual Range (BVR) Air-to-air missile has augmented the IAF's air defence capabilities. The deployment of the LCA 'Tejas' aircraft, particularly along the western and northern frontiers, underscores India's commitment to leveraging indigenous technology for defence preparedness.

Strained Relations with China

Against the backdrop of strained relations with China, intensified by clashes in the Galwan Valley, the IAF's swift response underscores the importance of readiness and preparedness in safeguarding national interests. Deployments such as the Light Combat Helicopter (LCH) in Eastern Ladakh and Rafale jets conducting long-duration flights in the Indian Ocean Region demonstrate the IAF's proactive stance in countering regional threats.

Global Cooperation

Gaganshakti-2024 follows in the footsteps of Vayu Shakti, a mega firepower demonstration conducted by the IAF in the Thar desert, and precedes Tarang Shakti, the IAF's first multinational exercise slated for August. With participation from allies such as the US, Germany, France, Australia, and neighbouring countries, Tarang Shakti underscores India's commitment to strengthening defence cooperation and interoperability.

Gaganshakti-2024 serves as a testament to India's evolving defence capabilities and its resolve to meet emerging security challenges head-on. The upcoming wargame is expected to highlight network-centric operations, incorporating unmanned aerial vehicles (UAVs) and swarm drones, in line with evolving combat doctrines.

<https://economictimes.indiatimes.com/news/defence/indian-air-force-prepares-for-gaganshakti-2024-wargame-to-test-preparedness-against-pakistan-and-china/articleshow/108821633.cms>

THE ECONOMIC TIMES

Wed, 27 Mar 2024

Militarisation, Weaponisation of Space Inevitable Reality: IAF Chief

IAF Chief Air Chief Marshal V R Chaudhari on Wednesday said as nations increasingly rely on space-based assets for building strategic advantage, "militarisation and weaponisation" of space have become the "inevitable reality". He said this in his address at a seminar on "Aerospace Power in Future Conflicts" at Subroto Park here.

"Through the annals of human history, the skies have often been regarded as realms of wonder and exploration, where dreams take flight and boundaries dissolve into the vast blue expanse," he said.

Yet, beneath this calmness lies a domain "fraught with competition where contest for aerial superiority" has shaped the destiny of many nations and decided the outcome of many wars, the chief of the Indian Air Force (IAF) said.

"As we navigate these uncharted skies, air power being a key component of national power, would undoubtedly play a pivotal role and also serve as a symbol of national strength, a tool for peace and cooperation," he said.

Air Chief Marshal Chaudhari said over the last few decades, understanding of the military operational environment has "significantly transformed" from primarily a force, time and space-driven battlefield to an arrangement of systems capable of simultaneous and independent operations across multiple domains.

"We all need to acknowledge that the wars of the future will be fought differently," he said.

Future conflicts will be characterised by a blend of simultaneous application of kinetic and non-kinetic forces, high-levels of battle space transparency, multi-domain operations, a high-degree of precision, enhanced lethality, a compressed sensor-to-shooter cycle, and of course, all under intense media scrutiny, he also said.

In his address on Wednesday, Air Chief Marshal Chaudhari added that space has also emerged as a "critical domain for conduct of military operations", wherein seamless communication, navigation and surveillance capabilities would enhance survivability of modern military forces.

"As nations increasingly rely on space-based assets for building strategic advantage, militarisation and weaponisation of space has become an inevitable reality," he said.

Air and space control along with denial capabilities "will prove to be decisive" for furtherance of all operations. For that to happen, "we would need to gain and maintain not only information superiority but also decision superiority", he said.

"Emerging technologies like CMOS (complementary metal oxide semiconductor) sensors, smart decision support matrices, manned-unmanned teaming and robust and redundant C2 networks are critical capabilities that need to be developed," the IAF chief added.

<https://economictimes.indiatimes.com/news/defence/militarisation-weaponisation-of-space-inevitable-reality-iaf-chief/articleshow/108826869.cms>

THE TIMES OF INDIA

Thu, 28 Mar 2024

Balakot-like Ops Show Aero-power can be Used beyond Enemy Lines: IAF Chief

Balakot-like operations have shown that given the political will, aerospace power can be effectively used beyond enemy lines, IAF chief Air chief Marshal V R Chaudhari said on Wednesday, while also stressing the importance of space as a critical domain for conduct of military operations.

IAF had conducted the pre-dawn air strikes with Mirage-2000 fighters on Jaish-e-Muhammed facility at Balakot in Pakistan on Feb 26, 2019, in response to the Pulwama terror attack in which 40 CRPF troopers were killed earlier that month. While IAF had thwarted Pakistan's retaliation a day later, it had lost the MiG-21 being flown by the then Wing Commander Abhinandan Varthaman.

"Attributes of high speed, reduced response time, long reach, increased mobility, technological intensity, precision fire power, shock effect, ability to operate across domains, and network centric operations have made aerospace power a formidable component of our nation's military might," ACM Chaudhari said, addressing a seminar on "Aerospace Power in Future Conflicts" here. "Balakot like operations have shown that, given the political will, aerospace power can be effectively carried out beyond enemy lines, in a no-war, no-peace scenario, under a nuclear overhang without escalating into a full-blown conflict," he added.

The IAF chief also said that as nations increasingly rely on space-based assets for building strategic advantage, "militarisation and weaponisation of space has become an inevitable reality".

Space has emerged as a critical domain for conduct of military operations, where seamless communication, navigation and surveillance capabilities would enhance survivability of modern military forces.

"Air and space control along with denial capabilities will prove to be decisive for furtherance of all operations. For that to happen, we would need to gain and maintain not only information superiority but also decision superiority," ACM Chaudhari said.

Both the IAF chief as well as chief of defence staff General Anil Chauhan in recent months have been stressing the need for India to develop both defensive and offensive capabilities in the space domain. India currently has just a small tri-service Defence Space Agency, which was created in 2019, instead of the full-fledged Aerospace Command the armed forces had earlier demanded.

India in March 2019 had also conducted 'Mission Shakti', under which DRDO had then tested an anti-satellite (A-Sat) interceptor missile to destroy the 740-kg Microsat-R satellite at an altitude of 283-km in low earth orbit.

<https://timesofindia.indiatimes.com/india/balakot-like-ops-show-aero-power-can-be-used-beyond-enemy-lines-iaf-chief/articleshow/108830927.cms>

THE ECONOMIC TIMES

Wed, 27 Mar 2024

IIT Madras Partners with Starburst Accelerator SARL to Establish €100 Million Aerospace and Defence Start-up Hub

In a boost to India's aviation, space and defence ecosystem (ASD) and provide startups with business tools to grow and scale business in aerospace and defence to become future suppliers, French aerospace and defence firm Starburst Accelerator SARL is partnering with IIT-Madras to set up an innovative hub for start-ups with a funding support of €100 million (100 Million Euros). IIT-Madras will enable Starburst to set up accelerator programmes to ASD ecosystem in India.

Starburst Accelerator SARL is looking to create venture capital funds for ASD technology, a powerful engine to drive the transformation of India's economy and its integration with global stakeholders. This partnership will enable export promotion and provide support for Indian ASD startups to explore international markets through the extensive network of Starburst.

An MoU towards this collaboration was signed at IIT-Madras campus on Monday by François Chopard, founder and CEO, Starburst Aerospace, Cedric Vallet, innovation and venture director, Starburst Aerospace, and Prof V Kamakoti, director, IIT-Madras, Prof Manu Santhanam, Dean (ICSR), IIT-Madras.

An MoU was signed on Monday by François Chopard, founder and CEO, Starburst Aerospace, Cedric Vallet, Innovation and Venture Director, Starburst Aerospace and V Kamakoti, director, IIT Madras and Manu Santhanam, dean (ICSR), IIT Madras, the statement added.

"We together aim at creating a robust ASD ecosystem that supports innovation in deeptech and the production in India, to meet the future challenges of aerospace, new space and defence worldwide players," said Chopard.

V Kamakoti, director, IIT Madras, said, "Encouraging young entrepreneurs is extremely important as we embark on our journey to become a multi-trillion economy. To this effect, reputed higher educational institutions must aspire to nurture future employers than employees. In this context, such collaborations with accelerators to nurture startups in critical and emerging sectors are crucial and timely." With offices in Los Angeles, Paris, Munich, Singapore, Seoul, Tel Aviv, and Madrid, Starburst has built an ecosystem of key players with 17,000+ startups in its network.

A key focus of this partnership will be on entrepreneurs, research parks, investors (public and private), Government, and corporate firms. The aim is to create innovative startups and help them grow rapidly to work in tandem with future aerospace and new space worldwide programmes.

Starburst will create a consulting team that can be composed of IIT-Madras alumni and experienced military officers besides ASD managers and senior consultants from Starburst offices to help startups scale up in their growth journey. This programme will provide access to entrepreneurs and innovators, drive new technologies, business ideas, and models, and boost the Indian aerospace and

defence innovation ecosystem. It will also allow startups and entrepreneurs to explore synergies and avenues of collaboration with Industry, Government, and beyond besides guiding them towards rapid implementation and global commercialization.

Structured programmes will be created by combining academic knowledge with practical startup guidance, including workshops, seminars, and mentoring sessions for Indian Start-up clusters and research and innovative projects. Starburst will provide startups with business tools to grow and scale businesses in aerospace and defence to become future suppliers. These measures will also help start-ups attract external capital, de-risk investments and accelerate development.

<https://economictimes.indiatimes.com/news/defence/iit-madras-partners-with-starburst-accelerator-sarl-to-establish-100-million-aerospace-and-defence-start-up-hub/articleshow/108822426.cms>

Business Standard

Thu, 28 Mar 2024

India, China Discuss Full Disengagement, Resolving Issues along LAC

The 29th meeting of the Working Mechanism for Consultation and Coordination on India-China Border Affairs has been held and the two sides had an in-depth exchange of views on how to achieve "complete disengagement" and resolve the remaining issues along the LAC, the MEA said on Thursday.

The key meeting was held in Beijing on March 27, it said in a statement.

"The two sides had an in-depth exchange of views on how to achieve complete disengagement and resolve the remaining issues along the Line of Actual Control (LAC) in the Western Sector of India-China border areas," the Ministry of External Affairs (MEA) said.

Joint Secretary (East Asia) from the MEA led the Indian delegation. The Chinese delegation was led by Director General of the Boundary and Oceanic Department of the Chinese Ministry of Foreign Affairs, the statement said. "In the interim, both sides agreed to maintain regular contact through diplomatic and military channels and on the need to uphold peace and tranquility on the ground in the border areas in accordance with existing bilateral agreements and protocols," it said.

The 28th meeting of the Working Mechanism for Consultation and Coordination on India-China Border Affairs was held on November 30 last year.

https://www.business-standard.com/external-affairs-defence-security/news/india-china-discuss-full-disengagement-resolving-issues-along-lac-124032800104_1.html

Business Standard

Thu, 28 Mar 2024

Defence Major Israel Aerospace Industries Opens Indian Subsidiary in Delhi

Aerospace and defence company, Israel Aerospace Industries (IAI), has opened its Indian subsidiary in New Delhi, according to an official statement.

IAI made the announcement at an event held here.

The opening of AeroSpace Services India (ASI) is in sync with the Indian government's vision of 'Atmanirbhar Bharat' and 'Make in India', it said.

"This also shows the commitment to a strong partnership between IAI and DRDO in developing and supporting advanced systems for the Indian armed forces," the statement said.

AeroSpace Services India is the "sole authorised OEM's Technical Representative for the entire Medium Range Surface-to-Air Missile (MRSAM) system," it said.

"IAI proudly presents I as our first major milestone towards India's Atmanirbhar Bharat vision on self-reliance. India and Israel's partnership has witnessed state-of-the-art achievement. This growth and development will create history when our two nations will foster IAI's technology and India's talent and expertise in the defence sector," the statement quoted IAI's President and CEO Boaz Levy as saying.

IAI boasts a workforce of approximately 50 employees, with 97 per cent being Indian nationals. Headquartered in Delhi, IAI's strategically located branches extend its services across the entirety of the Indian subcontinent, reaffirming its commitment to nationwide coverage and customer satisfaction, it said.

https://www.business-standard.com/companies/news/defence-major-israel-aerospace-industries-opens-indian-subsidiary-in-delhi-124032701253_1.html

नवभारत टाइम्स

Wed, 27 Mar 2024

यूक्रेन युद्ध के कारण 'खाली' हुआ अमेरिका का तोपखाना, एर्दोगन देंगे हथियार, सबसे बड़ा सप्लायर बना तुर्की

रूस-यूक्रेन के युद्ध में सबसे ज्यादा फायदा उन देशों को हुआ है, जो हथियार बनाते हैं। युद्ध का फायदा तुर्की को सीधे तौर पर होता दिख रहा है। तुर्की अब अमेरिका को भी हथियारों की सप्लाय कर रहा है। अमेरिका तोपखानों के गोले के उत्पादन को बढ़ावा देने के लिए तुर्की से विस्फोटकों की खरीद बढ़ाने को लेकर बातचीत कर रहा है। अमेरिका यूक्रेन के लिए तोप के गोले चाहता है। पश्चिमी देशों की ओर से यूक्रेन को हथियारों की सप्लाय की जा रही है। तुर्की अमेरिका के लिए तोपखाने के गोले का सबसे पड़ा सप्लायर बनने की ओर बढ़ रहा है।

ब्लूमबर्ग की रिपोर्ट के मुताबिक अधिकारियों ने कहा कि ट्रिनिट्रोटोलुइन जिसे टीएनटी के नाम से जाना जाता है और नाइट्रोगुआनिडाइन जो एक प्रोपेलेंट के रूप में इस्तेमाल होता है, उसकी सप्लाय तुर्की करेगा। नाटो के मानक वाले 155 मिमी कैलिबर के गोला-बारूद उत्पादन में यह महत्वपूर्ण होगा। उत्पादन को संभावित रूप से तीन गुना बढ़ाने के लिए यह जरूरी है। तुर्की इस साल की शुरुआत में ही अमेरिका को तोप के गोले बेचने वाला सबसे बड़ा विक्रेता बनने की राह पर है।

अमेरिका जाएंगे एर्दोगन

यूक्रेन में युद्ध दो साल से चल रहा है। इस कारण वैश्विक गोला-बारूद की मांग बढ़ी है। पश्चिमी सहयोगी यूक्रेन को आपूर्ति देने में लगे हैं, चाहे उनका खुद का स्टॉक खत्म होता जा रहा हो। अधिकारियों का कहना है कि मांग में बढ़ोतरी के कारण दुनिया भर के ऑर्डर में बैकलॉग हो गया है। डिफेंस सप्लाय चैन इस समय टीएनटी जैसी चीजों को लेकर दबाव में है। तुर्की के साथ समझौता नाटो सहयोगियों के बीच एक नाजुक संतुलन को भी दिखाता है। तुर्की

के राष्ट्रपति एर्दोगन 9 मई को वाइट हाउस जाएंगे। राष्ट्रपति बाइडेन के ऑफिस संभालने के बाद यह उनकी पहली यात्रा होगी।

अमेरिका तुर्की के बीच बड़ी डील

एर्दोगन की यात्रा अमेरिका और तुर्की के बीच बढ़ते सैन्य संबंधों को भी दिखाईगी। इस साल स्वीडन को नाटो में शामिल होने की तुर्की ने मंजूरी दी है। इस मंजूरी के बाद अमेरिका तुर्की को एफ-16 फाइटर जेट, मिसाइलों और बमों की बिक्री करने को तैयार हुआ। यह डील 23 बिलियन डॉलर की होगी। फरवरी के अंत में पेंटागन ने कहा था कि उसने टेक्सस में तीन 155 मिमी गोले के हिस्सों को बनाने के लिए जनरल डायनेमिक्स ऑर्डनेंस सिस्टम को कॉन्ट्रैक्ट दिया है। इसमें तुर्की की एक कंपनी भी शामिल है। जून में यह प्लांट प्रोडक्शन करने लगेगा। तुर्की की रक्षा फर्म रेप्टोन को उम्मीद है कि 2025 तक वह अमेरिका के सभी 155 मिमी गोले का लगभग 30 फीसदी का उत्पादन करेगा। अमेरिका ने इस साल डिलीवरी के लिए तुर्की के अरका डिफेंस से युद्ध के लिए 116,000 राउंड गोले खरीदे हैं।

<https://navbharattimes.indiatimes.com/world/america/turkey-artillery-shell-supply-to-us-defence-deal-arms-supplier-news-hindi/articleshow/108828435.cms>

Science & Technology News

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‘Milestone’: ISRO Rocket’s 4th Stage Returns to Earth, Accomplishes Zero Space Debris Mission

In “another milestone” for Isro, the fourth stage of the PSLV-C58 rocket, which doubled up as an experimental platform in space after the launch of primary satellite X-ray Polarimeter Satellite (XPoSat) on January 1 this year, has finally returned to Earth after performing its duties, leaving no junk in space. The PSLV-C58 mission left “practically zero debris in orbit,” Isro said.

After launching primary satellite XPoSat, the fourth rocket stage (PS4), also called PSLV Orbital Experimental Module-3 (POEM-3), allowed nine different payloads to carry out technology demonstrations and scientific experiments in zero gravity in space. By late Jan 2024, POEM-3 achieved all its mission goals, and the only objective that remained to be fulfilled was an atmospheric re-entry. On March 21, POEM-3 made a fiery re-entry to the Earth's atmosphere and is believed to have splashed down into the North Pacific Ocean at 7.34 pm IST, the agency said.

PSLV-C58 is the third such mission in the series where the fourth stage of the rocket was used as an experimental platform (POEM), scripting success each time.

Through the POEM, which serves as a very cost-effective platform for carrying out short-duration space-borne experiments, Isro has opened up new vistas for academia, startups and NGEs to carry out space experiments with their new payloads. This opportunity has been effectively used by numerous startups, universities and NGEs for carrying out experiments in space, which included electric thrusters, satellite dispensers, and star-tracking. Out of the nine payloads, six were delivered by non-governmental entities (NGEs) through space regulator IN-SPACe. The mission objectives of these payloads were met in a month.

The stage was de-orbited from 650 km to 350 km, which facilitated its early re-entry and was passivated to remove residual propellants to minimise any accidental break-up risks.

The orbital altitude of the upper stage continued to decay under the influence of natural forces, primarily atmospheric drag with the module (NORAD ID 58695) expected to have impacted the North Pacific Ocean (Lat 6.4 N & Long 158.7 W) on March 21, 2024, at 14:04 UTC (19:34 Hrs. IST), Isro said. Till near re-entry, POEM-3 was tracked by Isro's ISTRAC ground stations. The Multi-Object Tracking Radar at Sriharikota also tracked the fourth stage (PS4 stage) return to the Earth.

Isro said it will continue its commitment to providing a cost-effective orbital experiment platform.

<https://timesofindia.indiatimes.com/india/milestone-isro-rockets-4th-stage-returns-to-earth-accomplishes-zero-space-debris-mission/articleshow/108829757.cms>

