खंड/Vol. : 50 अंक/Issue :15 21/01/2025

जनवरी Jan 2025

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

A Daily service to keep DRDO Fraternity abreast with DRDO Technologies, Defence Technologies, Defence Policies, International Relations and Science & Technology



Defence Science Library रक्षा वैज्ञानिक सूचना एवं प्रलेखन केंद्र Defence Scientific Information & Documentation Centre मेटकॉफ हाउस, दिल्ली - 110 054 Metcalfe House, Delhi - 110 054

CONTENTS

S. No.	Title	Source	Page No.
	Defence News		1-9
	Defence Strategic: National/International		
1	Tactical ballistic missile Pralay & long-range Pinaka rocket system to be part of Republic Day parade	The Economic Times	1
2	Indian Armed Forces conclude exercise 'Devil Strike' successfully	Business Standard	2
3	India, France to jointly track Indian Ocean Region threats	The Times of India	2
4	NCC cadets should contribute to PM Modi's 'Viksit Bharat' dream, says Defence Minister Rajnath Singh	The Economic Times	3
5	Army, IAF conduct drill to enhance joint capability in airborne ops	The Tribune	5
6	Dhruv fleet's grounding a setback for armed forces: Defence Secretary	India Today	5
7	Why India's defence sector needs a policy push	Deccan Herald	6
8	Dreaming big: China's J-15 fighter maker wants to develop warplanes as fast as smartphones	The Week	8
	Science & Technology News		9-11
9	ISRO likely to attempt undocking of satellites today; will conduct docking experiment again	The Indian Express	9
10	India Mobility Global Expo 2025: इसरो और इन–स्पेस ने दिखाई एडवांस स्पैस टेक्नोलॉजी की पावर, 43 हाईटेक इनोवेशन किए शोकेस	Times Now Hindi	10

Defence News

Defence Strategic: National/International

Tactical ballistic missile Pralay & long-range Pinaka rocket system to be part of Republic Day parade

Source: The Economic Times, Dt. 21 Jan 2025,

URL: <u>https://economictimes.indiatimes.com/news/defence/tactical-ballistic-missile-pralay-long-range-pinaka-rocket-system-to-be-part-of-republic-day-parade/articleshow/117406624.cms</u>

Glimpse of the Pinaka Multi-Barrel Rocket Launcher (MBRL) during the Republic Day Parade 2025 rehearsal, at Kartavya Path, in New Delhi on Saturday. Tactical ballistic missile Pralay and long-range Pinaka rocket system will be showcased at the upcoming Republic Day parade in the Capital, with focus on indigenously developed systems.

This will be the first time that Pralay surface-to-surface missile will feature at the parade. With a range of 500 km, the missile is meant for a conventional strike against high-value enemy targets and has been deployed on the border with China.

The Pinaka multi-barrel rocket launcher is an indigenous success story, with several systems in operation with the Army and an export order already executed with Armenia. Efforts are on to increase the range of the rockets to 75 km and then to more than 150 km.

The parade will also feature a marching contingent of Indonesian troops to honour the chief guest for this year's event, Indonesian president Prabowo Subianto. This will consist of a 160-member Indonesian military contingent and a 190-member band contingent, defence secretary RK Singh said on Monday.

The parade will have 18 marching contingents, 15 bands and 31 tableaux from different states, ministries and security forces. States including Bihar, Goa, Jharkhand, Karnataka, Madhya Pradesh and Punjab will have tableaux. A total of around 77,000 people will witness the parade this year, which will include 10,000 special invitees chosen by the government.

The flypast this year will consist of several fighter jets, transport aircraft and attack helicopters. Notable by their absence this year will be the indigenous advanced light helicopters that are currently grounded after a fatal crash involving a coast guard aircraft. The cause of the crash is being investigated, with the suspected faulty transmission system being sent to Bengaluru for detailed analysis. Fighter jets, including Su30MKI and Rafales, will be part of the flypast while the light combat aircraft will be missing from action this year.

*

Indian Armed Forces conclude exercise 'Devil Strike' successfully

Source: Business Standard, Dt. 20 Jan 2025,

URL: <u>https://www.business-standard.com/external-affairs-defence-security/news/</u> indian-armed-forces-conclude-exercise-devil-strike-successfully-125012000355_1.html

The Indian Armed Forces have successfully concluded Exercise Devil Strike, a high-intensity joint exercise held from 16 to 19 January.

This collaborative endeavour between the Indian Army's elite airborne troops and the Indian Air Force showcased seamless integration, operational excellence, and readiness to operate in the most challenging environments, according to an official press release.

Conducted across Training Areas and Firing Ranges, the exercise focused on validating complex airborne operations, including precision insertion of troops and equipment into hostile terrains. It also tested and refined logistic sustenance strategies, ensuring troops remained operationally effective under extreme conditions.

Key highlights of the exercise included the deployment of advanced technologies and state-of-theart equipment for precise and efficient delivery of forces to remote locations; execution of synchronized airborne drills that demonstrated unparalleled coordination between the Army and Air Force; and successful completion of mission scenarios simulating real-world operational challenges.

Lieutenant General Zubin A Minwala, AVSM, YSM, GOC 33 Corps who observed the exercise commended the participating units' professionalism and adaptability.

Speaking about the exercise, he remarked, "Exercise Devil Strike has once again demonstrated our Armed Forces' ability to adapt, innovate, and operate as a cohesive unit in diverse operational scenarios. It reflects our commitment to maintaining readiness for future challenges."

The exercise has significantly enhanced joint operational capabilities, reaffirming the Indian Armed Forces' preparedness to safeguard national interests and respond effectively to any emerging threat. Exercise Devil Strike is yet another milestone in the ongoing efforts to maintain operational excellence and ensure the nation's security, according to the press release.

India, France to jointly track Indian Ocean Region threats

Source: The Times of India, Dt. 21 Jan 2025, URL: <u>https://timesofindia.indiatimes.com/india/india-france-to-jointly-track-indian-</u>

ocean-region-threats/articleshow/117408071.cms

India and France reiterated, after another round of maritime cooperation dialogue, their strong commitment to upholding international law, supporting multilateralism, including through regional

organisations, respect for sovereignty and territorial integrity, and protecting freedom of navigation.

Recalling in a joint statement their vision for a free and open Indian Ocean Region, first expressed in the 'Joint Strategic Vision of India-France Cooperation in the Indian Ocean Region' in 2018, India and France agreed to support free and secure access to sea lanes of communications through collaboration between their maritime assets and organisations.

France welcomed the participation of the Indian Navy in the Combined Maritime Forces and looks forward to India's leadership of the appropriate Combined Task Forces, said the Indian govt.

"India and France agreed to develop a joint assessment of the threats to maritime security in the region; to counter illicit maritime activities, including piracy and robbery, maritime terrorism, contraband smuggling, illegal unreported and unregulated fishing; hybrid as well as cyber security threats and marine pollution," said the Indian readout.

As part of their joint commitment towards the conservation of biodiversity and the protection of oceans, India and France also agreed to preserve marine resources in the Indian Ocean Region, through the United Nations Ocean Conference.

NCC cadets should contribute to PM Modi's 'Viksit Bharat' dream, says Defence Minister Rajnath Singh

*

Source: The Economic Times, Dt. 20 Jan 2025, URL: <u>https://economictimes.indiatimes.com/news/defence/ncc-cadets-should-</u> <u>contribute-to-pm-modis-viksit-bharat-dream-says-defence-minister-rajnath-singh/</u> <u>articleshow/117392493.cms?from=mdr</u>

Noting that Prime Minister Narendra Modi is an ex-cadet of the NCC, Defence Minister Rajnath Singh on Monday exhorted cadets to contribute to PM Modi's dream of making India a 'Viksit Bharat' by 2047. Addressing a gathering of cadets and officers during his visit to the ongoing Republic Day National Cadet Corps (NCC) camp at Delhi cantonment, Singh also said that he sees an image of India in NCC cadets.

A total of 2,361 NCC cadets from across the country are taking part in the month-long camp, which began on December 30, and will culminate with the PM rally on January 27. The annual event is also witnessing the participation of 917 girl cadets, the largest contingent so far.

Appreciating the unity and discipline shown by cadets at the NCC camp, the defence minister said, "India has many bodies but one soul, many branches but one root, many rays but one light". In his address, Singh also recalled that before foraying into politics, he himself was "a student, a cadet of NCC, and a physics teacher".

The energy and enthusiasm of the cadets reflect that India has and will have a bright future. NCC ingrains in youth leadership quality and discipline, he added.Singh also spoke of the 'Viksit Bharat' vision of the government and the role the cadets can play in realising the ambitious vision that

seeks to make India a developed nation by the time it completes 100 years since its Independence in 1947.

"Our Prime Minister Narendra Modi, himself an ex-cadet of the NCC, has given the vision of 'Viksit Bharat' by 2047. So, its current cadets have a responsibility to contribute to his 'Viksit Bharat' dream," Singh said.

However, he emphasised that 'Viksit Bharat' does not mean merely physical development on land, but a holistic growth of entire society.

Praising the NCC's role in inculcating discipline and leadership qualities among cadets when they are young, the defence minister said there is a "spark within" the cadets that forges a way of life for them in such a way that irrespective of the profession they will choose later, they will all contribute to nation-building. Singh also recalled his visit to Taj Mahal Palace Hotel in Mumbai, a place, he said, also reminds one of the deadly 26/11 terror attacks in that city in 2008.

He also mentioned the last words spoken by Major Sandeep Unnikrishnan before he laid down his life while battling the terrorists in the attack."That was his (Maj Unnikrishnan's) leadership quality (shown during the combat)," the defence minister told the cadets, exhorting them to become leaders in life. Singh also exhorted them to "think big" and never get disheartened in life, nor have a narrow-minded thinking.

"A person becomes significant in life not by virtue of the big posts one holds, but by the human qualities they have," he said.

"There is a need to move forward by breaking free from shackles of thoughts," he said, and urged people to never harbour conceit.

Earlier, he was accorded a welcome by a group of cadets drawn from all three wings of the NCC and later also reviewed a guard of honour given by them at the venue. The defence minister also handed Raksha Mantri Padak and Commendation Cards to several NCC cadets, chosen for their exemplary performance and devotion to duty, at an investiture ceremony held during his visit.

Singh also visited the 'Flag Area' and interacted with a few cadets.On Saturday, Minister of State for Defence Sanjay Seth visited the NCC camp and lauded cadets as "ambassadors" of 'Viksit Bharat' while urging them to continue working tirelessly towards the vision of making India a developed country by 2047.

The NCC camp was formally inaugurated by Vice President Jagdeep Dhankhar on January 5.Chief of Defence Staff Gen Anil Chauhan, Army Chief Gen Upendra Dwivedi, Indian Air Force Chief Air Chief Marshal A P Singh, and Navy Chief Admiral Dinesh K Tripathi have also visited the camp and addressed cadets.

Recalling his days as an NCC cadet, the Army chief, in his address on January 9, had urged the youth to dream big and strive to become the "changemakers, innovators and leaders" of tomorrow.

*

Army, IAF conduct drill to enhance joint capability in airborne ops

Source: The Tribune, Dt. 21 Jan 2025,

URL: <u>https://www.tribuneindia.com/news/india/army-iaf-conduct-drill-to-enhance-joint-capability-in-airborne-ops/</u>

A four-day-long high-intensity joint exercise by the Army and the Indian Air Force was undertaken to validate integrated operations in multi-faceted combat environments and enhance joint operational capabilities.

Codenamed 'Exercise Devil Strike', the drill between the Army's elite airborne troops and the IAF showcased seamless integration, operational preparedness and the ability to operate in the most challenging environments.

Conducted across training areas and firing ranges, the exercise focused on validating complex airborne operations, including precision insertion of troops and equipment into hostile terrains. It also tested and refined logistic sustenance strategies, ensuring that troops remained operationally effective under extreme conditions.

The key highlights of the exercise included deployment of advanced technologies and state-of-theart equipment for precise and efficient delivery of forces to remote locations, besides execution of synchronised airborne drills that demonstrated unparalleled coordination between the Army and Air Force. The exercise concluded with the successful completion of mission scenarios that simulated real-world operational challenges, a defence spokesperson said.

Lieutenant General Zubin A Minwala, Genetal Officer Commanding 33 Corps, said Exercise Devil Strike had demonstrated the armed forces' ability to adapt, innovate and operate as a cohesive unit in diverse operational scenarios, which reflected the commitment to maintaining readiness for future challenges.

Dhruv fleet's grounding a setback for armed forces: Defence Secretary

*

Source: India Today, Dt. 20 Jan 2025, URL: <u>https://www.indiatoday.in/india/story/advanced-light-helicopter-alh-dhruv-fleet-grounded-defence-secretary-republic-day-parade-hal-2667285-2025-01-20</u>

Defence Secretary RK Singh said that the grounding of the Dhruv Advanced Light Helicopter (ALH) fleet for over 15 days has been a setback for India's armed forces.

Addressing the press on Monday, Singh said that the fleet won't participate in this year's Republic Day Parade due to safety concerns following the crash of a Coast Guard ALH Dhruv Mk III at Gujarat's Porbandar Airport, which killed three crew members.

"The grounding of the light helicopter fleet is a slight setback. Hindustan Aeronautics Limited (HAL) is currently conducting safety checks, and it will be sorted out soon. However, it is unlikely the fleet will return to action in time for the Republic Day parade," Singh stated. The grounding of the 330-strong ALH fleet for over 15 days has disrupted operations across the Army, Navy, Air Force, and the Coast Guard.

As the backbone of rotary-wing operations, the absence of the ALH, which is manufactured by Hindustan Aeronautics Limited (HAL), has forced the services to rely on alternative helicopters, which has led to delays and operational challenges. An Army source described the situation as critical, noting that the ALH's absence has directly affected logistics, troop movements, and other routine operations.

"We have had to adapt and rely on other helicopters, but the gap left by the ALH is undeniable. It is impacting operational efficiency," the source said. Similarly, the Navy and Coast Guard have faced hurdles in maritime operations, with the grounding affecting search-and-rescue missions and surveillance patrols. Notably, this is not the first time the ALH fleet has faced such an issue.

In 2023, the fleet was grounded following a Navy crash, with rectifications made before the helicopters were declared operational again. Despite assurances from the Defence Secretary that the issue would be resolved soon, the HAL has yet to provide a definitive timeline for the completion of the current safety checks. The prolonged absence of the ALH highlights the critical role the helicopter plays in the country's defence ecosystem.

As a versatile platform used in a range of missions, from combat to humanitarian assistance, its grounding has underscored the need for enhanced maintenance protocols and quicker turnaround times for safety checks. The ALH was earlier supposed to be a part of the fly past during the Republic Day parade, but after the fleet was grounded on January 5, alternate aircraft were deployed for the fly past during the parade.

*

Why India's defence sector needs a policy push

Source: Deccan Herald, Dt. 21 Jan 2025, URL: <u>https://www.deccanherald.com/opinion/why-india-s-defence-sector-needs-a-policy-push-3364608</u>

As India prepares for the 2025-26 Union Budget, the question of how the defence allocation will address current challenges is front and centre. Despite consistent increase in allocation – now exceeding Rs 6.2 lakh crore – the defence industry remains heavily dominated by public sectorenterprises. The private sector, despite showing promise, continues to playa limited role in manufacturing and innovation. This persistent gap raises an important question: why hasn't India fully tapped into the capabilities of its private sector to bolster defence manufacturing?

In this context, the Ministry of Defence has declared 2025 as the 'Year of Reforms', signalling a renewed commitment to restructuring and modernising defence production. These reforms are aimed at streamlining procurement processes and encouraging private sector participation, along with a strong focus on achieving self-reliance in defence manufacturing. This move is in line with

6

India's 'Aatmanirbhar Bharat' mission, which aims to reduce dependence on imports and develop indigenous capabilities across sectors.

India's defence budget has consistently shown a commitment to reducing reliance on imports. About 75% of the modernisation funds are reserved for domestic manufacturers, which is a reflection of the government's mission to strengthen indigenous production. Over the years, policies like the 2020 Defence Acquisition Procedure (DAP) were created to prioritise domestic manufacturers.

Yet, in practice, state-owned giants like Hindustan Aeronautics Limited (HAL) and Bharat Electronics Limited (BEL) have been central to this endeavour. It is important to highlight that these organisations have developed capabilities over decades and remain vital for handling sensitive technologies and national security projects.

However, public sector enterprises alone cannot meet the growing demands of modern defence requirements. The overreliance on public sector enterprises has created inefficiencies that drain the defence budget. Challenges such as production delays and technology gaps often arise due to the sheer scale and complexity of their responsibilities.

For instance, the Light Combat Aircraft (LCA) Tejas project has taken years longer than expected. This forced India to import equipment to fill the gap, which undermined the very goal of self-reliance. These kinds of setbacks aren't a failure of the PSUs but rather an indication of the need for complementary contributions from the private sector to enhance capacity and efficiency.

The hesitancy to involve private companies in defence manufacturing stems from both historical and strategic concerns. After independence, India adopted a centralised approach to defence production, focusing heavily on public sector control to safeguard sensitive technologies and ensure secrecy.

While this approach served its purpose during the early years of nation-building, it created a culture of mistrust towards private enterprises. Decision-makers have long worried that private companies could prioritise profits over national security or fall victim to monopolistic tendencies. These concerns, while valid, have inadvertently limited the potential for private sector innovation to play a transformative role in defence.

The private sector, with its capacity for innovation, efficiency, and competition, could address many challenges. Programmes such as Innovations for Defence Excellence (iDEX) have already begun encouraging startups and small businesses to develop cutting-edge technologies for defence. Yet, systemic issues like bureaucratic red tape, inconsistent procurement processes, and limited access to government contracts have hampered private companies from scaling their involvement.

PPP in play

In countries like the United States, private companies like Lockheed Martin and Boeing play a pivotal role in defence manufacturing and developing advanced technologies under strict government oversight. These partnerships have not only driven innovation but also created robust industrial ecosystems that benefit the broader economy.

For India, the challenge is to replicate such models while trying to ensure that sensitive technologies and national security concerns remain protected. While private entities like Larsen and Toubro (L&T) have made commendable contributions in the development of the nuclear-powered Arihant-class submarines, such examples are more of an exception rather than the rule. There is a lot of room to institutionalise such collaborations with a strong Public Private Partnership (PPP) framework.

PPP represents an important area of opportunity. Projects like the Advanced Medium Combat Aircraft (AMCA) could benefit from private sector involvement. These collaborations, however, must be underpinned by clear guidelines to ensure that national security is not compromised. Transparency in bidding processes and fairness in awarding contracts will also be essential to build trust between the government and private players.

While the defence budget should encourage private sector involvement, it is equally important to recognise the areas where public control must remain paramount. Sectors that involve highly classified technologies, such as missile systems or nuclear capabilities, are best managed by state-owned enterprises due to their direct impact on national security. Similarly, strategic assets like cybersecurity systems and critical infrastructure should remain under strict government oversight to prevent vulnerabilities. Balancing these priorities will require a nuanced approach that distinguishes between the areas where private innovation can flourish and those where government control is essential.

Apart from financial numbers, the substance of the Union Budget and the Prime Minister's vision are critical for shaping our developmental trajectories. Prime Minister Narendra Modi's vision that underscores the importance of indigenisation in defence manufacturing demands more than budgetary allocations; it requires a policy thrust that translates words into action. The 2025-26 budget offers an opportunity to outline clear initiatives to boost private participation in the sector. A balanced approach of combining the strengths of the public and private sectors could transform India's defence manufacturing ecosystem into one that is efficient, innovative, and self-reliant.

Dreaming big: China's J-15 fighter maker wants to develop warplanes as fast as smartphones

Source: The Week, Dt. 20 Jan 2025,

URL: <u>https://www.theweek.in/news/defence/2025/01/20/dreaming-big-chinas-j-15-fighter-maker-wants-to-develop-warplanes-as-fast-as-smartphones.html</u>

Sun Cong, the chief designer of China's all-weather, twin-engine, carrier-based multirole fighter aircraft J-15, recently shared his dream of making aircraft like mobile phones. According to a China Central Television (CCTV) report, Sun was speaking at a forum on aviation and aerospace medicine when he shared his vision to reduce the time taken to build fighter jets.

"Our development cycles are too lengthy now, and this has raised a new challenge to our aircraft research and development: Can we make aircraft like mobile phones? This is a dream of ours for

the future," he was quoted as saying. It is to be noted that warplanes take years to develop while there is a new mobile phone coming out way too frequently.

Global Times quoted chief editor of Aerospace Knowledge magazine Wang Ya'nan as saying that Sun's remarks offer China a target to achieve.

Pointing out that design and development of a warplane are a complex process consisting of various systems such as weapons, radars and displays, Wang said such a move calls for strong comprehensive capabilities of a country to support multi-dimensional upgrades.

According to Wang, if the warplanes are to be designed as frequently as mobile phones, they require a highly standardised interface and an open structure that has upward and backward compatibility.

If this vision is to be realized, it will be a paradigm shift for what we know in the past, Wang was quoted as saying.

Science & Technology News

ISRO likely to attempt undocking of satellites today; will conduct docking experiment again

Source: The Indian Express, Dt. 20 Jan 2025, URL: <u>https://indianexpress.com/article/india/isro-likely-attempt-undocking-satellites-today-9788906/</u>

India is likely to attempt undocking — or separation of two satellites — for the first time on Monday, according to officials of the Indian Space Research Organisation (ISRO). After separating the satellites, ISRO will re-attempt docking to improve precision.

ISRO had to postpone the docking experiment at least twice — on January 7 to carry out more simulations on the ground and on January 9 when the satellites drifted more than expected during one of the manoeuvres.

On January 16, India became the fourth country in the world — after the United States, Russia and China — to successfully dock two satellites in space. Isro had to postpone the docking experiment at least twice — on January 7 to carry out more simulations on the ground and on January 9 when the satellites drifted more than expected during one of the manoeuvres.

Docking is a process by which two fast-moving satellites or spacecrafts are brought together and joined in orbit. It is essential for missions that require big payloads that cannot be carried to the orbit in a single launch.

During the feat, two small 220-kg satellites were brought within a distance of 3 metres of each other in orbit, their extended rings were joined with each other, retracted, and locked in space. The

9

space agency also demonstrated sending commands to both the satellites as one composite spacecraft.

Afterwards, the satellites were moved away to a safe distance before the space agency brought them to a distance of 3 metres of each other on January 12. At this point, the on-board cameras could clearly see the two satellites. The docking, however, was not attempted and the satellites were moved back. The space agency then studied the data and re-attempted docking later.

India required docking capability for its planned Chandrayaan-4 missions that will bring back lunar samples, its own Bharatiya Antariksh Station, and a mission to take an Indian to the Moon by 2040. Take for example, the Bharatiya Antariksh Station, which is planned to be constructed by bringing together five modules, the first of which is scheduled to be launched in 2028.

The Chandrayaan-4 mission will also see samples being brought from the Moon in a transfer module which will dock with the re-entry module waiting for it in Earth orbit. The re-entry module would be designed to withstand the heat when the spacecraft enters Earth's atmosphere.

Significantly, the mission has utilised an indigenous Bharatiya Docking System. The docking mechanism being used by India is on the lines of the International Docking System Standard used by spacecrafts going to the International Space Station. The system is androgynous — meaning the systems on both the Chaser and Target satellites are identical. However, instead of the 24 motors used in the International Docking System Standard, the ISRO system had two.

India Mobility Global Expo 2025: इसरो और इन-स्पेस ने दिखाई एडवांस स्पैस टेक्नोलॉजी की पावर, 43 हाईटेक इनोवेशन किए शोकेस

Source: Times Now Hindi, Dt. 21 Jan 2025,

URL: <u>https://www.timesnowhindi.com/tech-gadgets/isro-and-in-space-showcase-advanced-space-technology-at-india-mobility-global-expo-2025-article-117415441</u>

भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) और भारतीय राष्ट्रीय अंतरिक्ष संवर्धन और प्राधिकरण केंद्र (इन– स्पेस) ने सोमवार को द्वारका के यशोभूमि में चल रहे भारत मोबिलिटी ग्लोबल एक्सपो 2025 में मोबिलिटी इंडस्ट्री में संभावित अनुप्रयोगों के लिए तैयार 43 अत्याधुनिक तकनीकों का प्रदर्शन किया।

हाईटेक इनोवेशन हुए शोकेस

इसरो द्वारा कार्यक्रम स्थल पर लगाए गए एक स्टॉल पर कैमरा और इमेजिंग सेंसर, तापमान और दबाव सेंसर, जायरोस्कोप, एक्सेलेरोमीटर, शोर दमन प्रणाली, विशेष कोटिंग्स और इंसुलेशन तकनीक सहित उन्नत अंतरिक्ष तकनीकों का प्रदर्शन किया गया। इन नवाचारों को अपनाकर, इस पहल का उद्देश्य ऑटोमोटिव क्षेत्र में आयातित तकनीकों पर निर्भरता को कम करना, आत्मनिर्भर भारत के दृष्टिकोण के तहत आत्मनिर्भरता और नवाचार को बढ़ावा देना है। एक्सपो में बोलते हुए इन–स्पेस के निदेशक–तकनीकी निदेशालय डॉ. राजीव ज्योति ने कहा, "इन–स्पेस ऑटोमोटिव उद्योग के साथ मिलकर काम करेगा, ताकि इसरो द्वारा विकसित प्रौद्योगिकियों को ऑटोमोटिव निर्माताओं द्वारा अपनाए जाने के लिए स्थानांतरित किया जा सके।"

"ऑटोमोटिव क्षेत्र के साथ जुड़कर, इसका उद्देश्य इसरो की प्रौद्योगिकियों की क्षमता को प्रदर्शित करना है, जिन्हें ऑटोमोटिव उद्योग की विशिष्ट आवश्यकताओं को पूरा करने के लिए स्थानीय स्तर पर और अधिक संशोधित और विकसित किया जा सकता है। प्रमुख उद्देश्यों में से एक घरेलू स्तर पर सेंसर जैसे उन्नत घटकों को विकसित और विनिर्माण करके भारत में आत्मनिर्भरता बढ़ाना है।"

एजेंसी ने भारत की अंतरिक्ष उपलब्धियों को व्यापक औद्योगिक अनुप्रयोगों में अनुवाद करने के महत्व पर जोर दिया, ऑटोमोटिव उद्योग को सुरक्षा, प्रदर्शन और स्थिरता को बढ़ाने के लिए अंतरिक्ष–ग्रेड प्रौद्योगिकियों को अपनाने के लिए प्रोत्साहित किया। इस गति को सहयोगी पायलट परियोजनाओं के माध्यम से बनाए रखने पर भी जोर दिया गया, जो अनुसंधान और उद्योग अपनाने के बीच की खाई को पाटते हैं।

एक्सपो में, इन–स्पेस और ऑटोमोटिव कंपोनेंट मैन्युफैक्चरर्स एसोसिएशन (एसीएमए) ने "ऑटोमोटिव क्षेत्र के लिए इसरो प्रौद्योगिकी" शीर्षक से आहूत एक सत्र की मेजबानी भी की। इस सत्र में, अंतरिक्ष अनुप्रयोग केंद्र (अहमदाबाद), विक्रम साराभाई अंतरिक्ष केंद्र (तिरुवनंतपुरम), इसरो जड़त्वीय प्रणाली इकाई (आईआईएसयू त्रिवेंद्रम) और द्रव प्रणोदन प्रणाली केंद्र (तिरुवनंतपुरम) सहित इसरो केंद्रों के विशेषज्ञों ने प्रस्तुत किया कि इन प्रौद्योगिकियों को ऑटोमोटिव अनुप्रयोगों के लिए कैसे अनुकूलित किया जा सकता है। इन चर्चाओं का उद्देश्य व्यावहारिक कार्यान्वयन के लिए उद्योग के भीतर रणनीतिक संवाद और पायलट परियोजनाओं को आरंभ करना है।

भारत मोबिलिटी ग्लोबल एक्सपो का 2025 आधिकारिक तौर पर 19 जनवरी को जनता के लिए खोला गया। इसका आयोजन तीन स्थानों नई दिल्ली में भारत मंडपम, द्वारका में यशोभूमि और ग्रेटर नोएडा में इंडिया एक्सपो मार्ट में किया जा रहा है।

11

© The news items are selected by Defence Science Library, DESIDOC from Print Newspapers and Authentic Online News Resources (mainly on DRDO, Defence and S&T)