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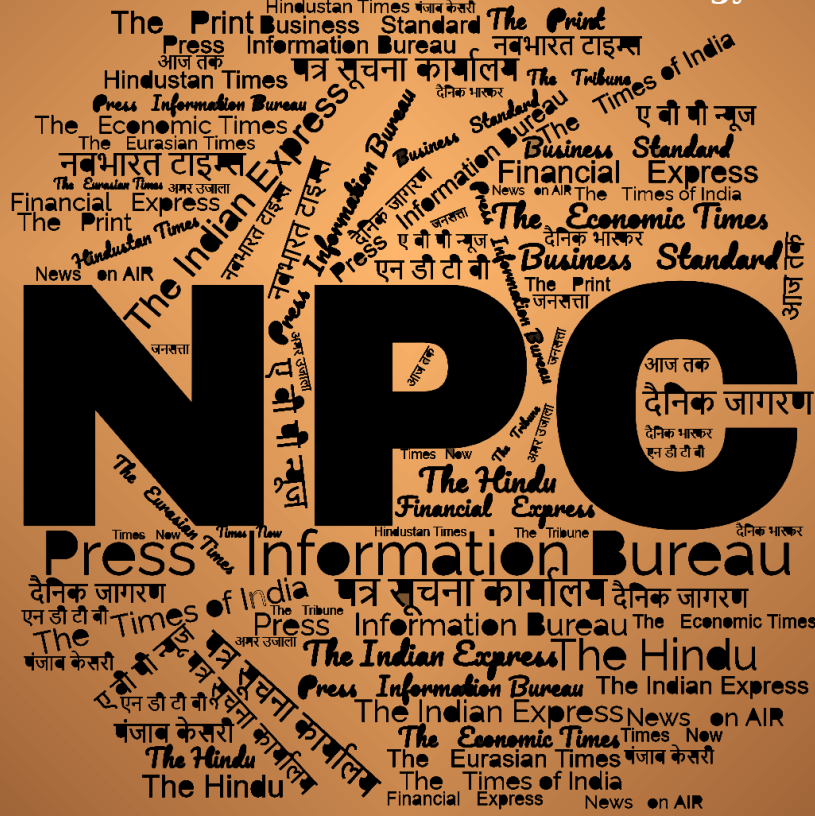
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Thu, 11 May 2023

India's Missile Technology 95 Per cent Indigenous: NSTL Chief

Defence Research and Development Organisation (DRDO) has developed India's missiles and torpedoes with components that are nearly 95 per cent indigenous, disclosed Dr. Y. Sreenivasa Rao, outstanding scientist and director of Naval Science and Technological Laboratories (NSTL), Visakhapatnam.

Speaking as chief guest at the National Technology Day celebrations organised at the NSTL premises on Thursday, he expressed the strong belief that with joint endeavour, public and private organisations, along with academic institutions; can make India a top country in research and development.

National Technology Day is celebrated on May 11 every year to commemorate the successful nuclear test – Operation Shakti (Pokhran-II) – conducted on May 11, 1998 in Pokhran, Rajasthan.

An exhibition has been held on the occasion during the last two days at NSTL, with 6,200 students visiting it.

Speaking on "Importance of Global Technology Interventions in Development of Advanced Systems," Prof. D.V.L.N. Somayajulu touched upon disruptive and global technologies, business intelligence, data science, data analytics and generative artificial intelligence.

Dr. G.N. Rao explained in detail the background of Operation Shakti and its execution under code name "Laughing Buddha" in May 1998 and Mission Shakti of May 2019. He asserted that DRDO has created history by fully utilising the country's state-of-the art technological advancements.

<https://www.deccanchronicle.com/nation/in-other-news/110523/indias-missile-technology-95-per-cent-indigenous-nstl-chief.html>

Thu, 11 May 2023

Will Give Befitting Reply to Every Step Against India: Rajnath Singh

India's nuclear tests in 1998 sent a message to the world that it may be a peace-loving nation but will not tolerate any step taken against its self-respect, Defence Minister Rajnath Singh said here on Thursday.

Addressing the National Technology Day celebrations here, Singh said India had learnt lessons from history after external aggressors ravaged the centre of learning at Nalanda and culture icon at Somnath. "We have learnt our lessons from history and resolved that we will not allow such history to be repeated," Singh said at the function that also celebrated the 25th anniversary of the 1998 Pokhran -II nuclear tests.

"India's nuclear tests conveyed a message to the world that we may be a peace loving nation but we will not see a Nalanda burn again. We will not tolerate our cultural icon like Somnath be ravaged again," the defence minister said.

"We will give a befitting reply to every step taken against our self-respect," Singh said.

Prime Minister Narendra Modi, Science and Technology Minister Jitendra Singh and top scientists were present at the function.

https://www.business-standard.com/india-news/will-give-befitting-reply-to-every-step-against-india-rajnath-singh-123051100380_1.html



Thu, 11 May 2023

Indian Army's Military Drills in Tawang Showcase Offensive Firepower Against China

An integrated surveillance and firepower training exercise 'Buland Bharat' was conducted in the eastern theatre's recently operationalised longest high-altitude Artillery Ranges. Frontier troops and equipment were tested in simulated war conditions in high-altitude areas and extreme weather conditions during which synergised surveillance and firepower from Infantry and Artillery radars, weapon systems and direction of fire from the air were practised.

Bringing the full might of artillery, the army fired various large caliber 155 mm artillery guns including 155 mm Bofors howitzers, M-777 Ultra-light howitzers, 105mm field guns and 120mm mortars. The former army chief said that the army planned its firepower in the high-altitude areas of Arunachal Pradesh, indicating the highest level of operational readiness in case of any eventuality.

That indication hints at the Chinese aggression across the Line of Actual Control (LAC) in Arunachal Pradesh.

The exercise involved the synergised application of surveillance and firepower capabilities of the Artillery and the Infantry in close coordination with Special Forces, Aviation and Central Armed Police Forces (CAPF) deployed in West Kameng and Tawang districts of Arunachal Pradesh.

The deployment of a wide array of artillery weapons along the entire 3,488-km-long Line of Actual Control (LAC) is now part of such high-voltage combat exercise. Tawang sets forth a wave of new military drills with a new approach. The tactical shift is all about the no-holds-barred, high-voltage combat exercise with the full might of artillery and infantry on the offensive with air power.

What is the tactical shift in military drills?

Infantry's tactical approach

The exercise 'Buland Bharat' comes right after the multi-domain exercise with the strategic forces of the Indian Army and the Air Force carried out in strategically key areas in the Eastern sector.

The joint military exercise took place last month in the backdrop of Beijing announcing Chinese names for 11 more places in Arunachal Pradesh. What is often dubbed as the whimsical move of China, which claims Arunachal Pradesh as the southern part of Tibet.

Earlier as a part of the drills, the IAF deployed C17 Globemaster aircraft, Chinooks and Mi 17 choppers for conducting multi-mode insertion operations into designated greenfield landing zones with surgical precision.

While the highly intense war exercise makes of multi-layer complex coordination, troops mobilization and gun deployment, its message is quite simple and straight – critical offensive against the aggressor.

That is exactly what the Indian armed forces is planning to do through exercise 'Buland Bharat' with the Indian army leading the ground attack.

The exercise actually aimed to show the speed, agility and lethality of the specialised troops and their ability to rapidly deploy into a hostile environment, secure landing zones and engage the enemy with precision and speed as per the tactical setting.

However, the fact that the exercise involved the synergised application of surveillance and firepower capabilities of the Artillery and the Infantry in close coordination with Special Forces, Aviation and Central Armed Police Forces (CAPF) has redefined the new tactical approach and strategic goals.

“This is a steep learning curve that the Indian army is known for its progressive assessment over the time and experiences gained,” explained the former Chief.

He adds: “Certainly, the Indian army edges over in terms of its preparation with precise movement and counter-offensive.”

The offensive and the counter-offensive readiness is much visible with the fast deployment of the newly acquired Russian S-400 Triumf surface-to-air missile system behind the Line.

The PLA's planning

On the other side, China's People's Liberation Army has been conducting military drills at a higher altitude. The drills mostly take place in Tibet Military District at an altitude of 4,700 metres (15,400 feet).

The military exercise often involved infantry, artillery, army aviation, special operation forces, electronic warfare, engineers, and special defence units (Chemical units).

The PLA often tested the long-range rocket launchers to stage precision strikes—mostly the newly launched ones. For example, last year, the PLA tested its Type PHL-03 multiple-launch rocket system and PCL-181 vehicle-mounted howitzers. That largely shows the efficacy of its arsenal against India; so much so that more than 50 new weapon systems and guns have been deployed by the PLA to the area post-Galwan standoff with India.

At the same time, China has permanently deployed its air defence missile systems. Besides the land forces, the People's Liberation Army's Air Force (PLAAF) has also permanently stationed its J-20s at the Hotan airbase in China's Xinjiang province with a set of bombers. Both Xinjiang and Tibet are under the Chinese Western Theatre Command that overlooks the LAC with India.

That all leads to the tactical shift towards combat-ready military drills which the Indian army has been testing with its full force of artillery and infantry together with IAF.

The exercise 'Buland Bharat' demonstrated that firepower, with offensive and defensive forces to confront and neutralize China's "Anti Access Area Denial (A2AD)" policy.

<https://www.financialexpress.com/business/defence-indian-armys-military-drills-in-tawang-shift-to-offensive-firepower-against-china-3083453/>



Thu, 11 May 2023

Indian Army Personnel may soon get Jet Pack Suits to Defend Borders with China, Pak: Report

The Indian Army might soon have its soldiers in jet pack suits to defend the borders with China and Pakistan. According to a report by the Eurasian Times on Tuesday (May 9), the army might soon have soldiers in "Iron Man" suits in semi-urban and urban warfare scenarios. Speaking to the publication, an army officer in Jammu and Kashmir, who chose to remain anonymous, said the jet pack suits are coming as an aerial surveillance platform.

The officer pointed out that the effectiveness of these suits would vary from place to place. "For instance, it will be less effective in terrain with thick vegetation. Also, the wind factor has to be catered for in higher reaches of mountains," the officer added. Eurasian Times reported that with the conversation with the officer, it appeared that jet pack suits could soon debut in the valley.

Another officer highlighted that jet-packing would not be just about propelling through the air. The soldier could be equipped with other technologies such as infrared goggles to scan thick vegetation to identify enemy combatants.

In February this year, the Army Borne Training School (AATS) in Agra got a demonstration of jet pack suits from Gravity Industries, a British company founded by Richard Browning, an ex-Marine. Taking to Twitter, the Indian Aerospace Defence News (IADN) shared a video of Browning giving the demonstration of the jet pack system to the Indian Army.

As per Gravity Industries, the jet pack suit is powered by five gas turbines which can generate over 1,000 horsepower and produce 144 kg of thrust. The speed of the suit is typically in excess of 60 kilometres per hour (km/ph). The jet pack can run on Jet A1 Kerosene and Premium Diesel.

In January, the Indian Defence Ministry said that it intended to buy 48 jet pack suits under emergency procurement through Fast Track Procedure (FTP) under Buy (Indian) category and sought participation in the procurement process from prospective bidders subject to requirements.

"The Government of India invites responses to this request only from Original Equipment Manufacturers (OEM) or Authorised Vendors or Government Sponsored Export Agencies (applicable in the case of countries where domestic laws do not permit direct export by OEM) subject to the condition that in cases where the same equipment is offered by more than one of the aforementioned parties, preference would be given to the OEM," the ministry said in its proposal on January 24.

<https://www.wionews.com/india-news/indian-armys-jet-pack-suits-might-be-used-to-defend-china-pak-borders-report-591248>



Thu, 11 May 2023

Naval Aviation Looks for Capable Industry Partners to Build More Flight-critical

The Indian Naval Aviation has achieved 90 % of indigenisation in the category of non-flight-critical components and it was looking for capable industry partners to build more numbers of flight-critical and mission-critical components, said Rear Admiral Deepak Bansal, Assistant Chief of Naval Staff (Air Materials), here on Thursday. The percentage of indigenisation achieved by the Naval Aviation in the areas of the most sophisticated flight-critical and mission-critical components was one to two % and 30 to 40%, respectively, he said. "Flight-critical items are those on which the safety of the entire aircraft will depend. Such items are very very few that we have been able to indigenise. Because they are the most difficult ones like the engine and controls. Some parts of that could be indigenised but not as the entire aggregate," said Rear Admiral Bansal on the sidelines of a Naval Aviation Industry Outreach Programme held at Coimbatore District Small Industries Association (Codissia) trade fair complex in Coimbatore.

According to him, a mission-critical component is not like the flight-critical. If it fails, the mission will fail but the aircraft will remain safe. Non-flight-critical components are support equipment like jacks, platforms, towing arms, trolleys etc. "Non-flight-critical items are low-hanging fruits which are plucking first. They are easy to do and the certification is simple. That is why we are trying to attract industries...Flight-critical is the most challenging one," he said after visiting the Codissia Defence Innovation and Atal Incubation Centre (CDIIC), a defence innovation hub.

The Rear Admiral said that the Naval Aviation was trying to find out the best of the industry and handhold them with the Centre for Military Airworthiness and Certification (CEMILAC), a laboratory of the Indian Defence Research and Development Organisation (DRDO) in Bengaluru. "We are having regular meetings with them so that handhold can be given to the industry partner and take them through various steps so that they will develop confidence. That is our endeavour," he said. He said the Naval Aviation Indigenisation Roadmap is promulgated every five years. "As of today, the road map is for 2022 to 2027. But we always renew it. When we are successful in

some category, we delete it and add new ones. All these items, whatever we want, are coming with a problem statement. As of today 585 items are there in the roadmap,” he said.

CDIIC director R. Ramamurthy said that around 50 industries from the region are catering to the defence sector. “The Defence Ministry has identified 700 items required for the sector and given us a list last week. Industries will take it up and move forward,” he said. Commodore Justin Xavier, Chief Controller, Naval Aeronautical Quality Assurance Service; Commodore P. Vinayagam, CMDE (APP), Integrated Headquarters, Ministry of Defence; Commodore Manmohan Singh, Commanding Officer, INS Agrani; Captain E. David, Officer in-charge, Aircraft and Engine Holding Unit, Sullur; CODISSIA president V. Thirugnanam, secretary R. Shasi Kumar, vice-president M. Karthikeyan, CDIIC directors P. Ponram, G. Devaraj and R. Sasidaran; and a team of officials from the Indian Navy were present.

<https://www.thehindu.com/news/national/tamil-nadu/naval-aviation-looks-for-capable-industry-partners-to-build-more-flight-critical/article66839106.ece>

ARMY TECHNOLOGY

Thu, 11 May 2023

HIMARS Become the Centrepiece of Exercise Formidable Shield

Thirteen Nato countries have come together between 8-26 May 2023 in the High North and North Atlantic Ocean for exercise Formidable Shield.

The exercise demonstrates the partners’ interoperability when it comes to the organisation’s missile defence across the Euro-Atlantic. The exercise will comprise a live-fire joint and combined integrated air and missile defence (IAMD) environment, orchestrated by standard Nato command and control structures.

Some 13 partner nations, more than 20 ships and 35 aircraft, eight ground units consisting of radars, national advanced surface-to-air missile system (NASAMS), and high mobility artillery rocket systems (HIMARS), and approximately 4,000 personnel from across the alliance are training together.

Royal Navy Rear Admiral James Morley, deputy commander, and officer in charge of the exercise commented: “The strength and unmatched cohesion of our trans-Atlantic alliance lies in our mutual commitment to one another and to the deterrence and defence of the Euro-Atlantic area. This commitment shines through in complex, high-end evolutions like Formidable Shield.”

While the multi-domain exercise saw many aircraft operating together – from the RAF Typhoons to French Rafale M jets – it was the HIMARS that took centre stage in the Nato arsenal.

Interoperability of HIMARS

As the unsung element of the interoperable missile exercise, HIMARS are a common thread right across Nato. The US may push the F-35 Lightning II fighter as the standard jet, but HIMARS are a standard, albeit reliable, air defence system.

The HIMARS system is a highly mobile artillery system capable of delivering precision-guided munitions, making it an ideal tool for modern warfare. It provides the end-user with greater capabilities to deter and defend against any threats to sovereignty.

Poland, the rising star of European mobilisation, has received extensive military support from the US that includes HIMARS. With the HIMARS' effect demonstrated in wartorn Ukraine, Poland's acquisition marks a wider spread of the standard defence system.

The production of HIMARS is currently extensive, with the Polish government being the most recent consumer of the American defence system. Poland agreed to a collaboratively produce this system alongside the original manufacturer, Lockheed Martin.

This marks the American-led mobilisation of the Euro-Atlantic. "The agreement will create a basis for the Polish defence industry to engage more effectively in co-operation with the US defence industry", Poland's deputy prime minister pointed out. In the same way, it was the US Sixth Fleet and Naval Striking and Support Forces Nato that kicked off the exercise.

<https://www.army-technology.com/news/himars-become-the-centrepiece-of-exercise-formidable-shield/>



Thu, 11 May 2023

UK Sending Long-range Storm Shadow Missiles to Ukraine, Says Defence Minister

Britain has become the first western country to provide Ukraine with the long-range Storm Shadow cruise missiles that Kyiv wants to boost its chances in a much-anticipated counteroffensive, prompting a threat from the Kremlin of a military response.

Hours after Ukraine's president, Volodymyr Zelenskyy, said he needed more western weapons to be confident of a victory this summer, Ben Wallace, the UK defence secretary, told MPs that the missiles – which cost more than £2m each – were "now going in, or are in the country itself".

The gift of the missiles was supported by the US, Wallace added, although previously Washington had declined to give Ukraine long-range missiles of its own, fearing that the outcome could escalate hostilities in the 15-month war.

Reflecting such concerns, the minister said the decision was "a calibrated and proportionate response" to the Russian invasion, and in particular Moscow's repeated targeting of Ukrainian civilians.

At least 23,000 civilians had been killed or injured, Wallace said. Russia had made "788 attacks on healthcare facilities, hospitals, clinics, medical centres", and on many occasions killed civilians in missile strikes, he added.

"The use of Storm Shadow will allow Ukraine to push back Russian forces based within Ukrainian sovereign territory," Wallace told MPs, adding: "Russia must recognise that their actions alone have led to such systems being provided."

Speaking at a press briefing in Moscow, the Kremlin spokesperson Dmitry Peskov said Russia was taking a "rather negative" view of the UK's move. "This will require an adequate response from our military, who ... will make appropriate decisions," he said.

Wallace did not say how many Storm Shadow missiles had been given to Ukraine, although it has been estimated the UK holds a stock of between 700 and 1,000. Working with four other countries, the UK issued a tender to buy more long-range "missiles or rockets with a range of 100-300km" (62 to 186 miles).

Storm Shadow has a range of “in excess of 250km”, according to its manufacturer, the European arms group MBDA. That is significantly further than the high-precision US HIMARS rocket launchers currently used heavily by Ukraine, which rely on missiles with a range of 47 miles. HIMARS have become less effective as the Russian invaders have moved reserves of troops and equipment out of their range.

There have been concerns that the Storm Shadow missiles could be used to strike targets deep inside Russia’s internationally recognised borders. The White House has balked at supplying Ukraine with similar long-range ATACMS missiles, which can be fitted to the HIMARS systems.

Wallace said the US was “incredibly supportive” of the UK’s decision, and said ATACMS missiles were not as suitable as Storm Shadow, which is designed to be able to strike defensive positions below ground.

A US official said that “each country makes their own sovereign decisions” about what weapons to give to Ukraine, and stressed that the Biden administration appreciated the contributions made by “more than 50 countries, including the UK” in support of Kyiv in its effort to kick out the Russian invaders.

Ukrainian commanders on the ground have said Kyiv still lacks vital weapons needed for a large-scale campaign to succeed. These include long-range missiles. Without them, it is feared that deep-laying reserves could be used to snuff out any Ukrainian counteroffensive quickly if it looks likely to break through.

Earlier, Zelenskiy said in a television interview Ukraine needed more time before it could launch its much-anticipated counteroffensive, and was still waiting for key weapons to arrive.

The president said newly formed brigades were ready to attack, but were at risk of taking too many casualties if they did so now. “We can go forward and be successful. But we’d lose a lot of people. I think that’s unacceptable,” he said. “So we need to wait. We still need a bit more time.”

His comments are the clearest sign yet that the Ukrainian military push, on which the outcome of the war may depend, is unlikely to take place in the next few weeks. Long-range attacks on key Russian military sites in Crimea and elsewhere deep in occupied territory are likely to be a prelude to any frontline assault.

Justin Bronk, an aviation analyst at the Rusi thinktank, described Storm Shadow as “an expensive weapon designed for strategic targets such as command centres, logistics hubs or other high-value fixed sites”.

Experts say Storm Shadow could be used to strike targets such as the Dzhankoi rail and logistics hub in northern Crimea, as well as the naval base at Sevastopol and airfield at Saky. Rendering them unusable would make it harder for Russia to push back against any Ukrainian counterattack.

Ukrainian leaders have publicly said they would not use long range missiles inside Russia, although leaked Pentagon papers reported, based on electronic eavesdropping, that Zelenskiy privately complained to his top commander that Ukraine “does not have long-range missiles capable of reaching Russian troop deployments in Russia”.

Ukraine has been gradually amassing western tanks and armoured vehicles as it seeks to build up a counterattack force of 12 brigades aimed at breaking through Russian lines and demonstrating that it could be possible for Kyiv to push the invaders out of the country.

Bronk said that although Nato standard weapons, Storm Shadows could be mounted under the Soviet-standard jets used by Ukraine’s air force, and, as with any cruise missile, could be pre-programmed from the ground.

Ukraine's small surviving air force runs about 12 or so missions a day, its pilots often flying a few metres above ground to evade detection.

British sources said giving Storm Shadow missiles was compatible with the UK's signature to the voluntary missile technology control regime, which is intended to limit the proliferation of cruise missiles.

Although the missiles are considered a category 1 weapon, and so there is a "strong presumption" that they will not be exported to other countries, officials pointed to the fact that an exception can be made "on rare occasions" where there is a demonstrable need.

<https://www.theguardian.com/politics/2023/may/11/uk-sending-long-range-storm-shadow-missiles-to-ukraine-says-defence-minister-ben-wallace>



Thu, 11 May 2023

China Completes Warship Deliveries to Pakistan as Military Alliance Grows

China has delivered two frigates to Pakistan's navy, completing a four-warship deal inked in 2018, Chinese media reported, amid deepening military cooperation between the two nations in one of the world's most complex geopolitical regions.

The vessels - two Type 054A frigates - will be used to safeguard the seas of the China-Pakistan economic corridor (CPEC), state-backed Chinese newspaper Global Times reported late on Wednesday.

CPEC is an ambitious infrastructure project that links Xinjiang in west China to Pakistan aimed at offering an alternative transportation route in the future for goods including gas. Part of the network is Pakistan's Gwadar port, located on a key waterway in the Arabian Sea.

Economic and military ties between the two neighbours have deepened against a shifting geopolitical backdrop, evident from Pakistan's increasing military procurement from China and joint military exercises to safeguard assets and trade routes. For China, Pakistan and its access to the Arabian Sea is key in the event of a maritime blockade in the Strait of Malacca.

China delivered the first batch of six J-10 fighter jets to Pakistan in March last year. Eight Hangor Class submarines that Pakistan ordered from China are expected to be delivered before 2028.

Earlier this week, China's defence minister told Pakistan's navy chief that their militaries, including their navies, should "expand into new fields of cooperation" to bolster their capability in safeguarding regional security.

"The prospects for cooperation between the two sides, in my opinion, is getting stronger and stronger," Song Zhongping, a military commentator with Phoenix TV, told Reuters.

In South Asia, China's ties with India, with whom Pakistan has frosty relations, have deteriorated in recent years, and the withdrawal of U.S. troops in nearby Afghanistan has raised geopolitical uncertainty in the region, pushing China and Pakistan to seek a stronger alliance.

"Maintaining the peace and stability of South Asia fits with both countries' actual interests," Song said.

<https://www.reuters.com/world/asia-pacific/china-completes-warship-deliveries-pakistan-military-alliance-grows-2023-05-11/>

President Xi Asks China's Submarine Force to Become Elite Force to Fulfil Missions

Chinese President Xi Jinping has asked the country's submarine force to strive to become an elite force with overall competency by continuously improving its ability to fulfil missions and tasks. The submarine force, which operates in the deep sea, is tasked with glorious missions and bears great responsibility, he said in a letter to the submarine crew, state-run Xinhua news agency reported on Thursday.

He urged them to continuously improve their ability to fulfil missions and tasks, and strive to become an elite force with overall competency.

Xi called on them to make greater contributions to achieve the goals set for the centenary of the People's Liberation Army in 2027.

After he took over power in 2012, Xi, who heads the Central Military Commission, (CMC) - the high command of the PLA - has laid emphasis on developing the Chinese navy in order to increase China's global military presence.

Besides launching a large number of naval ships including three aircraft carriers, the People's Liberation Army Navy (PLAN) possesses both a nuclear-powered submarine fleet and diesel-electric submarines.

While the PLAN is currently developing its nuclear-powered submarine capabilities, its diesel-electric submarine fleet remains the backbone of China's submarine forces, according to the US based Nuclear Threat Initiative (NTI).

It quoted a US government report indicating that the submarine fleet could grow to between 65 and 70 submarines by the 2020s.

<https://economictimes.indiatimes.com/news/defence/president-xi-asks-chinas-submarine-force-to-become-elite-force-to-fulfil-missions/articleshow/100166405.cms>



Pentagon to Accelerate Allied Science and Technology Co-operation with New Strategy

The US Department of Defense (DoD) is looking to accelerate co-operation with allies and partner countries in the area of science and technology (S&T) development, as a way to maintain a technological advantage over near-peer adversaries such as China.

The push for more international collaboration in the S&T realm is one of three major pillars in the department's newly released National Defense Science and Technology Strategy, officially unveiled on 9 May. The new strategy will seek to not only enhance co-development initiatives among US

allies on advanced technologies, but also bring a more joint focus into internal technology test and development initiatives within the US armed forces.

“First and foremost ... any mission is a collaborative and joint mission, which means that we need to be thinking beyond just sort of service-specific and agency-specific concerns but really thinking about this as a joint ... effort with our partners and allies internationally, as well as domestically,” Nina Kollars, adviser to the Undersecretary of Defense for Research and Engineering, said.

“So we're going to step away from conventionally thinking the department defence can be solely responsible for science and technology that is defence relevant, and really think about this ... as a collaborative effort. From the very beginning, from early basic research all the way to acquisition,” she added during an 8 May briefing ahead of the strategy's release.

<https://www.janes.com/defence-news/defence/latest/pentagon-to-accelerate-allied-science-and-technology-co-operation-with-new-strategy>

Science & Technology News



Press Information Bureau
Government of India

Ministry of Defence

Thu, 11 May 2023

Prime Minister Inaugurates Programme Marking National Technology Day 2023 in New Delhi

Lays foundation stone & dedicates to the nation multiple scientific projects worth more than Rs 5,800 crore

Shri Narendra Modi releases commemorative stamp and coin on 25th National Technology Day

“We have to make the nation Viksit and Aatmanirbhar”

The passion, energy and capabilities of the children and youth today are India's big strengths: PM

Pokhran nuclear tests gave the message that India is a peace-loving nation, but it won't let anyone to harm its sovereignty, integrity & unity: Raksha Mantri

Shri Rajnath Singh calls for optimum use of country's powerful human resource to make India strong, prosperous & self-reliant

Prime Minister Shri Narendra Modi inaugurated the programme marking National Technology Day 2023 at Pragati Maidan in New Delhi on May 11, 2023. The programme also marked the commencement of the celebration of the 25th year of National Technology Day being held from the 11th-14th May. On this momentous occasion, the Prime Minister laid the foundation stone and dedicated to the nation multiple projects related to scientific and technological advancement in the country worth more than Rs 5,800 crore. This is in line with the Prime Minister's vision of 'Aatmanirbhar Bharat' through strengthening scientific institutions in the country.

The projects whose foundation stone was laid include Laser Interferometer Gravitational Wave Observatory – India (LIGO-India), Hingoli; Homi Bhabha Cancer Hospital and Research Centre, Jatni, Odisha; and Platinum Jubilee Block of Tata Memorial Hospital, Mumbai.

The projects dedicated to Nation include Fission Molybdenum-99 Production Facility, Mumbai; Rare Earth Permanent Magnet Plant, Visakhapatnam; National Hadron Beam Therapy Facility, Navi Mumbai; Radiological Research Unit, Navi Mumbai; Homi Bhabha Cancer Hospital and Research Centre, Visakhapatnam; and Women & Children Cancer Hospital Building, Navi Mumbai.

During the programme, the Prime Minister also inaugurated the Expo showcasing scientific & technological advancements made in India in the recent past and also took a walk-through. He also released a commemorative stamp and coin on the occasion.

Addressing the gathering, the Prime Minister said that the 11th of May is one of the most prestigious days in the history of India. He underlined that today marks the day when India's scientists achieved the stupendous feat in Pokhran which made the entire nation proud. "I can never forget the day when Atal Ji made the announcement of India's successful Nuclear Testing," the Prime Minister remarked. He stated that the Pokhran Nuclear Testing not only helped India prove its scientific capabilities but also gave a boost to the global stature of the nation. "In Atal Ji's words", the Prime Minister said, "We have never stopped on our journey and never surrendered to any challenge that has come our way." The Prime Minister conveyed his greetings to every citizen on the occasion of National Technology Day.

Mentioning the futuristic projects that have been inaugurated today, the Prime Minister mentioned the National Hadron Beam Therapy Facility, and Radiological Research Unit in Mumbai, the Fission Molybdenum-99 Production Facility, Rare Earth Permanent Magnet Plant in Visakhapatnam and the various Cancer Research Hospitals and said that it will give a push to the progress of the country with the help of nuclear technology. Talking about LIGO-India, the Prime Minister called LIGO to be one of the foremost science and technology initiatives of the 21st century. The observatory will bring new opportunities for research for the students and scientists, he said.

The Prime Minister reiterated that today, at the initial period of Amrit Kaal, the goals of 2047 are clear before us. "We have to make the nation Viksit and Aatmanirbhar," said the Prime Minister emphasizing the need for creating an inclusive ecosystem for growth, innovation and Sustainable Development Goals. He underlined the importance of technology at every step and said, India is moving forward with a holistic and 360-degree approach in this regard. "India considers technology as a tool of the nation's progress, not a means to assert its dominance," the Prime Minister said.

Praising the theme of today's event 'School to Start-ups - igniting young minds to innovate', the Prime Minister said that India's future will be decided by the youth and children of today. He said that the passion, energy and capabilities of the children and youth today are India's big strengths. Quoting Dr APJ Abdul Kalam, the Prime Minister underscored the importance of knowledge and said as India is developing as a Knowledge society, it is taking action with equal force. He elaborated on the strong foundation that has been created in the country during the last nine years to ignite young minds.

The Prime Minister said that more than 10 thousand ATAL tinkering labs in 700 districts have become innovation nurseries. More importantly, 60 percent of these labs are in government and rural schools. He informed that over 75 lakh students are working laboriously on more than 12 lakh innovation projects in Atal Tinkering Lab. This, the Prime Minister said, is a sign of young scientists coming right out of schools and reaching the far corners of the country and emphasising

that it is everyone's duty to handhold them, nurture their talent and also assist them in implementing their ideas. He noted the hundreds of start-ups that have been incubated at Atal Innovation Centres (AIC) and said that it is emerging as the new laboratories of the 'New India'. "The Tinkerpreneurs of India will soon become leading entrepreneurs of the world", the Prime Minister said.

Quoting Maharishi Patanjali on the importance of hard work, the Prime Minister said that measures taken after 2014 have resulted in big changes in the field of science and technology. "Start-up India Campaign, Digital India, and National Education Policy help India in gaining new heights in the field," Shri Modi said as he underlined that Science is coming out of the books and turning into patents through experiments. "The number of patents has increased from 4,000 per year 10 years ago to more than 30,000 today. Registration of designs has grown from 10,000 to 15,000 in the same period. The number of trademarks has grown from less than 70,000 to more than 2,50,000," the Prime Minister informed.

"The India of today is moving forward in every direction that is necessary to become a tech leader", Shri Modi said. He noted that the number of tech incubation centres in the country has grown from roughly 150 in 2014 to more than 650 today. The Prime Minister also mentioned that India's Global Innovation Index Rank has gone from 81st to the 40th position where the youth of the country are setting up their own digital ventures and start-ups. Drawing comparisons with 2014, the Prime Minister mentioned that the number of start-ups in the country has increased from roughly 100 to one lakh recognised start-ups today and it has turned India into the third largest start-up ecosystem in the world. Noting India's capability and talent, the Prime Minister pointed out that the growth took place at a time when the world is dealing with economic uncertainty. Underlining that the present moment is extremely precious for policymakers, the scientific community, research labs spread across the country and the private sector, the Prime Minister reiterated that even though the School to Start-up journey will be made by the students, it is the stakeholders who must guide and encourage them at all times. The Prime Minister extended his entire support for the cause.

The Prime Minister said that when we move keeping in mind the social context of technology, technology becomes a powerful tool of empowerment. It becomes a tool for removing imbalance and promoting social justice. The Prime Minister recalled the time when technology was beyond the reach of common citizens and things like debit, credit cards were status symbols. But today, UPI has become a new normal due to its simplicity. Today India is among the countries with the highest data use. Rural internet users number has overtaken urban users. JAM trinity, GeM portal, CoWin portal, e-NAM are making technology an agent of inclusion.

The Prime Minister said that the right use of technology gives new strength to society, today the government is using technology for providing services for every stage of life. Online birth certificates, e-Pathshala and Diksha e-learning platforms, scholarship portal, Universal access number during the job period, e-Sanjeevani for medical treatment, and Jeevan Praman for the elderly, such solutions are helping the citizen at every step, said the Prime Minister. He also talked about initiatives in easy passports, Digi Yatra, and DigiLocker as examples of ensuring social justice and enhancing ease of living.

Referring to the rapid changes taking place in the world of technology, the Prime Minister expressed confidence that the youth of India will lead the country in matching this pace and also crossing it. He mentioned AI tools that have emerged as the new game changers, the limitless possibilities in the health sector, and new innovations taking place in drone technology, and the therapeutics sector and said that India must take a lead in such revolutionary technology.

Referring to India's goal of a self-reliant defence sector, the Prime Minister mentioned Innovations for Defence Excellence (iDEX) and expressed delight that the Ministry of Defence has procured 14 innovations from iDEX worth more than Rs 350 crore. The Prime Minister mentioned initiatives

like i-create and DRDO young scientists' labs and said that these efforts are being given a new direction. Touching upon the new reforms in the space sector, the Prime Minister said that India is emerging as a global game changer and highlighted technologies like SSLV and PSLV orbital platforms. Shri Modi stressed the need to provide new opportunities for the youth and start-ups in the space sector and also touched upon taking the lead in areas of coding, gaming and programming. The Prime Minister also highlighted policy-level initiatives like the PLI scheme at a time when India is increasing its presence in new avenues like semiconductors.

Throwing light on the role of hackathons in innovation and security, the Prime Minister underlined that the government is continuously promoting the hackathon culture where students take up new challenges and emphasised the need for hand-holding and creating a framework for this. He suggested that an institutionalised system be kept in place to address the youth coming out of Atal Tinkering Labs. "Can we similarly identify 100 labs in the country in different areas, which should be made youth driven?", the Prime Minister asked. Highlighting the special focus areas of clean energy and natural farming, the Prime Minister stressed promoting research and technology. Concluding the address, the Prime Minister expressed confidence that National Technology Week can play an important role in realizing these possibilities.

In his address, Raksha Mantri Shri Rajnath Singh asserted that the 1998 Pokhran nuclear tests gave a message to the world that although India is a peace-loving nation which believes in 'Vasudhaiva Kutumbakam' and 'Ahimsa Paramo Dharma', it will not let anyone to harm the sovereignty, integrity and unity of the nation.

"India has not only wished for peace for itself, but given the message to the world. Visionaries like Lord Buddha and Father of the nation Mahatma Gandhi are India's gift to the world. We have never invaded any country nor enslaved it. But, the Pokhran tests gave a message that we will give a befitting reply to every step taken against our dignity," the Raksha Mantri said.

Shri Rajnath Singh termed National Technology Day as an inspiration to adopt a scientific approach while acknowledging the country's technological achievements. He underlined the importance of science in the progress of a nation, describing it as the source of power. He emphasised that scientific approach motivates the youth to contribute to nation building and ensures holistic development.

The Raksha Mantri was of the view that India, passing through the phase of demographic dividend, possesses a powerful human resource, which has guided it to a respectable position on the world stage. He called for optimum utilisation of this human resource to achieve the goal of a strong, prosperous and developed India.

"Under the leadership of Prime Minister Shri Narendra Modi, we are moving forward with the resolve of Jai Jawan, Jai Kisan, Jai Vigyan and Jai Anusandhan. We have risen in stature on the global stage and the world is witnessing a new ray of hope in India. We will be successful in realising our vision of building a strong and self-reliant 'New India'," Shri Rajnath Singh said.

The venue of the event is Pragati Maidan (Hall no 5 & 4), New Delhi. Stakeholder ministries and departments namely Atal Innovation Mission, NITI AAYOG, DST, DRDO, DOS, DAE, CSIR, DBT, MoES, DoT, MEITY, AICTE and DPIIT are participating in this grand expo.

A DRDO Pavilion has been set up, wherein over 30 DRDO laboratories, five DRDO Young Scientists Laboratories (DYSLs), Technology Development Fund (TDF), DRDO Industry Academia-Centre of Excellence (DIA-CoE) and BrahMos are showcasing a range of indigenously designed and developed systems, technologies and innovations in line with the theme of the event. Many DRDO developed innovative technologies & products developed in association with the industry in recent years are being exhibited. 12 MSME and industries are participating under the TDF and DIA-CoE.

In the prestigious Atal Innovation Mission (AIM), the DRDO is displaying Exoskeleton developed by DEBEL Bengaluru, and AI based Audio Transcription Translation for Airborne Communication System Measures (CSM) and associated AI Toolboxes developed by CABS Bengaluru; Laser Based Underwater Communication System developed by SSPL Delhi; and Internet of Battlefield Things (IoBT) developed by DYSL-AI. The DRDO will also organise motivational talks on 13th May being delivered by DYSL Directors and speakers from Industry and academia.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1923334>

THE TIMES OF INDIA

Fri, 12 May 2023

ISRO Successfully Tests Semi-Cryogenic Engine

The Indian Space Research Organisation on Wednesday successfully carried out the first test of a semi-cryogenic engine at the newly commissioned semi-cryogenic integrated engine and stage test facility at the Isro propulsion complex (IPRC) in Mahendragiri, Tirunelveli district. It was the first integrated test on an intermediate configuration of the 2000kN semi-cryogenic engine.

A tweet by the space agency said the test was, “A step towards developing a 2000kN thrust engine for future launch vehicles.”

A release said the intermediate configuration, designated as power head test article (PHTA), comprises all the engine systems except the thrust chamber. “The test was the first in a series of tests planned to validate the design of the propellant feed system, including the low pressure and high pressure turbo pumps, the gas generator and control components,” the release said.

Isro said liquid propulsion systems centre (LPSC) of Isro has undertaken the design and development of the semi-cryogenic engine with 2000kN thrust with India industry participation. The engine, which works on liquid oxygen (LOX- kerosene propellant combination, will power the booster stages of future launch vehicles.

The space agency said Wednesday’s test was a major milestone before integrating the complete engine and its qualification.

<https://timesofindia.indiatimes.com/city/chennai/isro-successfully-tests-semi-cryogenic-engine/articleshow/100172907.cms>

Business Standard

Thu, 11 May 2023

India will Soon Have 85,000 Talent Pool in Semiconductor Space: MoS IT

Minister of State for Electronics and IT Rajeev Chandrasekhar on Thursday said that in the semiconductor space, the country will soon have a talent pool of 85,000 who will not only create innovative designs and solutions for the country but also for the world.

Addressing an event organised by the non-profit Public Affairs Forum of India (PAFI), the minister said that India's 'Techade' is changing the narrative of the country being a IT/ITES hub.

"Our digital economy pie has transitioned from a unipolar prism of IT/ITES to one that consists of almost every activity in the digital economy space that the world is pursuing," he told the audience.

The minister also said that in the space of semiconductor, in just 14 months, the country has not only created opportunities in manufacturing and design but "with brand new curriculum in place, we will soon deliver a brand new 85,000 talent pool not only for India but also for the world".

"What China took 30 years to achieve, our government and country want to implement in one decade. The focus has been on moving 'New India' from being an outlier on the fringe in the Global Value Chains of electronics to becoming a serious player," Chandrasekhar emphasised.

On the Digital India Act (DIA), the minister said it is going to supersede the IT Act, which has gone into the pre-consultation phase.

"We have already had some fruitful discussions. We want to be transparent and collaborative about it," he told the audience.

"The laws and framework of policies we are creating are not just for today but for the next decade. And for that we want consultations with everybody, from consumers to companies, to anyone who has a point of view," the minister added.

India's semiconductor market is projected to reach \$64 billion by 2026 and Chandrasekhar will meet and encourage startups, next-generation innovators, chip designers and business leaders to invest in the semiconductor sector at an event as part of a series at IIT Delhi on May 12.

https://www.business-standard.com/india-news/india-will-soon-have-85-000-talent-pool-in-semiconductor-space-mos-it-123051100848_1.html

THE ECONOMIC TIMES

Thu, 11 May 2023

ICMR, AYUSH Ministry Sign MoU for Collaboration on Health Research

The Indian Council of Medical Research (ICMR) and the AYUSH ministry have signed an agreement for collaboration and cooperation for research in the field of integrated medicine. Integrated medicine refers to using alternative medicine systems such as ayurveda, yoga, naturopathy, unani, siddha and homeopathy with orthodox systems as part of a treatment plan.

The Memorandum of Understanding (MoU) will combine traditional knowledge with modern research and boost ayurveda's identity on the basis of scientific evidence, Union Health Minister Mansukh Mandaviya said.

According to an official statement, the agreement envisages cooperation and collaboration between the ministry and the ICMR for exploring areas of convergence and synergy for integrated health research and strengthening research capacity.

The agreement will focus on promoting high-impact scientific research in identified areas of national importance in healthcare, it said.

It will also look into the possibility of conducting high-quality joint clinical trials on certain diseases with promising therapies of the AYUSH system to generate evidence for wider acceptance, the statement said.

It said a joint working group will be created between the ministry and the ICMR that will hold quarterly meetings for exploring further areas of collaboration and to work on deliverables.

Both institutions will formulate and implement joint research projects and programmes and allow for joint supervision of activities, the statement said.

They will design and conduct conferences, workshops and seminars with participation of researchers interested in the field of integrated healthcare, it said.

<https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/icmr-ayush-ministry-sign-mou-for-collaboration-on-health-research/articleshow/100163400.cms>

