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अमर उजाला

Tue, 27 Feb 2024

सेना में शामिल 46 मीटर लंबा मॉड्यूलर ब्रिज क्या है? जिसे DRDO ने किया है डिजाइन; जानें सब कुछ

मॉड्यूलर ब्रिज मंगलवार को भारतीय सेना में शामिल किया गया। यह कदम सेना के इंजीनियर्स की ब्रिजिंग क्षमता को बढ़ाएगा। इसे डीआरडीओ ने लार्सन एंड टुब्रो (एल एंड टी) के साथ मिलकर स्वदेशी रूप से डिजाइन और विकसित किया गया है। नई दिल्ली स्थित मानेकशॉ सेंटर में आयोजित समारोह में इस 46 मीटर लंबे मॉड्यूलर ब्रिज को सेना में शामिल किया गया। इस दौरान सेना प्रमुख जनरल मनोज पांडे, सेना और एल एंड टी के वरिष्ठ अधिकारी मौजूद रहे। इस मॉड्यूलर ब्रिज में 2,585 करोड़ रुपये की कीमत के कुल 41 सेट अगले चार वर्षों में शामिल किए जाएंगे। इस गेम चेंबर ब्रिज को डीआरडीओ (रक्षा अनुसंधान एवं विकास संगठन) ने डिजाइन और विकसित किया है। जबकि एल एंड टी ने डीआरडीओ की ओर से नामित एजेंसी के रूप में इनका उत्पादन किया।

यह पूरी तरह से असॉल्ट ब्रिज है। मॉड्यूलर ब्रिज सेना को नहरों और खाइयों जैसी बाधाओं को आसानी से पार करने में समक्ष बनाता है। यह भारतीय सेना के इंजीनियर्स की ब्रिजिंग क्षमता को बढ़ाएगा। क्योंकि इन्हें बहुत कम समय में तैनात किया जा सकता है। मॉड्यूलर ब्रिज को आधुनिक सैन्य उपकरणों के साथ डिजाइन और विकसित किया गया है। यह भारत के कौशल और रक्षा क्षेत्र में देश की आत्मनिर्भरता को दिखाता है।

मॉड्यूलर ब्रिज की खरीद के लिए फरवरी 2023 में एल एंड टी के साथ अनुबंध किया गया था। सेना के मुताबिक, मॉड्यूलर ब्रिज के प्रत्येक सेट में 8x8 मॉबिलिटी वाहनों पर आधारित लॉन्चर वाहन शामिल हैं।

मॉड्यूलर ब्रिज मैन्युअल रूप से लॉन्च किए गए मीडियम गर्डर ब्रिज (एमजीबी) की जगह लेंगे, जो वर्तमान में सेना में इस्तेमाल किए जा रहे हैं। अधिकारियों ने कहा कि स्वदेशी रूप से डिजाइन और निर्मित मॉड्यूलर ब्रिज के कई फायदे होंगे। उन्होंने कहा कि यह ब्रिज से न केवल सेना की परिचालन क्षमता को दिखाते हैं, बल्कि रक्षा प्रौद्योगिकी और विनिर्माण में भारत की आत्मनिर्भरता को दिखाते हैं।

<https://www.amarujala.com/india-news/indigenously-designed-and-manufactured-modular-bridge-inducted-into-indian-army-2024-02-27?pageId=4>

ThePrint

Tue, 27 Feb 2024

Encouraging Students' Involvement in R&D Key to Foster Innovation Culture: DRDO Chief at IIT-Mandi

Encouraging students' involvement in research and development is the key to fostering a culture of innovation, DRDO Chairman Samir V Kamat said on Tuesday.

Kamat was addressing a gathering during the 15th foundation day celebrations of the Indian Institute of Technology (IIT)-Mandi.

“Encouraging students’ involvement in R&D (research and development) is key to fostering a culture of innovation. Leveraging engineering talent is imperative for our transition to a developed economy,” the Defence Research and Development Organisation (DRDO) chief said.

“Amid the serene Himalayan backdrop, taking the prime minister’s vision to be a world leader by 2047, IIT-Mandi is rapidly evolving into a technological landscape. The collaboration between DRDO and academia is vital for research and development, paving the path for a leader in defence in this constantly-evolving technological development,” he added.

IIT-Mandi Director Laxmidhar Behera said the institute has ambitious plans to expand the faculty and student strength, with a focus on inclusivity and accessibility.

“Our ongoing projects, such as the construction of new hostels, academic blocks and sports facilities, underscore our commitment to providing a conducive learning environment for all. Furthermore, our Green Committee’s proactive efforts in environmental conservation have earned us accolades such as the prestigious ‘Green University’ award at COP28,” he said.

Last year, IIT-Mandi secured significant external funding through 63 sponsored projects worth more than Rs 29.62 crore and 47 consultancy projects amounting to over Rs 2.21 crore.

On the outreach front, IIT-Mandi organised numerous national and international seminars, conferences and workshops, facilitating knowledge exchange and collaboration among scholars, researchers and professionals.

“The Centre for Continuing Education is playing a pivotal role in extending the institute’s impact beyond academia, offering a diverse array of educational opportunities, and fostering lifelong learning within the regional community,” Behera said.

“Along with this, the Technology Business Incubator, IIT-Mandi Catalyst, is serving as a dynamic hub for nurturing entrepreneurship and innovation, providing start-ups with essential support services, funding opportunities and industry partnerships to thrive in the competitive landscape,” the institute director added.

<https://theprint.in/india/encouraging-students-involvement-in-rd-key-to-foster-innovation-culture-drdo-chief-at-iit-mandi/1980982/>

THE TIMES OF INDIA

Wed, 28 Feb 2024

‘Our Defence Products can Challenge World’

India’s defence exports have experienced a remarkable eight-fold increase over the last five years, according to Binay Kumar Das, director general (DG) of electronics and communication system at the Defence Research and Development Organisation (DRDO).

Highlighting the array of products, from bulletproof jackets to advanced missiles like Dhanush built by the country, Das said India is all set to challenge the global defence market.

Addressing the first convocation of Odisha University of Technology and Research (OUTR) on Tuesday, Das said, “If I talk about defence today, the opportunities are phenomenal. With the national call of Atma Nirbhar Bharat, the entire defence import has gone down drastically. With

411 items on the negative import list, India is roaring high for self-reliance in defence manufacturing. Defence research is in the pinnacle of success.”

He said India has the world’s largest youth population. “The average age of an Indian is 29 years now compared to 39 years in China and 49 in Japan. The youth percentage below the age of 35 years in India will be 66%. It is the highest in the world today. We need to harness the power and potential of this youth power to make our country the best in the world,” said Das.

Odisha governor Raghubar Das said India aspires to become a developed country by 2047. “I am confident that this university and its students, with their innovation and use of technology, will be contributing to the dream of a developed India,” the governor said.

The DRDO DG said they are collaborating with IIT, Bhubaneswar, and other similar institutions to set up a unified research station.

<https://timesofindia.indiatimes.com/city/bhubaneswar/indias-defence-exports-witness-eight-fold-increase-drdo-dg-says/articleshow/108060531.cms>

Defence News

Defence Strategic: National/International



Press Information Bureau
Government of India

Ministry of Defence

Tue, 27 Feb 2024

Indian Army Strengthens Bridging Capability with 46-Meter Modular Bridge

Today, the Indian Army bolstered its bridging capability with the induction of the 46-meter Modular Bridge. Designed and developed by DRDO and produced by Larsen & Toubro (L&T), the bridging system was formally handed over in a ceremony at the Manekshaw Centre, New Delhi. The event was graced by General Manoj Pande, Chief of the Army Staff. Senior dignitaries from Indian Army, DRDO, and MoD were also in attendance.

Over the next four years, a total of 41 sets, valued at ₹2,585 Crores, will be progressively inducted. It is a mechanically launched single-span, fully decked 46-meter assault bridge, enabling the army to overcome obstacles such as canals and ditches with ease. It will augment the crucial bridging capability of Indian Army Engineers as these bridges are highly mobile, rugged, and designed for quick deployment and retrieval, aligning with the fast-paced nature of mechanized operations.

Each set of Modular Bridge consists of seven carrier vehicles based on 8x8 Heavy Mobility Vehicles and two launcher vehicles based on 10x10 Heavy Mobility Vehicles. The bridge can be employed over various types of obstacles like canals and ditches with quick launching and retrieval

capabilities. The equipment is highly mobile, versatile, rugged and capable of keeping pace with wheeled and tracked mechanized vehicles.

The modular bridges will replace the manually launched Medium Girder Bridges (MGB) that are currently being used in the Indian Army. The indigenously designed and manufactured Modular bridges shall have many advantages over the MGB such as increased span, less time for construction and mechanical launching with retrieval capability.

The induction of the Modular Bridge represents a significant step in enhancing the Indian Army's bridging capabilities. It highlights India's prowess in designing and developing advanced military equipment and underscores the nation's commitment to 'Aatmanirbhar Bharat' and self-reliance in defence production.

The acquisition of these bridges not only enhances the Indian Army's operational effectiveness but also showcases India's growing prominence in defence technology and manufacturing.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2009375>



Press Information Bureau
Government of India

Ministry of Defence

Wed, 28 Feb 2024

Defence Secretary Co-chairs India-Germany High Defence Committee Meeting in Berlin

Both countries focus on collaboration in high technology in defence.

Defence Secretary Shri Giridhar Aramane co-chaired the India-Germany High Defence Committee (HDC) meeting in Berlin on 27 Feb 2024 with the State Secretary, German Ministry of Defence Mr Benedikt Zimmer. Both sides discussed a range of bilateral security and defence issues, with a focus on developing the defence cooperation as a key pillar of the Strategic Partnership between India and Germany.

They exchanged views on the regional security situation, discussed likely joint exercises with Germany in the Indo-Pacific, and deliberated on potential defence industrial projects and proposals. They emphasized on the need for a closer defence partnership and connecting the defence industries from both sides together. Of particular focus was the collaboration in high technology in defence.

The conduct of HDC meeting follows the visit of German Federal Minister of Defence Mr Boris Pistorius to India in 2023.

Shri Giridhar Aramane later interacted with a prominent think tank German Institute of International and Security Affairs (Stiftung Wissenschaft und Politik - SWP) in Berlin.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2009618>



**Press Information Bureau
Government of India**

Ministry of Defence

Wed, 28 Feb 2024

Indian Navy – Narcotics Control Bureau Anti Narcotics Operations at Sea

In a coordinated operation at sea, the Indian Navy and the Narcotics Control Bureau (NCB) apprehended a suspicious vessel carrying almost 3300 Kgs contraband (3089 Kgs Charas, 158 Kgs Methamphetamine 25 Kgs Morphine).

Based on intelligence received from the Indian Navy's maritime surveillance aircraft which were corroborated with inputs from the NCB, a mission-deployed IN warship was pressed into action to intercept a suspicious dhow enroute to the Indian waters with sizeable contraband. IN units successfully located, tracked and intercepted the suspicious boat at sea.

The Boarding Operations on the dhow resulted in the largest seizure of narcotics, in quantity, in recent times. Subsequently, the boat was towed by the IN warship to the nearest Indian port for handing over the crew and contraband to the Law Enforcement Agencies.

This operation is significant, not only in terms of quantity and cost of the seized contraband, but also highlights the collaborative efforts between the Indian Navy and the NCB for disruption of the illegal narcotics smuggling routes, which emanate from the Makran coast and flow towards various IOR countries.

The successful coordinated mission reaffirms the strong commitment and resolve of the Indian Navy in thwarting the attempts to use the seas as a medium for illegal activities, especially in India's maritime neighbourhood.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2009627>



Tue, 27 Feb 2024

Army Chief General Pande Holds Talks with French Counterpart Schill

Army chief General Manoj Pande on Tuesday held "constructive" talks with his French counterpart, General Pierre Schill, focusing on ways to strengthen the cooperation between the two armies.

General Schill, the French Army chief, is on a visit to India from February 27 to 29.

The Indian Army said General Pande and General Schill exchanged ideas and held constructive discussions on various contemporary issues, including strengthening the cooperation between the two armies.

"The visit by Gen. Pierre Schill highlights the shared commitment of France and India to strengthen their strategic collaboration across defence, security and technology," the Army said in a statement.

"Such bilateral visits and various exercises between the militaries of both the nations epitomise the longstanding bond between the armed forces and reinforce their dedication to promoting regional stability and international security," it added.

The French Army chief began his engagements after paying tributes to the fallen heroes at the National War memorial.

General Schill was accorded a ceremonial Guard of Honour at the South Block lawns.

The visiting commander will be interacting with defence industry representatives and also witness a firing demonstration of Pinaka weapon systems in Rajasthan.

He will also be visiting the Sapta Shakti Command in Jaipur and interact with senior military commanders.

On February 29, General Schill will be addressing officers at the prestigious National Defence College (NDC).

<https://www.deccanherald.com/india/army-chiefgeneralpandeholds-talks-with-french-counterpart-schill-2912805>

THE TIMES OF INDIA

Wed, 28 Feb 2024

Army Tests Firepower at Pokhran Field Firing Range

The Theatre Artillery of the Eastern Command of the Indian Army successfully tested its firepower and arms and ammunition at the Pokhran field firing range in Jaisalmer.

The firepower of surface-to-surface weapons, including mainly Pinaka and Smerch rockets, was demonstrated. Eastern Army Commander Lt Gen R C Tiwari witnessed the exercise.

The Army described the exercise with a special slogan that "this exercise is a warning to our enemies, a promise to our friends". Under this, Artillery performed the best of its gunner's ability as well as the strength of its modern weapons. During this time, the manoeuvres were monitored by drones. At the same time, the incorporation of modernity in future wars was also practiced.

An official said, "Lt Gen RC Tiwari witnessed integrated firing of theatre artillery across full spectrum of operations and validation of swarm, First person view drones and niche technologies to operate in an EM and Air Defence contested environment at Pokhran Field Firing Ranges. The Army Commander appreciated the innovative efforts of the Eastern Command Gunners in technology absorption, doctrinal evolution, force preservation measures and cohesive integration of multi-domain force multipliers."

<https://timesofindia.indiatimes.com/city/jaipur/indian-army-successfully-tests-firepower-at-pokhran-field-firing-range-in-jaisalmer/articleshow/108059340.cms>

India and China are Reshaping Global Order: S Jaishankar

According to external affairs Minister S Jaishankar, India and China's ascendance is reshaping the global hierarchy.

"If you were to list three or four really big things which have changed in the last 20-25 years, I think most people would agree it would be the rise of China and the rise of India," Jaishankar said while replying to a question.

Speaking at an event in Delhi, Jaishankar on Monday emphasized the complexities arising from their simultaneous ascent, especially given their geographical proximity and evolving diplomatic relations. The minister pointed out the historical context of the bilateral relations, referencing the informal summits in Wuhan and Mamallapuram as efforts to maintain diplomatic equilibrium. However, the scenario shifted dramatically in 2020 when China's military build-up along the Line of Actual Control violated existing agreements, prompting India to respond by bolstering its own military presence.

The minister also shed light on India's internal measures in response to the challenges posed by China. He detailed significant increases in border infrastructure spending and efforts to protect the country's economic interests from "unfair competition." Jaishankar's comments reflect a broader strategy to enhance India's self-sufficiency and defense capabilities.

Beyond the immediate neighborhood, Jaishankar addressed India's stance on global terrorism, citing the Uri and Balakot strikes as strong responses to threats on the western front.

"The Uri and Balakot strikes by India sent its own message to the world. The West front terrorism got a befitting reply," Jaishankar asserted, highlighting India's proactive stance on national security and its broader implications for global peace and stability.

He also touched upon India's evolving role in the global arena, noting its improved economic standing and active participation in international forums like the G20.

<https://timesofindia.indiatimes.com/india/india-and-china-are-reshaping-global-order-s-jaishankar/articleshow/108025572.cms>



India's Military Capability Enhancement and Defence Procurements

By Maj Gen (Dr) Ashok Kumar, VSM (Retd)

An increasing convergence is being seen between the Services and the Ministry of Defence (MoD) towards the two concurrent goals of modernisation and indigenisation of the Indian Armed Forces. This is reflected in the simplification of policies and regulations for acquisition of technologies and platforms, according primacy to indigenous defence startups & MSMEs and fast tracking of existing procurement processes.

The recently concluded meeting of the Defence Acquisition Council (DAC) under the chairmanship of the Raksha Mantri gave approval for acceptance of necessity (AoN) for capital acquisitions of close to Rs One Lakh Crores, one of the biggest in MoD's recent history with special focus on the Indigenisation. Platforms such as new generation anti-tank mines with seismic sensors and remote deactivation, tactical control Air Defence radars for the Army; active towed array sonar and medium range maritime reconnaissance and multi-mission aircraft for the Navy and; flight refueller aircraft for the Air Force were the main highlights of this DAC.

Apart from these sophisticated platforms, the DAC also strengthened rules for expediting the acquisition of advanced technologies from Indian startups and MSMEs, especially those who qualify under the Innovations for Defence Excellence (iDEX) and Technology Development Fund (TDF) competitions. The amendments made to the Defence Acquisition Procedure (DAP) 2020, which has undergone multiple revisions to promote fast tracking of defence procurements and incentivise indigenous development of defence technologies since 2020, further simplify procedures related to payment schedule, procurement quantity and cost computation. This will help indigenous industries to scale and increase their competitiveness in the global market, again demonstrating the close link between national security and economic growth, each feeding into the other.

Over the years, the percentage of indigenisation component in platforms acquired through the capital acquisition route has constantly moved upwards on a steep gradient. This was a deliberate step taken to ensure that the stigma attached to India being one of the world's largest arms importers is replaced with one that redesignated the country as a defence exporter as well as a net security provider in the region.

Many steps were taken under the current government to facilitate this transition. Arrangements such as joint ventures, transfer of technology, enabling of defence startups and MSMEs through iDEX & TDF and promulgation of back-to-back positive indigenisation lists started showing results and India, for the first time in its history, emerged as a major exporter of defence systems and subsystems to significant number of nations, the last count being 85. One can only reminisce on the pride and exuberance felt when an agreement was reached between India and the Philippines for a \$375 million deal to export the BrahMos supersonic cruise missile to the latter in 2022. The LCA Tejas is also being considered by at least three countries to form the mainstay of their respective air forces.

However, some of India's neighbours that have revisionist powers ignore and actively disregard international norms of acceptable state behaviour. A delicate territorial understanding between India and China along the Line of Actual Control was broken unilaterally by the latter in May 2020 when soldiers of the People's Liberation Army transgressed into Indian territory and clashed with Indian soldiers, resulting in deaths on both sides.

As a result of the developments along our northern borders, a massive counter-mobilisation was ordered to stop further Chinese incursions and all the three services quickly went into action. Under these circumstances, duly aggravated with large supply chain disruptions due to ongoing Covid pandemic, to ensure that the country stands up to the regional bully and Indian forces are equipped with the best available products, a series of emergency powers (EPs) were allocated to the three Services. These EPs, gave revenue procurement powers of up to Rs 500 crores (per case) to each of the three Services, through their respective Vice Chiefs.

EPs focused on three broad areas i.e. spares, stores and limited niche capabilities. So far EPs have been allocated in four tranches, with the last expiring in June 2023. Under the first three tranches, restrictions on importing equipment from abroad were lifted and items were procured from both indigenous sources and foreign vendors. In the last tranche of EP, from January to June 2023, procurement was allowed only from indigenous sources. The change in terms and conditions of the

EPs also mirror the relative stabilisation of the situation along the LAC which has been termed 'sensitive yet stable'. The termination of the EP, along with further easing of DAP 2020 also brings attention back to the twin process of indigenisation and modernisation of the forces.

Taking a deeper look, one can gauge that EPs had a threefold aim: meet urgent operational requirements, early insertion of equipment to address capability voids and cater for the sustenance of requirement of the Armed Forces. What the EPs ensured was that the procurement process was put on steroids for a short term and enhanced capability was achieved. This was under the understanding that the EP route was for emerging crises and situations warranting a concentrated and immediate response.

After the EPs, the receipt of the equipment had to be within one year of signing the contract. Some of the equipment contracted under the first three tranches of EP include ammunition of various calibres, radio sets, night sights for the Army; repair of platforms like KH-35E, Shtil, Barak and provision of spares for torpedoes and Sea Kings for the Navy and repair and overhaul of aero engines for Su 30, MiG 29 and Mirage 2000s for the Air Force. The last tranche which featured only Indian manufacturers had the Army procuring equipment like ballistic helmets, quick reaction light and heavy vehicles, remotely piloted aerial vehicles and very short-range Air Defence systems, depth charges and repair of certain UAVs for the Navy. Acknowledging that the provision of EP did not exist in the just released DAP 2020, the MoD inserted a clause of Fast-Track Procedure (FTP) for capital procurement cases, under which the services received autonomy over procurement of capital equipment up to Rs 300 Crores.

There are some very valid caveats in the FTP procedure, given that it pertains to items that can be made available in the short term. So, obviously items with long lead times are automatically out of the purview of FTP, since they form part of the regular procurement route. The evolution of the FTP, extension of the EPs till June 2023 also reflects a matured and converging thought process within the MoD which couples increasing autonomy to the services with the impetus to indigenisation and also reflects the growing capability of the Indian defence industry.

Also, one has to be very careful when attempting to routinise EP for a longer time horizon since there is a huge difference between EP and an established procurement cycle. While the former implies ensuring adequacy of spares, overhauls and niche yet limited capabilities and is focused more on plugging operational gaps, the latter has a more long-term horizon. A quicker and efficient procurement cycle has to be mirrored in an increased technological absorptive capacity of the organisation. It is prudent to amend, modify and in place, adopt new doctrinal concepts, organisational structures and related tactics to absorb any new technology or platform fully in order to leverage them for maximum military effectiveness on the battlefield.

The sharpening of the DAP 2020 is a welcome step since it provides a scaffolding where processes and regulations regarding defence procurement and acquisition can be debated and modified based on a shared understanding. It is hoped that Indian defence procurement reaches a point where the concept of EP itself becomes redundant. The emerging convergence between the Services and the MoD reflects the integrated approach of warfighting from a 'Whole of Nation' approach. With the synchronised efforts of the MoD, the integration amongst the three services has resulted in better coordination to deal with every challenge together. Defence procurements are an integral part of such reforms and India is moving in the right direction to reduce its dependence on arms imports and become a net exporter, with defence exports expected to reach 50,000 Crores by 2028.

<https://www.financialexpress.com/opinion/indias-military-capability-enhancement-and-defence-procurements/3406891/>

Astronaut Wings for Gaganyaan's IAF Pilots, PM Calls them 4 Shakti

Six Years after he announced the decision to send Indians into space, Prime Minister Narendra Modi on Tuesday presented to the nation the four selected astronauts-designate who have been undergoing training under anonymity for the last four years.

The four candidates — Group Captains Prasanth Balakrishnan Nair (47), Angad Pratap (41), Ajit Krishnan (41) and Wing Commander Shubhanshu Shukla (38), all officers of the Indian Air Force — will follow in the footsteps of Rakesh Sharma, the first and only Indian to have travelled to space, way back in 1984, in a Russian spacecraft. (Two Indian-Americans — Kalpana Chawla and Sunita Williams — have also been to space on NASA missions.)

One of the four IAF pilots is likely to fly to the International Space Station later this year as part of a NASA mission, following an agreement between the space agencies of India and the United States last year. The others would be part of the Gaganyaan mission, India's first manned space flight that is currently scheduled for next year. The space capsule for Gaganyaan has the capacity to carry three astronauts, but it has not yet been finalised whether two or three astronauts would be sent on that mission.

Hailing the four officers at a function at the Vikram Sarabhai Space Centre at Thumba near Thiruvananthapuram, Modi called them “four Shakti” and bestowed the prestigious ‘astronaut wings’ on them. “They are not just four names or individuals, they are four ‘Shakti’... carrying the aspirations of 140 crore Indians into space,” he said, asking the audience to give a standing ovation to the pilots.

Emphasising the significance of this mission, he noted that an Indian was ready to venture into space after four decades. “This time around, the countdown, the timing, and even the rocket would be ours,” he declared.

Modi also expressed pride that most of the components for the Gaganyaan mission have been manufactured in India, underscoring the nation's self-reliance in space exploration.

Lauding their dedication and spirit towards training, he said the four pilots are representatives of India's “Amrit generation” that never gives up and shows the strength to challenge all adversities. He also noted the role of yoga as part of the training module.

“In this Amrit Kaal, an Indian astronaut will land on the Moon in an Indian rocket,” he said. “All of you are opening new doors of future possibilities,” he told the ISRO team.

Only three countries — the United States, Russia and China — have sent human spaceflights till now, though over 600 astronauts, including over 70 women, from close to 50 different countries have gone into space.

The Indian Space Research Organisation (ISRO) had started planning for a human spaceflight mission way back in 2004 but the real possibilities opened up only after the success of Chandrayaan and Mangalyaan missions, and the development of the GSLV rocket in the last one decade.

The Gaganyaan mission was originally scheduled for a launch in 2022, to coincide with 75 years of India's independence, but that schedule got derailed because of the Covid pandemic.

The four astronauts-designate

Gp Capt Prasanth Balakrishnan Nair

Nair, who hails from Nemmara village in Kerala's Palakkad district, is an alumnus of the National Defence Academy (NDA) and recipient of the Sword of Honour at the Air Force Academy.

Born on August 26, 1976, he was commissioned on December 19, 1998. The fighter pilot is a Category A flying instructor and a test pilot with approximately 3,000 hours of flying experience. As an experienced fighter pilot, he has flown a variety of fighter jets, including Su-30 MKI, MiG-21, MiG-29, Hawk, as well as the Dornier and AN-32 in over 25 years of his career in the IAF. He has commanded a premier fighter Su-30 squadron in the Northeast.

Nair has also trained at the United States Staff College and has been a Directing Staff at Defence Services Staff College (DSSC), Wellington.

The son of a retired engineer, his two brothers are settled abroad while his sister lives in Thrissur.

Gp Capt Ajit Krishnan

Born in Chennai on April 19, 1982, the fighter pilot is an alumnus of NDA and a recipient of the President's Gold Medal and Sword of Honour at the Air Force Academy. He is also an alumnus of DSSC, Wellington.

Commissioned in June 2003 in the fighter stream of IAF, the officer is a flying instructor and a test pilot with about 2,900 hours of flying experience and has flown a variety of aircraft including Su-30 MKI, MiG-21, MiG-21, Mig-29, Jaguar and Dornier, AN-32.

His wife is also learnt to have served in the IAF.

The officer is known to be an excellent gymnast and was a "blazer holder" at NDA. "Blazer holder" means a person who has attained the highest standard in a particular discipline.

Gp Capt Angad Pratap

Born in Prayagraj on July 17, 1982, he is also an alumnus of NDA and was commissioned in the fighter stream of IAF in December 2004. The officer is a flying instructor and a test pilot with about 2,000 hours of flying experience and has flown Su-30 MKI, MiG-21, MiG-29, Jaguar, Hawk, Dornier, AN-32 among other aircraft. His wife is a former IAF officer.

Wg Cdr Shubhanshu Shukla

Born in Lucknow on October 10, 1985, the officer is an alumnus of NDA and was commissioned in the IAF in June 2006. He is a fighter combat leader and a test pilot with about 2,000 hours of flying experience, and has flown Su-30 MKI, MiG-21, MiG-29, Jaguar, Hawk, Dornier, AN-32 among other aircraft.

The Gaganyaan mission envisages demonstration of human spaceflight capability by launching a crew of three members to an intended low earth orbit of 400 km for a three-day mission and bringing them back safely to Earth by landing in Indian sea waters.

"We will launch the Gaganyaan mission with astronauts by next year; everything is progressing as per plan," Dr Jitendra Singh, Minister of State, Science and Technology, said. "The PM himself awarding the astronaut wings to the selected candidates shows the government's commitment and priority towards space missions," he said.

Meanwhile, Modi also inaugurated three major space infrastructure projects worth about Rs 1,800 crore – the SLV Integration Facility (PIF) at the Satish Dhawan Space Centre, Sriharikota; the new

'Semi-cryogenics Integrated Engine and Stage Test facility' at ISRO Propulsion Complex at Mahendragiri; and 'Trisonic Wind Tunnel' at VSSC, Thiruvananthapuram.

Among those present at the VSSC were Kerala Governor Arif Mohammed Khan, Chief Minister Pinarayi Vijayan, Minister of State for External Affairs V Muraleedharan and ISRO chairman S Somanath.

<https://indianexpress.com/article/technology/science/astronaut-wings-for-gaganyaans-iaf-pilots-pm-calls-them-4-shakti-9184931/>



Wed, 28 Feb 2024

PM Modi Inaugurates New Projects, Lays Foundation Stone for New ISRO Launch Complex in Tamil Nadu

Prime Minister Narendra Modi on Wednesday inaugurated projects and laid the foundation stones for new initiatives, totally worth over Rs 17,000 crore and castigated the UPA regime for not 'bothering' about Tamil Nadu's progress.

Laying the foundation stones and inaugurating projects, Modi said the state is writing a 'new chapter of progress,' and due to the Centre's efforts, modern connectivity in Tamil Nadu is 'on a new high.'

In a veiled reference to the ruling DMK, he alleged that though newspapers and TV channels wanted to highlight Centre's such efforts "the regime here won't allow them to do so," "But we won't desist from development work," Modi asserted.

Flagging off India's first indigenous green hydrogen waterway vessel in Tamil Nadu's Thoothukudi, he said increasing connectivity due to the consistent efforts of the Central Government has enhanced 'ease of living' in Tamil Nadu. [The new projects are an important part of the roadmap for a developed India. "Whatever I am saying belongs neither to any political ideology nor to my own ideology, it only belongs to development."

Apparently targeting the DMK-Congress and pointing to a slew of development projects launched, he said: "I need to tell a truth to people of Tamil Nadu and the rest of the nation. Truth is bitter but it needs to be told...all these projects I have brought, they were demands of locals for decades."

In an indirect reference to the DMK, he said the Tamil Nadu's ruling party shared power at the Centre during the UPA regime.

However, they were not 'bothered about your progress.'

All the development initiatives have been delivered by the 'sevak,' he said in a reference to himself.

The Prime Minister laid the foundation stone for a new launch complex of ISRO at Kulasekarapattinam near here, which is worth about Rs 986 crore and the facility is set to accommodate 24 launches per year.

The new complex includes 35 facilities, and features mobile launch structure (MLS) with checkout computers marking a significant stride in enhancing space exploration capabilities.

<https://www.deccanherald.com/india/tamil-nadu/pm-modi-inaugurates-new-projects-lays-foundation-stone-for-new-isro-launch-complex-in-tamil-nadu-2913585>

