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List of Newly Elected Members approved in the 225th Grading Committee Meeting

NAL initiates taxi trials for evaluation of indigenously developed digital antiskid braking system for SARAS Mk 2



The National Aerospace Laboratories (NAL) initiated taxi trials for the evaluation of an indigenously developed digital anti-skid braking system for the civil aircraft, SARAS Mk2, 19-seat Light Transport aircraft. The low-speed taxi trial was conducted at the speed of about 30 knots and the results are highly satisfactory, the authorities informed. NAL sources said that there will be about 15 to 20 taxi trials to evaluate system performance. “Digital anti-skid braking system integration on SARAS Mk2 will benefit operation from airfields with short runways to boost regional air connectivity. The taxi trials were initiated on May 13 to validate the Digital Anti-skid Brake Management System developed for the first time in India for civil aircraft by the Council for Scientific and Industrial Research (CSIR) and NAL. The state-of-art brake-by-wire Electro-Hydraulic Braking System is configured around indigenously built most advanced high-performance Integrated Avionics & Flight Control Computer (IAFCC) embedded with multicore Power PC, VPX bus architecture and ARINC 653 compliant Real-Time Operating System (RTOS) with safety-critical partitioned virtual wall,” a statement read. The Union government sanctioned the SARAS-Mk2-19 Seat Light Transport aircraft project to the Council for Scientific and Industrial Research (CSIR- NAL) in June 2019. It is a multirole commuter aircraft with unique features like the pressurised cabin, short take-off and landing, operation from hot and high altitude airfields, operation from semi-prepared runways, autopilot for CAT-II landing, glass cockpit, digitally controlled mechanical systems and is also slated to be the most-versatile aircraft of its class for connecting remotely located Tier-II and Tier-III towns under the UDAN Scheme, sources added. “The Aircraft is designed to meet the requirements of the Armed Forces as well as those of commercial Airlines by keeping the low operational and acquisition cost by introducing advanced technologies. Indian Air Force has already committed the induction of 15 SARAS Mk2 aircraft,” the statement stated. In order to cut down the flight testing efforts of SARAS MK2, CSIR- NAL is using its existing SARAS PT1N, a 14-seater aircraft platform, to evaluate the sub-system performance and finetune the design ahead of the SARAS Mk2 maiden flight scheduled in end-2024.

Source: <https://indianexpress.com/>

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CURRENT AFFAIRS

ISRO SYNERGISES NATIONAL EFFORTS TO STUDY PLANET VENUS

On May 4, 2022, ISRO had organized a single-day National meeting on Venus science, in virtual mode, with the theme 'Outstanding Scientific Problems on Venus: Need for Space-based Studies', to brainstorm on the scientific contexts and possibilities of the Venusian science. The event witnessed active participation from several academic and research institutes, that included eleven scientific lectures from IIT-Delhi; IIT-Bombay; IIT-Roorkee; IIA, Bangalore; IISER, Kolkata; IIG, Mumbai; CUSAT, Kochi; SPPU, Pune; Amity University, Noida, and more; and four lectures from ISRO/DOS. The event was inaugurated by Shri Somanath S., Chairman, ISRO / Secretary, DOS, in the presence of Shri Shantanu Bhatawdekar, Scientific Secretary, ISRO, and Dr. Tirtha Pratim Das, Director, Science Programme Office, ISRO Headquarters. During the inaugural address, Chairman, ISRO / Secretary, DOS mentioned that ISRO has conceptualized an orbiter mission to Venus, with a set of scientific instruments to study the Venus system science. He emphasized the need for the synergy between the academicians, scientists and engineers to ensure effective scientific planning for the country's Venusian endeavor. He stressed bringing out unique scientific results from the proposed Venus mission and urged the scientists, and academicians of the Nation to invest their intellect and efforts to bring out the best scientific outcome. Shri Shantanu Bhatawdekar, Scientific Secretary, ISRO, mentioned that this meeting would provide a platform for the sustained association between the academia/institutes and the scientists and engineers of ISRO/DOS.

Source: <https://www.ISRO.gov.in/>

ISRO ORGANISES ACADEMIA-INSTITUTE-MINISTRY MEET FOR SPACE-BASED AERONOMY MISSION

ISRO had organized a National meeting on Aeronomy research to discuss the importance and prospect of space-based in-situ observation of the Earth's upper atmosphere to study the space-weather effects, with the theme 'Science of Near-Earth Space & Applications', on May 10, 2022, in virtual mode. The meeting was attended by representatives of several ministries of the Government of India, academicians and scientists from several reputed academic institutions. Introducing the theme, during the inaugural session, Shri Shantanu Bhatwadekar, Scientific Secretary, ISRO, explained that 'Aeronomy' refers to the physics and chemistry of the Earth's upper atmosphere, which directly feels the wrath of the space weather events. In the near-Earth environment, the space weather is governed by the eruptive phenomena from the Sun, which affect the ionosphere-thermosphere system severely, and the perturbation percolates to the lower altitudes depending on the intensity of the solar events. In this context, Scientific Secretary, ISRO mentioned that the DISHA-H&L mission, a twin Aeronomy mission conceptualized by ISRO, comprising two satellites, one at high (DISHA-H, at inclination greater than 85 degrees) and the other one at low (DISHA-L, at an inclination of about 25 degrees) inclination orbits, simultaneously orbiting the Earth at an altitude of ~400 km. He mentioned that DISHA is an acronym for 'Disturbed and Quiet time Ionosphere-Thermosphere systems at High Altitudes'. The twin satellites, he informed, with the identical set of scientific instruments, will capture the latitudinal and longitudinal effects of the space weather events on the Earth's upper atmosphere. Shri S. Somanath, Chairman, ISRO / Secretary, DOS, inaugurated the meet. During his inaugural address, he emphasized the necessity of bringing out the societal benefit of the proposed DISHA H&L mission. He mentioned that the proposed DISHA H&L mission will provide valuable scientific insight into the effect of space weather events on Earth's upper atmosphere, which, in turn, will help in the modelling of the ionosphere-thermosphere system in terms of its response to the space weather events. The model will not only be a valuable scientific contribution towards the understanding of the Sun-Earth connection but also be a tool for several applications that are susceptible to the space weather events. He solicited the active participation of the academia, institutes and ministries to build a strong user-base for this mission. Prof. Pallam Raju, Dean, Physical Research Laboratory, an autonomous body within the Department Space, made a presentation on the DISHA H&L concept, the parameters to be investigated, and the scientific instruments. The meeting, apart from several lectures from academia and institutes, witnessed a panel discussion on 'Science of Near-Earth space and its applications',

which was attended by the senior officials nominated by the Department of Telecommunication, Ministry of Civil Aviation, Ministry of Power, Ministry of Earth Sciences, Department of Science & Technology, Ministry of Electronics and Information Technology and Ministry of Information and Broadcasting. The panelists deliberated the importance of such space-based Aeronomy missions with relevance to the respective ministries. Discussions spun the domains of the disruption of radio-wave propagation affecting communication and navigation infrastructure during severe space-weather events, the need for coupling the ionosphere-thermosphere model and atmospheric model to build a holistic model to assess the effects of space weather events on the atmosphere, passenger health in aviation sector during polar flights, the importance of the Aeronomy study on the air navigation services, need for parallel/super-computing facilities for high spatial-temporal modelling of the Sun-Earth coupling system will better accuracy, to name a few. Ministry representatives offered collaborative support to take this endeavor forward. Dr. Tirtha Pratim Das, Director, Science Programme Office, moderated the inter-ministerial panel discussion. He mentioned that DISHA H&L is just an initial step towards the building of the space infrastructure towards achieving self-reliance in modelling and managing space weather events. Fulfilling this goal necessitates drawing a long-term plan covering many solar cycles, which, in turn, requires a programmatic approach, with the confluence of the wisdom and active participation of the relevant ministries. Once Aditya-L1 heliophysics observatory is in orbit and study the causes of the space weather events, DISHA H&L will studies the effects. The ground-based observations of the ionosphere and the Sun will complement the space-based observations. Thus, DISHA H&L will add to the space and ground-based infrastructure for achieving a better understanding of the space weather effects, which will eventually lead to better planning for the protection of the space and ground-based assets.

Source: <https://www.ISRO.gov.in/>

Yuva Vigyani Karyakram (YUVIKA-2022)

The Yuva Vigyani Karyakram (YUVIKA) is residential training programme conducted by ISRO. YUVIKA-2022 is scheduled from 16th to 28th May 2022 wherein, 150 students are selected from all the states and Union territories of the country. The training is organised at 5 centres of ISRO viz, VSSC-Trivandrum, URSC-Bengaluru, SAC-Ahmedabad, NRSC-Hyderabad and NESAC-Shillong. The programme includes class room lectures, hands-on activities, interaction with eminent scientists, lab/facility visits, sky gazing, robotic assembly, Cansat experiments and so-on. All the students will be taken to SDSC SHAR- Sriharikota, the space port of India for a visit and Face-to-face interaction with Chairman, ISRO. Around 1 lakh students applied for the programme. The finally 150 students were selected based on the academic scores and achievements in other co-curricular activities. Secretary, DOS/Chairman, ISRO inaugurated YUVIKA-2022 in a virtual event on 16th May, 2022 in the presence of directors of all major centre, Scientific Secretary, ISRO, Dr TK Alex and Director, CBPO. Addressing the gathering, Secretary, DOS / Chairman, ISRO Shri. Somanath S, welcomed all the students and urged the students to fully utilise the opportunity to interact with the senior scientists and technocrats whom they are going to meet in next two weeks. He also explained the students about the vast opportunities and domains like Engineering, Astrophysics, Astrobiology, Mathematics, Material science, Chemistry, Computer Science etc. which actually are integral part of space technology but not known to people. He also requested the students to ambassadors of ISRO and propagate the experience to their schoolmates, teachers, general public and make them understand how ISRO is touching each and everyone's life in a positive way. The course content made also was released by Secretary, DOS/ Chairman, ISRO during the event.

Source: <https://www.ISRO.gov.in/>

ISRO plans mission to Venus, eyes December 2024 launch window

After sending missions to the Moon and Mars, ISRO is now readying a spacecraft to orbit Venus to study what lies below the surface of the hottest planet in the solar system and also unravel the mysteries under the sulfuric acid clouds enveloping it. Addressing a day-long meeting on Venusian science, ISRO Chairman S Somnath said the Venus mission has been conceived, project report has been made and money has been identified, and urged scientists to

focus on high impact outcomes. “Building and putting a mission on Venus is possible for India in a very short space of time, as the capability today exists with India,” Mr Somnath said in his inaugural address. The space agency is eyeing the December 2024 window for launch with orbital maneuvers planned for the following year when earth and Venus would be so aligned that the spacecraft could be put in the neighbouring planet’s orbit using a minimum amount of propellant. The next similar window would be available in 2031. Indian Space Research Organisation (ISRO) Chairman Mr Somnath cautioned against repeating experiments conducted by previous missions to Venus and focus on unique high impact outcomes as were achieved by the Chandrayaan-I and the Mars Orbiter Mission. “Goal is to review that unique additional knowledge observation can be done and see that we are not repeating what all has already been done. Repeating some of them is not a crime but if we bring uniqueness, it will have an impact globally,”he said. Among the experiments planned include investigation of the surface processes and shallow sub-surface stratigraphy, including active volcanic hotspots and lava flows, studying the structure, composition and dynamics of the atmosphere and investigation of solar wind interaction with Venusian Ionosphere. A key instrument on the spacecraft will be the high resolution synthetic aperture radar to examine the Venusian surface, which is covered by dense clouds that make it impossible to view the planet’s surface.

Source: <https://www.deccanherald.com>

Army successfully test-fires advanced version of Akash Prime at Pokhran

The Indian Army’s Air Defence Warriors of Sapta Shakti Command successfully tested one more advanced version of Akash Prime, a new generation missile at field in. The missile included simultaneous engagement of multiple aerial targets ensuring 100% hits, demonstrating the potency of the weapon in realistic operational conditions. The new variant of the missile fired from surface to air successfully hit the pseudo targets of the enemy. During the trials which were on for the last four days, GoC Lieutenant General Mr A S Bhinder, scientists from Defence Research and Development Organisation (DRDO) and senior army officers were present. DRDO developed the ‘Made in India’ Akash missile system that can be launched from mobile platforms and engage multiple targets simultaneously from different directions. An army official said, “The upgraded missile has been fired from a mobility platform. The new generation missile is designed for use by the Indian Air Force (IAF) and Indian Army in order to intercept high manoeuvring aerial threats. The Indian Army artillery will become stronger from the missile and the aerial security will become tighter.” The missile is capable of engaging multiple targets in real time and has an intercept range of 40km with the missile guidance system being more accurate now along with the fire control system. A defence source said, “The performance of the command and control system, on-board avionics and aerodynamic configuration of the missile was successfully validated during the trial. Several range instruments including radar, EOTS and telemetry systems were used while monitoring the entire path of the missile during the test launch.”

Source:<https://timesofindia.indiatimes.com/city/jaipur/army-successfully-test-fires-advanced-version-ofakash-prime-at-pokhran/articleshow/91244056.cms>

HANSA-NG completes in-flight engine relight test

The new generation two-seater trainer aircraft (HANSA-NG 2) designed and developed by National Aeronautics Laboratory (NAL) successfully completed its in-flight engine relight test. The test was conducted at the Defence Research and Development Organisation’s (DRDO) Aeronautical Test Range (ATR) facility in Challakere, 200km from Bengaluru.

Source:<https://timesofindia.indiatimes.com/city/bengaluru/hansa-ng-completes-in-flight-engine-relighttest/articleshow/91627688.cms>

Defence Minister urges youths to indigenise new technologies

Defence Minister Mr Rajnath Singh called upon the youth of the country to ideate, innovate and indigenise new technologies to achieve "Aatmanirbhar Bharat", as envisioned by Prime Minister Narendra Modi. Addressing the students of Dr DY Patil Vidyapeeth during the 13th convocation ceremony in Pimpri, Singh described the youth as the biggest strength, catalyst and source of change for any country. "The youth can face any challenge and convert it into an opportunity. They have the potential to discover new technologies, and set up new companies and research establishments," he said. He iterated the government's resolve of domestic procurement of defence equipment to achieve "Aatmanirbhar Bharat", saying that India should not depend on other countries for its needs. He said the government had faith in the youth and was striving to provide them with ample opportunities to ensure their progress and holistic development. Referring to Prime Minister Modi's appeal "Vocal for Local", he said it would create employment opportunities for the young and ignited minds of the country. The minister reminded students to value the contributions made by unknown people in their lives. "For example, an apron that you wear today may have come from a cotton farmer from Vidarbha, and your shoes may have been made in a factory in Kanpur. Likewise, many unknown people are contributing to your lives. They need your respect and love," he said.

Source:<https://timesofindia.indiatimes.com/city/pune/defence-minister-urges-youths-to-indigenise-newtechnologies/articleshow/91716668.cms>

Top officers of Army, Navy, Air Force meet to review preparedness in East

Top officers of the Air Force, Navy and Army met in Shillong to review the operational issues and enhance interoperability among the forces in the eastern region, a defence spokesperson said. The three-day Tri-Services Eastern Commanders-in-Chief Conference, held at the headquarters of the Eastern Air Command, concluded. "The commanders exchanged notes on the peculiarities of operations in their respective domains, identify each other's strengths and arrive at mutually agreeable solutions to enhance interoperability and synergy between the three services," the spokesperson said. They reviewed the progress made on various operational and logistic issues made since the last meeting, he said. Commander-in-Chief of Andaman and Nicobar Command Lt Gen Ajai Singh, Flag Officer Commanding-in-Chief Eastern Naval Command Vice Admiral B Dasgupta and General Officer Commanding-in-Chief Eastern Command Lt Gen RP Kalita attended the meeting. The meeting was hosted by Air Officer Commanding-in-Chief Eastern Air Command Air Marshal DK Patnaik.

Source:<https://www.deccanherald.com/national/east-and-northeast/top-officers-of-army-navy-air-force-meet-to-review-preparedness-in-east-1110719.html>

TECHNOLOGY

ISRO successfully tests large human rated solid rocket booster for the Gaganyaan programme

ISRO successfully completed the static test of a human-rated solid rocket booster (HS200) for the Gaganyaan Programme at Satish Dhawan Space Centre (SDSC), Sriharikota, Andhra Pradesh on May 13, 2022, at 7:20 AM local time. HS200 rocket booster is the human-rated version of the well-proven S200 rocket booster of GSLV Mk III satellite launch vehicle, popularly known as LVM3. The successful completion of this test marks a major milestone for the prestigious human space flight mission of ISRO, the Gaganyaan, as the first stage of the launch vehicle is tested for its performance for the full duration. The event was witnessed by Shri S Somanath, Chairman, ISRO / Secretary, Department of Space and Dr. S Unnikrishnan Nair, Director, VSSC along with other ISRO scientists. Design and development of the HS200 booster were completed at Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram and propellant casting was completed at SDSC, Sriharikota. The S200 motor which is the first stage of the LVM3

launch vehicle intended for launching a 4000 kg class of satellites to Geosynchronous transfer orbit, was configured as a strap-on rocket booster. Based on the successful launch pedigree of this launch vehicle including the Chandrayaan mission, the LVM3 has been identified as the launcher for the Gaganyaan mission. For the manned space mission, LVM3 launch vehicle underwent improvements stipulated by the requirements of human rating. Accordingly, a host of design improvements that were aimed at increasing the safety and reliability of various systems were implemented in the S200 booster like all other systems. These include additional safety features for motor case joints and robust insulation and ignition systems. The control system used in this booster employs one of the world's most powerful electro-mechanical actuators with multiple redundancies and safety features. The system is fully indigenously designed and developed by ISRO in participation with various industries spread across the country. Despite the restrictions imposed by the pandemic, ISRO could complete the entire design, development, realization and testing process within a short span of two years. The HS200 booster loaded with 203 tons of solid propellant was tested for a duration of 135 seconds. The 20 m long and 3.2 m diameter booster is the world's second-largest operational booster with solid propellant. During this test, about 700 parameters were monitored and the performance of all the systems was normal. With the successful completion of this test, ISRO marches one more step closer to Gaganyaan Programme. Out of the three propulsion stages of LVM3, the human-rated versions of the second stage known as L110-G loaded with liquid propellant and the third stage C25-G with cryogenic propellant are in the final phase of qualification including tests with static firing. Gaganyaan programme, the most prestigious scientific endeavour of India is steadily progressing towards its final goal of taking an Indian to space and bringing him safely back.

Source: <https://www.ISRO.gov.in/>

Indian Navy successfully test-fires naval anti-ship missile

India successfully conducted the maiden flight test of an indigenously-developed naval anti-ship missile from a Seaking 42B helicopter, demonstrating the new weapon's ability to add more teeth to the force's war-fighting prowess. The test firing at the Integrated Test Range, Chandipur, Odisha, sources said, was a significant step towards achieving self-reliance in niche missile technology. The missile followed the desired sea-skimming trajectory and reached the designated target with a high degree of accuracy, validating the control, guidance and mission algorithms, the Defence Research and Development Organisation said in a statement. All the sub-systems performed satisfactorily. The sensors deployed across the test range and near the impact point tracked the missile trajectory and captured all the events. The missile employed many new technologies, including an indigenously developed launcher for the helicopter, while the guidance system includes a state-of-the-art navigation system and integrated avionics. The missile would have to undergo multiple trials before it is inducted in the Indian Navy.

Source: <https://www.deccanherald.com>

DRDO conducts successful trials of ATAGS - Know more about this indigenously built towed artillery gun system

In yet another technological advancement, India has successfully conducted the trials of the indigenous Advanced Towed Artillery Gun System (ATAGS), being developed by the Defence Research and Development Organisation (DRDO). The trials of the gun system, considered to be the best in its class in the world, were conducted at Pokhran Field Firing Range (PFFR) between April 26 and May 2, the DRDO said as reported by news agency ANI. The ATAGS is a towed 155 mm x 52 calibre howitzer that is being developed for the Indian Army by the DRDO along with private firms Bharat Forge and TATA Power SED. The ATAGS project was started in 2013 by DRDO to replace older guns in service in the Indian Army with a modern 155mm artillery gun. ATAGS is a large calibre Gun system with the capability to program and fire future Long-Range Guided Munitions (LRGM) to achieve precision and deep strike, according to the DRDO's website. As per the premiere agency, the system is configured with an all-electric drive that will ensure maintenance free and reliable operation over longer periods of time. It consists of a barrel of 6,875mm, breech mechanism,

muzzle brake and recoil mechanism to fire 155 mm calibre ammunition with a firing range of 48 kilometre. The howitzer is integrated with advanced features like high mobility, quick deployability, auxiliary power mode, automatic command and control system, and advanced communication system with night vision capability in direct-fire mode. According to the DRDO, it can fire three rounds in 15 seconds while in burst mode, and as many as 60 rounds in 60 minutes while in sustained mode. With a weight of 18 tonnes, it is said that the gun is two tons lighter than guns in the same category

Source:<https://www.timesnownews.com/india/drdo-conducts-successful-trials-of-atags-know-moreabout-this-indigenously-built-towed-artillery-gun-system-article-91268392>

DRDO's SFDR flight test successful

Defence Research and Development Organisation (DRDO) has successfully flight-tested Solid Fuel Ducted Ramjet (SFRD) booster at the Integrated Test Range (ITR), Chandipur off the coast of Odisha. The SFDR has been developed by Defence Research and Development Laboratory, Hyderabad in collaboration with other DRDO laboratories such as Research Centre Imarat, Hyderabad and High Energy Materials Research Laboratory, Pune. Complimenting the teams involved in design, development and testing, Secretary, Department of Defence R&D and Chairman DRDO Dr G Satheesh Reddy said, with the successful trial of SFDR, the range of air-to-air missiles can be enhanced. "The test successfully demonstrated the reliable functioning of all critical components involved in the complex missile system and met all the mission objectives," the ministry of defence said. The SFDR-based propulsion enables the missile to intercept aerial threats at very long range at supersonic speeds. The performance of the system has been confirmed from the data captured by a number of range instruments like Telemetry, Radar and Electro Optical Tracking Systems deployed by ITR. Defence minister Mr Rajnath Singh congratulated DRDO for the successful trial of SFDR. He termed it as an important milestone toward the development of critical missile technologies in the country.

Source:<https://timesofindia.indiatimes.com/india/drdo-sfdr-flight-test-successful/articleshow/90733566.cms?from=mdr>

BUSINESS

A Memorandum of Understanding (MoU) is signed between Indian Space Research Organization (ISRO), Bengaluru and Central University of Himachal Pradesh (CUHP), Dharamshala

A Memorandum of Understanding (MoU) is signed between Indian Space Research Organization (ISRO), Bengaluru and Central University of Himachal Pradesh (CUHP), Dharamshala for cooperation in the areas of Space Situational Awareness (SSA), Astronomy and Astrophysics by Shri Shantanu Bhatawdekar, Scientific Secretary, ISRO and Prof. Sat Prakash Bansal, Vice-Chancellor CUHP. Continuous analysis of the collision threats posed by growing number of space objects is essential to safeguard Indian space assets. Reliable Indian space activities require tracking and monitoring these objects with the help of observational facilities. This leads to mounting interest in Space Situational Awareness and need for capabilities to track and monitor not just the operational satellites but the non-functional uncontrolled space debris. This MoU will pave the way for future collaborations between ISRO and CUHP in establishing the observational facilities specifically ground based optical sensors for space object tracking, deep space exploration, R&D related to astrophysics and Near Earth Objects (NEO). Dr. A. K. Anilkumar, Director, Directorate of Space Situational Awareness & Management (DSSAM), Dr. P. Sreekumar, Satish Dhawan Professor, ISRO, Dr. Tirtha Pratim Das, Director, Science Programme Office (SPO), Shri. Deva Arul Daniel, Associate Director, DSSAM, Dr. Bikram Pradhan, Deputy Programme Manager, DSSAM were present from ISRO side. Faculties of the Department of Physics

and Astronomical Sciences (DPAS), CUHP, Prof. Hum Chand, Dean, School of Physical and Material Science, Prof. Vishal Sood, Registrar, CUHP were also present.

Source: <https://www.ISRO.gov.in/>

5 years on, 'strategic partnership' Defence projects yet to take off

Five years after the (SP) model was promulgated to boost indigenous defence production through tie-ups with majors, not a single project has taken off under the much-touted 'Make in India' policy till now. The SP model projects identified by the ranged from the manufacture of newgeneration submarines and helicopters to advanced fighters and futuristic main-battle tanks in 4 long-term joint ventures between Indian companies and OEMs (original equipment manufacturers) with "deep and extensive" transfers of technology. But the first project to make six diesel-electric stealth submarines with airindependent propulsion for greater underwater endurance, at an initial estimated cost of Rs 43,000 crore under Project-75 India (P-75I), is still far away from the actual contract being inked after the long-winded initial shortlisting and tender process. The defence ministry in July last year issued the RFP (request for proposal) to defence shipyard and private shipbuilder L&T, who in turn were to join hands with one of the five shortlisted OEMs to submit technocommercial bids for the mega project. The foreign ship-builders were Naval Group-DCNS (France), (Russia), ThyssenKrupp Marine Systems (Germany), Navantia (Spain) and Daewoo (South Korea). "The French and Russians have already formally pulled out of the competition. Two others have also expressed concerns about the technical and commercial conditions," a defence official said. The other SP projects have not even reached this preliminary stage. One of them is the 's longpending acquisition of 111 armed, twin-engine utility choppers at a cost of over Rs 21,000 crore to replace its ageing fleet of single-engine Chetak helicopters. Another is IAF's quest for 114 new 4.5-generation fighters with "some fifth-generation capabilities" for over Rs1.25 lakh crore, which has seven foreign contenders but is yet to be even granted the initial "acceptance of necessity" by the defence ministry.

Source:<https://timesofindia.indiatimes.com/india/5-years-on-strategic-partnership-defence-projects-yetto-take-off/articleshow/91296132.cms>

India-France Defence partnership strong, in line with Atmanirbhar Bharat: MEA

hasizing the strong strategic and defence partnership between India and , Foreign Secretary said that the defence cooperation between the two countries is in line with "our own domestic policy of Atmanirbharta (selfreliance)". The Foreign Secretary made the remarks while addressing a press briefing at the conclusion of the bilateral and delegationlevel talks between Prime Minister and French President Emmanuel Macron. Answering a question of possible agreements during the talks on further upgradation and orders of the French fighter aircraft Rafale, Foreign Secretary said that the talks did not necessarily cover individual platforms. "I think what you need to realise is when the two strategic partners speak, it covers the discussion in a format which is not necessarily focused on transactions on individual platforms," Foreign Secretary said. Talking further about the defence cooperation 6 between India and France, the Foreign Secretary reiterated that the two countries "are very strong strategic partners, and also have a very strong defence partnership". The context of defence partnership is defined in the case of our two countries by not just trade in different platforms, but it also extends to co-development, co-designing, comanufacturing," Kwatra said. "This is also very much in sync and in line with our own domestic policy of Atmanirbharta, which also ofcourse extends very strongly in the field of defence," he added. The joint statement released by India and France at the end of the Prime Minister's visit also talked about the greater involvement of France in "Atmanirbhar Bharat" (self-reliant India). "As seen in the timely delivery of the Rafale despite the pandemic, the two sides enjoy synergy in the field of defence," the joint statement read. "Taking forward this momentum, and based on their mutual trust, both sides agreed to find creative ways for France's deeper involvement in the 'Atmanirbhar Bharat' (Self-reliant India) efforts in advanced defence technology, manufacturing and exports, including through encouraging increased industry to industry partnerships," the statement added. Both sides also welcomed the "ongoing intense cooperation across all defence domains" in the joint statement. Answering another question, on the possibility of coproduction of Rafale aircraft with France in India by the Hindustan

Aeronautics Limited (HAL), Foreign Secretary Kwatra said that he could not comment specifically on that, but highlighted that there are many possibilities. "With regard to the co-production, possibilities... look, it's a very broad scope, and it's a very broad field of substance, and anything can be discussed and is possible in terms of what two countries can eventually agree to co-produce," Mr Kwatra said.

Source: <https://timesofindia.indiatimes.com/india/india-france-defence-partnership-strong-in-line-withatmanirbhar-bharat-mea/articleshow/91329772.cms>

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6	Mr. Anurag Negi	Assistant Manager	--do--	M-20756	Mumbai
7	Mr. Melroy Bosco Dias	Licensed Aircraft Engineer	--do--	M-20757	Mumbai
8	Mr. Rijin KV	Engr SF	--do--	M-20758	Thiruvananthapuram
9	Mr. Kiran R	Sci/Engr-SF	--do--	M-20759	Thiruvananthapuram
10	GpCapt Rajesh Dogra	Chief Technical Officer	--do--	M-20760	Kanpur
11	Dr. Rajesh Ranjan	Asst. Professor	--do--	M-20761	Kanpur
12	Mr. Suparnkumar SudhakarSathe	Test Pilot	--do--	M-20762	Kolkata
13	Mr. Saikat Roy	Manager	--do--	M-20763	Kolkata
14	Mr. Nishant Nanasahab Kale	Chief Manager	--do--	M-20764	Nasik
15	Mr. SatyanandaDoraiswamyArcot	Senior Manager	--do--	M-20765	Bangalore
16	Mr. Rambabu Doudu	Scientist	--do--	M-20766	Hyderabad
17	Mr. Atul Sudhakar Ambaskar	Sr. Assistant General Manager(Retd)	--do--	M-20767	Mumbai
18	Mr. V. Nagaraj	Assistant Professor(Er.)	Associate Member	AM-7597	Chennai
19	Ms. Siva Priya S	Assistant Professor(Er.)	--do--	AM-7598	Chennai
20	Ms. Savitry Kumari	Scientist/Engr-SE	--do--	AM-7599	Bangalore
21	Ms. Jithu Priya K	Scientist C	--do--	AM-7600	Bangalore
22	Mr. Shahvir Pervez Kyas	Senior First Officer	--do--	AM-7601	Mumbai
23	Ms. Ashitha K	Nil	Graduate	G-13525	Bangalore
24	Ms. Megha Goyal	Nil	--do--	G-13526	Chandigarh
25	Ms. Nair Anjali Mohandas	AeSI Graduate	--do--	G-13527	Goa
26	Mr. Karandeep Singh	AeSI Graduate	--do--	G-13528	Delhi