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Wings India 2022

Glimpses



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CURRENT AFFAIRS

Satish Dhawan Centre For Space Sciences Inaugurated at CUJ, Jammu

ISRO, Department of Space and Central University of Jammu (CUJ) has jointly established a space science centre for carrying out research in space science and technology in the Central University campus, Jammu. The Centre is named after the renowned Space Scientist, teacher and former Chairman, ISRO, Prof. Satish Dhawan, who hailed from Jammu & Kashmir. The Satish Dhawan Space Science Centre was inaugurated by Dr. Jitendra Singh, Hon'ble Minister of State (MoS) for Space, in the presence of Shri Somanath S, Chairman, ISRO/ Secretary DOS, Dr. K. Radhakrishnan Former Chairman, ISRO & Member, Space Commission and Prof. Sanjeev Jain, VC-CUJ, on March 12, 2022. Dr. Jitendra Singh mentioned that the institute will open up new vistas in the region for academicians, industrialists and start-ups in the space domain. He also opined that the space applications cut across all the technology domains, and space will become an unavoidable technology in the years to come in all walks of life. The Centre houses different labs/ facilities related to geospatial data analysis, materials, astrophysics, natural disasters and avionics. Inauguration is followed by a two days conference on "Frontiers of Space Technology and Applications for Humanity" with technical sessions where Directors of IIRS, PRL, NARL, SPL and Sr. ISRO scientists and Sr. faculty from Central University of Jammu delivered talks related the above areas of research.



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

ISRO ACADEMIA DAY 2022 - Invitation to academia for submitting Research proposals to ISRO

ISRO Academia Day 2022 was celebrated on March 15, 2022. In a virtual function, Shri Somanath S, Chairman, ISRO/ Secretary DOS inaugurated the celebrations and released RESPOND Basket. RESPOND is a scheme through which ISRO funds academic research projects undertaken at various Indian institutions. The RESPOND basket is a compilation of about 195 research topics from various ISRO centres. The online portal "i-GRASP" for the submission of research proposals including grant-in-aid management was also launched. On the occasion, Chairman, ISRO urged the academia to come forward and contribute to the R&D efforts of ISRO and highlighted that ISRO focuses on the schedule bound and result oriented research. The day was organised by Capacity Building Programme Office (CBPO) ISRO HQ. Shri N Sudheer Kumar, Director, CBPO welcomed the Academic and Scientific community. Prof Srinivasan Raghavan, Professor & Chair, CeNSE, IISc, Bengaluru touched upon the high ended research at CeNSE in collaboration with ISRO and highlighted the outcome of the projects. Shri Rama Kamaraju, Advisor, NITI Aayog spoke on the occasion and appreciated the technology based approach to monitor the progress of the scheme. Dr M A Paul, Associate Director, CBPO proposed the vote of thanks. The above function was followed by a technical session where research opportunities available at various ISRO/DOS Centres were presented to academia. It provided a common platform for academic researchers and ISRO scientists to share the experience, views and expectations on research opportunities available in ISRO. Over 1500 researchers from academia witnessed the programme.



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

DRDO successfully flight tests Indian Army version of Medium Range Surface to Air Missile off Odisha coast

Defence Research and Development Organisation (DRDO) conducted two successful flight tests of the Indian Army version of Medium Range Surface to Air Missile (MRSAM) at Integrated Test Range, Chandipur off the coast of Odisha on March 27, 2022. The flight tests were carried out as part of the live firing trials against high-speed aerial targets. The missiles intercepted the aerial targets and destroyed them completely, registering direct hits at both the ranges. The first launch was to intercept a medium altitude long range target and second launch was for proving the capability of a low altitude short range target. This MRSAM version is a Surface-to-Air Missile developed jointly by DRDO and Israel Aerospace Industries (IAI), Israel for use by the Indian Army. The MRSAM Army weapon system comprises multi-function radar, mobile launcher system and other vehicles. The flight tests were carried out with the weapon system in deliverable configuration. The performance of the weapon system was validated through the flight data captured by range instruments like radars, electro-optical tracking systems and telemetry deployed by ITR, Chandipur. The flight tests were carried out in the presence of senior officials from DRDO and Indian Army. Raksha Mantri Shri Rajnath Singh has congratulated DRDO, Indian Army and the Industry for the successful flight tests of MRSAM-Army. He said, both the successful tests established the capability of the weapon system in intercepting targets at critical ranges. Secretary Department of Defence R&D and Chairman DRDO Dr G Satheesh Reddy complimented the teams involved in the successful flight trial of the Army version of MRSAM and stated that these tests are the major milestones for an 'Aatmanirbhar Bharat'.



Source: <https://pib.gov.in/>

NAL's Hansa-NG trainer aircraft completes sea-level trials

India's first indigenous flying trainer aircraft Hansa-NG, designed and developed by the National Aerospace Laboratories (NAL) here, successfully completed the sea-level trials at Puducherry from February 19 to March 5. The aircraft was flown to Puducherry covering a distance of 140 nautical miles in one-and-half hours at a cruising speed of 155 km/hr on February 19. The objective of these trials was to evaluate handling qualities, climb/cruise performance, balked landing, structural performance, including positive and negative G, power plant and other systems performance at the sea level. NAL sources said all the objectives of the sea-level trials were met and the aircraft was ferried back to Bengaluru on Saturday after completing 18 hours of flying at Puducherry. The aircraft was piloted by Wg Cdr K V Prakash and Wg Cdr Dilip Reddy of ASTE. The flight was monitored by NAL designers and Wg Cdr Reeju Chakraborty as Flight Test Director from telemetry. Hansa-NG is an advanced flying trainer powered by Rotax Digital Control Engine with unique features such as Just-In-Time Prepreg (JIPREG) Composite Light Weight Airframe, Glass Cockpit, Bubble Canopy with a wide panoramic view and electrically operated flaps. According to NAL, the aircraft is designed to meet the needs of the Indian flying club. "It is an ideal aircraft for Commercial Pilot Licensing (CPL) due to its low cost and low fuel consumption. NAL has already received more than 80 LoIs (Letter of Intent) from various flying clubs," an official informed. A top NAL official said the aircraft has till date completed 37 flights and 50 hours of flying. A few more flights will be conducted before it receives Type Certification by the Directorate General of Civil Aviation (DGCA). Type Certification is likely to be completed by April 2022 and thereafter, the manufacturing will be initiated with the public/private industry, which will enhance the aerospace ecosystem under Atmanirbhar Bharat, the official said.

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

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

Gaganyaan delayed, but Isro's mission plans still going strong

Pinned down by the pandemic, India's first manned space mission Gaganyaan might be delayed by a year or two, but that did not stop the project's director R Hutton from diving deep into its complexities as a bunch of engineering students listened in rapt attention here on Monday. Ambitious in scale, unprecedented even by the Indian Space Research Organisation's (Isro) standards, Gaganyaan could be a game-changer. The big plan, announced by Prime Minister Narendra Modi himself, was to get the mission blast off with three Indian Gaganauts, stay in a low orbit of 400 km for three days and splash down either in the Arabian Sea or the Bay of Bengal. Plagued by delays, Isro's best bet is to get at least one of the project's two preceding unmanned missions off the ground this year. But at the Science Day talk arranged by the Institution of Engineers here, Hutton's focus was clearly on the successes that Isro's technology demonstration missions achieved in 2014 and 2018. As early as 2007, he reminded, Isro had cracked the Space Capsule Recovery Experiment (SRE), laying the foundation for the mission's re-entry. SRE also recorded two micro-gravity experiments. Safe re-entry into the earth's atmosphere is critical for the manned mission's viability. In 2014, the space agency had also conducted the Crew Module Re-entry Experiment (CARE) with an end-to-end parachute system validation. "Through aero-braking and the parachute drag, the module's speed of 5-6 km per second can be reduced to 25-30 kmph," Hutton explained. The Pad Abort Test (PAT) recorded in 2018 was critical for a crew escape system, a euphemism to get the Gaganauts safely out of an undesirable event at the launchpad. "Throughout the mission, the acceleration has to be kept within 4g. The crew module's impact in the sea has to be at a safe speed level." Within the crew module, he pointed out, the mission has to integrate a foolproof life-support system, a crew seat and viewpoint, orbital debris mitigation system to evade free particles in space. "The seats will have to be in a sleeping posture to avoid the impact of accelerations that can range from 4 g to 12 g. The module itself has to be protected from extreme temperatures that can go up to 2,000 degrees Celsius."

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

HEMRL to build safe exit for staff for emergencies Pune:

The High Energy Materials Research Laboratory which deals with development of warheads containing high explosives like TNT, RDX, among others, will have a dedicated escape gate for the safe exit of its scientists and employees in case of any accidental explosion or mishap. "Work on this project will commence in the next few weeks," HEMRL director Mr KPS Murthy told. The DRDO headquarters recently cleared the proposal for the gate after a team of experts from the Centre of Fire, Explosives and Environment Safety recommended it. The HEMRL has 1,400 scientists and employees working on the campus. Over the last two decades, at least five accidental explosions or fires have occurred on this campus. The experts and internal committee of the laboratory carry out safety inspections of critical units to avert any accidental mishap every year, officials said. "Although the standard operating procedure is in place in each facility of the laboratory, human error or technical errors cannot be ruled out. One needs to have full-proof safety in place to reach fire brigade vehicles to control the damage. The new escape route will be used for that purpose as well," the official added. The gate is likely to come up on the Mumbai-Bengaluru highway side. HEMRL is based on 800 acres in Sutarwadi.

Source: <https://timesofindia.indiatimes.com/city/pune/hemrl-to-build-safe-exit-for-staff-foremergencies/articleshow/89910266.cms>

Umamaheswaran is new Human Space Flight Centre Chief

The Department of Space (DoS) has appointed Umamaheswaran R, the current Isro scientific secretary, as the new director of the Human Space Flight Centre (HSFC), which is responsible for implementation of Gaganyaan and also to pursue activities for sustained human space flight missions. HSFC was headed by S Unnikrishnan Nair who was recently appointed director Vikram Sarabhai Space Centre (VSSC), Isro's main rocket development centre. HSFC's

Gaganyaan responsibilities include end-to-end mission planning, development of engineering systems for crew survival in space and crew selection and training. The Centre is taking support from existing Isro centres to implement the first development flight of Gaganyaan, whose project director is R Hutton. Umamaheswaran, 15 who is scheduled to take charge of HSFC on Thursday, joined Isro's VSSC in 1987. He completed Master of Science in Software System in 2007, and Master of Arts in Russian Language in 1996. Over the years, he has made significant contributions to the development of launch vehicles. He played key roles in system integration, checkout and avionics of PSLV, GSLV & GSLV-Mk III. "He has been the chief designer (integration) of major subassemblies including the equipment bay of the launch vehicle. He was also the vehicle director for the remarkably successful GSLV D5/GSAT-14 mission with the indigenous cryo stage and served as project director, GSLV and mission director of the successful GSLV-D6, GSLV F05 & GSLV F09 missions, which is a hat-trick in GSLV programme," an official profile of Umamaheswaran reads. He also served as deputy director (avionics) at VSSC and led a team of young engineers for the development of miniaturised avionics, performing the crucial role in making key decisions to overcome various technical intricacies and mitigate developmental constraints in the realisation of these systems. Before the government's approval for setting up of space regulator Indian National Space Promotion and Authorisation Centre (IN-SPACe), he led a high-level interim committee of INSPACe to implement space sector reforms aimed at enhancing participation of private sector in space activities.

Source:<https://timesofindia.indiatimes.com/city/bengaluru/umamaheswaran-is-new-human-space-flight-centrechief/articleshow/89956483.cms>

India, Canada to set up bilateral hub to boost science & tech activities

A bilateral centre will soon be set up for dedicated science and technology activities between India and Canada. Welcoming a Canadian delegation on Friday, Union science and technology (S&T) minister Jitendra Singh said renewal of two MoUs between India and Canada is proposed to be signed in the upcoming joint committee meeting in May. The first 21 MoU relates to National Science Engineering Research Centre, Canada, and it is a project-based scientific exchange programme along with the development of human resource in basic and applied sciences of direct relevance to society. The second agreement relates to the National Research Council (NRC), Canada, and it is an industrial R&D project-based scientific collaboration. Informing about the bilateral centre with Canada, Singh said India has already established a few bilateral centres with other countries like US, Germany and France that are dedicatedly working on various useful S&T schemes between partner countries. The Canadian delegation led by its minister of international trade, export promotion, small business and economic development Mary Ng reviewed the progress of bilateral cooperation with Singh in several key areas, including green technologies, advanced engineering and manufacturing, agriculture and food technologies, digital transformation, energy conservation and healthcare. Discussions are on to finalise possible terms and conditions for the cooperation. Singh said that the future economy is premised on high quality research and innovation, and invited Canada to tap the unexplored areas like ocean and sea missions in India. He said CSIR is keen to develop research collaborations with Canadian R&D institutions. He also called for more youth exchange programmes between India and Canada and joint startups in key areas of research. Singh said the S&T department has also been supporting industrial R&D projects with Canada, which have potential for application. Total 10 projects have been supported for industrial R&D till now. Mary Ng expressed a desire to also deepen cooperation in areas like bio-technology, renewable energy and climate change through applied research mode.

Source:<https://timesofindia.indiatimes.com/india/india-canada-to-set-up-bilateral-hub-to-boost-sciencetech-activities/articleshow/90178249.cms>

CSIR-NAL showcases civil aircraft initiatives at Wings India 2022

CSIR-NAL's Multi-copter drones, HANSA-NG and SARASMK2 aircrafts, major attractions at the aviation show

CSIR-National Aerospace Laboratories, Bangalore (CSIR-NAL) is participating in Wings India 2022 and showcasing its indigenous initiatives of civil aircrafts for flying training & commuter air connectivity. HANSA-NG Aircraft designed and developed by CSIR-NAL is major attraction in Wings 2022. HANSA-NG was piloted by Wg. Cdr. Dilip Reddy, an Experimental Test Pilot of IAF. He has demonstrated its flying capabilities like climb, descend, maneuvering, low level stability and short take off /landing, exciting the viewers. HANSA-NG is one of the most advanced two seat flying trainer aircraft powered by Rotax Digital Control Engine with unique features like Just-In-Time Prepreg (JIPREG) Composite lightweight Airframe, Glass Cockpit, Bubble Canopy with wide panoramic view, electrically operated flaps, etc. HANSA NG is capable offlying upto an altitude of 10000ft with max speed of 200 kmph with more than 5 hrs endurance. HANSA-NG completed more than 55 hours of flying and will be type certified by DGCA shortly. NAL has already received more than 80 nos. of LoIs (Letter of Intents) from various flying clubs across the country and delivery is scheduled from July 2022. The spectacular formation flying of multi-copter drones developed by NAL demonstrating live societal applications has caught attention of many. The unique features of multi-copter drone are fully autonomous BVLOS (Beyond Visual Line of sight) operation capability with maxpayload capability of 20kg with endurance of about 30 mins. MoCA has given the conditional clearance and more than 60hrs offlying is completed. NAL showcased the fully loaded 1:1 mockup of SARASMK2 with glass cockpit, Cabin interiors including toilet, Cargo compartments and other cabin safety features. SARAS-Mk II is a 19 Seat Light Transport Aircraft with multirole capabilities like Passenger transport, Troop transport, VIP transport and Casevac (AirAmbulance). The aircraft is exclusively designed for operations from short runways, hot and high airfields, and semi-prepared runways for connecting Tier 1 & Tier 2 cities / towns. SARAS-MkII is one of the unique aircraft where operational benefits are maximized through the Pressurized Cabin, Digital antiskid braking, Autopilot with CatIII landing, two lever engine operation, Lightweight materials etc. by keeping cost minimum. Aircraft has capability to fly upto 29000 ft at max 15 speed of 500 kmph with range of 778 km and will be ideal candidate for promoting regional air connectivity under UDAN (UdeDesh ka Nagrik) scheme. Shri Jitendra Jadhav Director CSIR-NAL stated that the design is carried out with extensive use of digital tools like 3D platforms, virtual reality, advanced CATIA, Digital Mock Up (DMU) and PLM (Project Life Cycle Management) techniques to reduce efforts in design and manufacturing. He further stated that, the flight test efforts are reduced by realizing high fidelity simulator's & test facilities where most test points can be demonstrated on the ground. NAL demonstrated functional sub scale model of High Altitude Platforms (HAP) as futuristic path breaking technology. HAP is a solar-powered UAV capable of day & night operation at a height of 20 km for more than 90 days. HAP will be a game-changer to work as a pseudo satellite for telecommunication applications in the 5G & 6G spectrum with advantages like low data latency, high bandwidth, the flexibility of launch and low cost. HAP will be used for variety of applications like broadband communication, surveillance, earth observation, climate research etc. The deep technology innovations like intermediate modulus grade carbon fiber, carbon prepreg, special coatings for aerospace applications, C/SiC composites, Just-In-time Pre-preg, thermoplastic composites, ARINC 818 IP core, etc., for various aerospace applications towards self-reliance are demonstrated. In an interaction with the press at Wings India 2022, Dr Shekhar C Mande, Secretary, DSIR & Director General, CSIR said "New Generation aircraft called the HANSA-NG has been developed by incorporating the state-of-the-art technologies and New Generation Design features. It offers advanced digital display systems using certified instruments, two primary flight displays with built in redundant power supply. The indigenous HANSA-NG will benefit Indian Flying Clubs as well as other customer applications like bird reconnaissance at airfields, cadet training, coastal surveillance, and hobby flying. As a result of this, CSIR NAL received firm commitments for 10 Nos from M/s Belagavi Aviation Pvt Ltd during Wings India 2022. M/s Blue ray aviation has also shown interest in acquiring 3 nos of the aircraft during the WingsIndia. We thank Indian Air Force Test Pilot Wg. Cdr. Dilip Reddy for his brilliant flight demonstration during the flying display sessions". The delivery of aircraft is scheduled from July 2022 with private / public industry participation He mentioned that "Multi-copter drones developed by NAL are being demonstrated in Wings India which are configured for Precision Agriculture, Geo exploration studies and for last mile delivery / medicine/ vaccine delivery. The uniqueness of these UAVs are their higher payload capacity and longer endurance which are essential requirements for last-mile delivery, floriculture mapping, geophysical exploration studies (Underground minerals and water exploration), precision agriculture and pesticide spraying to remote places. NAL had demonstrated these capabilities to Govt. authorities all over India. Agreements were signed or Technology Transfer of these multi-copters (Quad, Hexa, Octa) to M/s Scientech Industries Pvt Ltd, Indore, M/s Magic Myna, Coimbatore and M/s C I

Network Technologies Pvt Ltd, Ahmedabad during Wings India on 24th March 2022". These MSME's will start production in next three months' time @ rate of 100 – 200 drones per month. DG-CSIR also stated that Armed Forces have already committed 15 nos of SARAS-Mk II for initial induction. The aircraft will be complied to FAR 23 standards and will be certified by DGCA and CEMILAC for Civil and Military use. The first flight is likely to be in June 2024 and the production will be from 2026-27 onwards. The SARAS MKII will be a gamechanger to boost air connectivity under the UDAN scheme. I am glad to state that M/s ICATT Air Ambulance Service has given two nos of Lol for SARAS-Mk II aircraft for 16 medical version offlying ICU & Operation Theater. SARAS-Mk II will be an ideal platform for ultra-critical flying services which ICATT is a pioneer and is the largest air ambulance service in Asia. He further stated that the development of HAP is progressing on fast track and the functional subscale model prototype is being demonstrated at Wings India 2022. The subscale model will fly by Aug 2022 to evaluate the aerodynamics, stability control and avionics & autopilot performance. The flight test data will be used to optimize final design and Proof-of-Concept (PoC) of full-scale HAP will be demonstrated at a height of 20km with 2hrs endurance by March 2024. Thereafter the full scale engineering will be taken up by NAL along with industries. While congratulating the NAL team, he said that NAL is moving rapidly towards the commercialization of aircraft and aerospace technologies for common man use to make India self-reliant under Atmanirbhar Bharat mission of government.

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1810024>

TECHNOLOGY

Ground testing of Solid Booster Stage (SS1) for Small Satellite Launch Vehicle (SSLV)

The ground testing of the newly developed solid booster stage (SS1) for the new launch vehicle of ISRO i.e. Small Satellite Launch Vehicle (SSLV) was carried out today, March 14 2022 at Satish Dhawan Space Centre Sriharikota at 1205 hrs. All the propulsion parameters during the test are found satisfactory and closely matching with the predictions. SS1 motor is a three segmented solid propulsion stage incorporating many new technologies and innovative processes which includes bond-free joint between the segments, high power electro mechanical actuator with digital control electronics, optimized ignitor and simultaneous propellant casting of all segments, which have been successfully validated in the ground test. The successful test of solid booster stage has given sufficient confidence to proceed with the first developmental flight of SSLV (SSLV-D1) which is scheduled in May 2022. The remaining stages of SSLV i.e. SS2 & SS3 stages have successfully undergone necessary ground tests and are ready for integration.

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

BUSINESS

957 premier battle tanks to get key upgrade

India is upgrading 957 T-90s — India's premier battle tank — with a new indigenous Commander Sight further enhancing its efficiency. Defence PSU Bharat Electronics Limited (BEL) on Monday said it has recently signed a contract for the retro-modification of Commander Sight of 957 T90 tanks for the Indian Army with the ministry of defence (MoD). The total value of the contract is Rs 1,075 crore including all taxes and duties, a BEL statement said. The successful indigenous development of Thermal Imager-based Commander Sight, jointly by Instruments Research & Development Establishment (IRDE), a Defence Research and Development Organisation (DRDO) lab and BEL. "The new sight comes with improved performance than its predecessor, provides a further boost to the 'Make in India' initiative of the government of India. This will provide a fillip to indigenous defence manufacturing and open avenues for export of such advanced technology," BEL said. 8 According to MoD, the Commander Sight of Battle Tank T-90, India's premier battle

tank, is currently fitted with Image Converter (IC) tube-based sight for night viewing. “Based on the requirement projected by the Indian Army, DRDO and BEL have jointly designed and developed an advanced Mid Wave Thermal Image (MWIR) based sight as a replacement for the existing ICbased sight,” an MoD press note read. The new retro-modified Commander Sight, it added, employs a thermal imager capable of detecting the targets at 8km during day and night and a Laser Ranger Finder to find the ranges accurately up to 5km, thereby enhancing its capability to engage target at longer ranges. “With the corrections from ballistic software and LRF, the Commander of T-90 can detect, engage and neutralise the targets with phenomenal accuracy,” the MoD statement read.

Source:<https://timesofindia.indiatimes.com/city/bengaluru/957-premier-battle-tanks-to-get-keyupgrade/articleshow/89909556.cms>

Army orders more mini vertical take-off UAVs

New Delhi: Mumbai-based drone manufacturer ideaForge has announced that it has won a repeat contract from the Army to supply 200 of its Switch mini Vertical Take-Off and Landing (VTOL) Unmanned Aerial Vehicle (UAV) along with its accessories. The Army had earlier ordered the same UAV in two separate deals. “ideaForge won this contract against stiff competition from Israel, Russia, Ukraine, France, India and others. The Switch UAV was the only system that emerged successful from the rigorous testing and field trials that the Indian Army is well known for,” a company statement said. The traditional understanding was that a fixed wing UAV would be the ideal solution for last mile deployments, ideaForge said adding, on analyzing the actual operational constraints that the Army faced, they realised that a hybrid VTOL platform which can take off without a runway or by hand launching would be the ideal solution. “ideaForge has engineered this product with the unique VTOL approach, keeping in mind the terrain challenges in the operational areas of the Indian Army,” Ankit Mehta, ideaForge CoFounder and CEO, said in the statement. “Looking ahead, we want to take this expertise across the world, to everyone in need of protecting their borders or to empower their forces with unprecedented last mile situational awareness,” he added. In the last two years, the Army has signed a series of contracts with Indian start ups for small drones for surveillance and load carrying. The high-altitude Switch UAV is a VTOL drone that takes off vertically like a helicopter and then transitions into flying like a regular plane even in high altitudes with low temperatures, high winds and low density of air, according to the company. In that context, it is a drone that can be carried on the back of a Jawan and deployed, with confidence, to act as the eyes-in-the-sky for our forces, it said. In January 2021, the Army signed a contract with ideaForge for Switch UAVs in a deal worth \$20 million. It placed a repeat order to procure an undisclosed number of Switch UAVs to augment surveillance along the LAC. According to the company it has fulfilled the first order as per contractual obligations. 6 Other deals signed by the Army recently include deals for Swarm drones with Indian start ups, Bengaluru-based NewSpace Research and Tech and Noida-based firm Raphe. The drones from New Space Research and Tech can hit targets with 5-10 kg explosives while mR-20 drones of Raphe can carry cargo of up to 20 kg in high altitude areas. In the second half of last year, the Army had also placed orders for ‘SkyStriker’ drones to be manufactured in Bengaluru by a joint venture between Israel’s Elbit System and India’s Alpha Design Technologies which is now part of Adani Group.

Source:<https://www.thehindu.com/news/national/army-orders-more-mini-vertical-take-offuavs/article65187683.ece>

Defence manufacturing in Gujarat gets shot in the arm

Already a preferred investment destination due to its entrepreneurial spirit and sound manufacturing base, Gujarat is on its way to developing a defence manufacturing ecosystem. While defence manufacturers from across the globe are looking to invest here, Gujarat already has a few manufacturers and startups supplying a range of technology products to defence manufacturers, the Indian Army, the Defence Research and Development Organisation (DRDO) and others. The state has thus far received Rs 292 crore investment in direct defence manufacturing with companies such as Larsen and Toubro, Jaivel Aerospace, Unique Forge (Gujarat) and Pushpak Aerospace operating here. It is also home to at least 100 micro, small and medium enterprises (MSMEs) that supply components and parts to aerospace and defence original equipment manufacturers (OEMs).

Source: <https://timesofindia.indiatimes.com/city/ahmedabad/defence-manufacturing-in-gujarat-getshot-in-the-arm/articleshow/90041282.cms>

Russia in talks with India to continue defence co-operation despite western sanctions, says Moscow's deputy envoy to New Delhi

Roman Babushkin, Moscow's deputy envoy to New Delhi, tells Anirban Bhaumik of DH that Russia is not in a war with the people of Ukraine, but launched a special military operation only to 'denazify' and 'demilitarise' the nation. He said that Moscow only wants to ensure that the territory of Ukraine is not used against Russia. The sanctions imposed on Russia by the US and other western nations will hit the global economy, he said. Russia, however, remains committed to implementing all its agreements with India for supplying military hardware, including S-400 missile defence systems. The Deputy Chief of Mission of the Embassy of Russian Federation in New Delhi added that Moscow will share with the Government of India the findings of the probe into the death of Naveen Shekharappa Gyanagoudar, a resident of Karnataka in southern India, who was killed at Kharkiv in eastern Ukraine on March 1. Why did Russia have to launch military operations in Ukraine? Couldn't Russia and NATO have resolved the differences through dialogue? Dialogue has always been and remains a priority choice of Russia. During three recent decades, we were engaged in various levels of conversation on European security. After the collapse of the Soviet Union, Russia was assured numerous times that NATO would not expand and would not admit new members. But the US-led bloc not only cared little to adhere to its commitments but also was taking measures to dismantle dialogue architecture with Russia and continued to expand. In order to justify itself – since obviously after the cold war there was a problem of the NATO identity and purpose – they increasingly started conducting unfriendly activities, including anti-Russian military exercises and deploying more weapons in the region, which were against the security interests of Russia. After the western countries supported an unconstitutional coup in Ukraine in 2014, the NATO leaders started openly using Ukraine and its extreme nationalist neo-Nazi policies against Russia and everything related to Russia, even suppression of the Russianspeaking population of Ukraine and genocide against people, who didn't recognise illegitimate Western-sponsored regime. Since 2014, around 14,000 people in Donetsk and Lugansk regions have been killed during ceasefire violations and targeted shelling. Kyiv authorities from the very beginning were not going to implement the Minsk Agreements and conduct a direct dialogue with Donetsk and Lugansk. In recent years, NATO has intensified supplying military equipment and weapons to Ukraine exceeding thousands of tons. That was the condition when the Russian red lines were about to be crossed, and in December 2021 we went with proposals for NATO to ensure legally-binding security guarantees for Russia, including non-expansion of the bloc and disarmament control. But they ignored our proposal. In fact, since the western nations were silent over what was happening in the eastern part of Ukraine, Russia in order to stop the war there had to launch a special military operation. It is aimed at denazification and demilitarisation of Ukraine. Russia is not waging war against Ukraine and its people. We are only fighting the ultranationalists and their neo-Nazi ideology to protect the people of Ukraine and not to allow its territory to be used against Russia. For these purposes, the Russian Armed Forces are only using high-precision weapons to target the military infrastructure in Ukraine. They don't target civilians or civilian infrastructure. They are not using prohibited weapons. They are not capturing and taking civilians as hostages, unlike what is being rampantly done by the forces fighting for the nationalist regime of Ukraine. How do you view India's stand and its abstentions from voting on the issue of the Russia-Ukraine conflict at the UN Security Council, General Assembly and Human Rights Council? We welcome India's balanced and independent approach on the issue of Ukraine. It shows that India is a responsible global power. India has a very deep understanding of the crisis in Ukraine. It is also in India's national interest not to allow anyone to manipulate it or dictate what stand it should take on such issues in international platforms. Will Russia share the findings of the probe into the death of 21-year-old medical student Naveen Shekharappa Gyanagoudar in Kharkiv in eastern Ukraine, apparently due to shelling? Can Russia help bring back home his mortal remains? It is a very unfortunate incident. We are not sure about the circumstances that caused this tragedy. The Russian Armed Forces do not target civilians. If it was shelling, videos that went viral clearly show that a missile came from the western side. Let's also keep in mind that the Kyiv regime started disseminating weapons for free for everyone, including criminals, who were freed from prisons. Among them are racists and neo-Nazis, and one of the versions is that the Indian student died in cross-firing. We will be interested in

conducting an investigation into the incident and we will be sharing our findings with the Government of India and will coordinate on the issue of repatriation of his mortal remains. Has Russia been in touch with India for the evacuation of its citizens from Ukraine? What did Russia do or what had Russia offered to do to facilitate the evacuation of India's citizens? Currently, this is the priority issue in our dialogue on various levels, including between President Vladimir Putin and Prime Minister Narendra Modi. The Russian Government and the Russian Armed Forces are always ready and committed to do whatever they can to evacuate the citizens of India from Ukraine. All arrangements are there to receive the Indians at the Russian border. Already a couple of times we announced ceasefire to ensure safe evacuation, but the people are not let go by the Ukrainian nationalists, who even go beyond the control of Kyiv. Moreover, they often use civilians as human shields. That delays evacuation. How do you view India's decision to send humanitarian assistance to Ukraine and its resistance to the US bid to expand the Quad's ambit to make it criticise Russia's military operations in Ukraine? We view India's humanitarian assistance to Ukraine positively, for sure. Russia is also providing a lot of humanitarian assistance to the people of Ukraine, particularly in the cities which have been liberated. We are providing food, medicines and other essentials. As far as the Quad is concerned, Prime Minister Modi made it clear that this mechanism should remain focused on its agenda, which has nothing to do with the situation in Europe. It's a strong message that India is not going to allow anyone to manipulate and pressurise it. The United States has an old habit of trying to politicise multilateral institutions to advance its own agenda. Unlike the US, Russia does not believe in coercing or blackmailing any of its friends. 13 The US has sought to draw a parallel between Russia's military operations in Ukraine and China's mobilisation of troops along its Line of Actual Control with India. What is your view? The US is in fact trying to pressurise India to make it change its position on the issue of Ukraine. But each situation should be seen differently. The crisis in Ukraine was preceded by a sequence of particular events, decisions and actions by the western countries that ultimately led to Russia's military operations in Ukraine. As far as the India-China boundary issue is concerned, it is completely different. As a sincere wellwisher of both India and China, Russia hopes that the two nations will be able to amicably resolve the border crisis through bilateral talks and mechanisms and without any external interference. We are not taking sides in this matter. What Russia really can do is to provide suitable platforms and opportunities to India and China to have more options for a constructive dialogue. For example, Foreign Ministers of India and China had a number of bilateral talks on the sidelines of the meetings of the Shanghai Cooperation Organization (SCO), including the ones held in Russia. This means that this platform is comfortable for both sides. There are other similar mechanisms, like the BRICS and the RIC, which provide good opportunities to expand common ground and create a positive atmosphere for negotiations. The US, on the other hand, is only trying to use this bilateral issue in its geopolitical purposes, provoking aggressive thinking and trying to use India in order to pursue its own agenda of containing China. How will you deal with the challenges the western sanctions on Russia pose to Russia-India relations, including delivery of S-400 missile defence systems and other military hardware? Neither India nor Russia recognises unilateral sanctions. The US and other western nations claim to be champions of human rights, but the unlawful unilateral sanctions they impose on nations in fact violate human rights and make common people suffer, as we have seen in Iran, North Korea and Syria. The sanctions are becoming extraordinary these days. The unlawful sanctions imposed by the US and other nations not only target economic and financial systems, but affect everything. They are, for example, targeting Russian airlines and Russian media these days. They are even trying to bar Russia's representatives from participating in international sports and cultural events. Such sanctions will certainly hit the global economy – you can see that the energy prices are increasing day by day because of the western sanctions policy. You cannot isolate a big country such as Russia from the global economy and global policy. By deciding to withdraw from Russia, the western companies are losing a huge market. And, as far as the Russian economy is concerned, we have been living under sanctions for years now. For us, there's not much new. There are many alternative options, including the expansion of mutually beneficial co-operation with the Asian nations, including India. With India, we are trying to figure out ways to continue our co-operation and adapt the mechanisms of payments, some of them are already in place, including the use of national currencies, which is going to be expanded. It will also be very important to ensure smooth continuation of our decadeslong defence co-operation as one of the pillars of the Russian-Indian special and privileged strategic partnership. We remain committed to implement all our agreements, including the one for supplying S-400 missile air-defence systems to India. We enjoy an exceptional level of goodwill, mutual understanding and trust, and nothing will disrupt friendly ties between India and Russia.

Source:<https://www.deccanherald.com/international/russia-in-talks-with-india-to-continue-defence-cooperation-despite-western-sanctions-says-moscow-s-deputy-envoy-to-new-delhi-1089520.html>

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Wings India 2022

Wings India 2022 represents a huge opportunity for India and its neighbouring countries: Jyotiraditya Scindia

Mr Jyotiraditya M Scindia, Union Minister of Civil Aviation, Govt. of India today said that Wings India 2022 represents a huge opportunity for India and its neighbouring countries, and the sector will be churning out millions of jobs for those looking to enter the industry. Addressing the curtain-raiser for **WINGS INDIA 2022** with the theme India @75 New Horizon for Aviation Industry organized by FICCI jointly with Airport Authority of India and the Ministry of Civil Aviation (MoCA), Mr Scindia said that WINGS India 2022 will provide an opportunity to build strong roots of the ecosystem that the civil aviation industry represents. He further said that the civil aviation industry is not only about airplanes and airports, but we must focus on building an airline ecosystem that has strong roots across the value chain. Manufacturing, he said is the core of the sector and the country must move from products to services. "Both product and service will result in economic and employment multipliers. Every direct job generated by civil aviation industry results in 6.1% indirect employment opportunities. This potential cannot be replicated by any other sector," added the Minister. Speaking on the govt initiatives he said that the Ministry wants to work as a collaborator along with all the stakeholders. "Our success lies with the success of our stakeholders. We have doubled the number of airports in India since the last 7 years and the horizontal expansion will result in vertical depth," noted Mr Scindia. Emphasizing the govt policies he said, the new helicopter policy, MRO policy, flying training organisation policy are focused on the spur of growth in the country. He urged the industry to join the Wings India 2022 to be part of the expanding horizon of the Indian aviation sector, which can be the key driver towards economic growth. Gen (Dr) VK Singh (Retd), MoS for Civil Aviation and Road Transport and Highways, Gol said that India has the largest number of unicorns and Start-Ups and the aviation sector is surging ahead depending on the COVID control measures. "There is a huge opportunity for each one connected to the aviation industry. One can manufacture, sell, lease and create to become partners in infrastructure with us," said Gen VK Singh. He urged the industry to suggest measures to improvise the industry for a mutually beneficial journey ahead. "State and Union Territories have a very important role to play in the sector and we need to ensure harmony between states to reap the benefits," the Minister further added. "We need to bring down the VAT on aviation turbine fuel," said General Singh. The revenue generated by bringing it down will be tremendous" he said. States, said General (Dr) VK Singh, must bring down the price of VAT and ensure more flights come in. **Mr Rajiv Bansal**, Secretary (CA), Ministry of Civil Aviation said that the Indian domestic Civil Aviation sector is almost back to pre-COVID numbers, and it will keep growing. There is huge growth in the Drones sector and the PIL scheme for manufacturing and start-up in the sector of Drone will witness tremendous growth in the sector.

Ms Usha Padhee, Joint Secretary, Ministry of Civil Aviation said, "This is a unique platform for civil aviation in India, we intend to ensure that all our stakeholders come under a single umbrella, showcase the achievements of the sector,

and share the good practices with equal contribution from all.” She further said the civil aviation sector is becoming a development engine for the nation.

Mr Sanjeev Kumar, Chairman, Airports Authority of India said that mobility is one of the most important catalysts for growth and mobility through the sky is the game-changer. Air mobility, he said, is the game-changer in the history of civil aviation and has the potential to change the economies of nations.

Mr Remi Maillard, Chair, FICCI Civil Aviation Committee and President & MD, Airbus Group said that India will be among the market-leading global aviation. He highlighted the growth of the global air traffic by 3.9% including tourism in the coming years. He invited stakeholders from India and across the globe to be part of Wings India 2022.

The promo video of the Wings India 2020-2022 was also launched during the event.

Source: <https://www.wings-india.co.in/>

India needs over 2000 single-aisle aircraft in 20 years: Boeing

Boeing on Friday said that Indian airline operators need over 2000 new single-aisle aircraft over the next 20 years. South Asia’s air travel sector is dominated by the Indian market, which accounts for about 90 per cent, the US aircraft maker said in a press release. “Indian operators will need just over 2,000 new single-aisle aeroplanes to meet demand during the forecast period. Single-aisle aeroplanes such as the 737 family will continue to serve growth in domestic and regional markets, including flights from India to the Middle East and the Asia Pacific regions,” it said. India’s continued economic growth and its expanding middle class will fuel demand across South Asia for 2,400 new commercial jets valued at nearly USD 375 billion during the 20-year forecast period, according to Boeing. The company shared its annual South Asia and India Commercial Market Outlook (CMO) at Wings India 2022, here, anticipating resilient long-term demand for commercial aeroplanes and services following the Covid-19 pandemic. “We project robust demand for air travel in South Asia with carriers increasing services, and passengers feeling confident about travel to see family and friends and do business, as well as from air cargo,” Dave Schulte, managing director, regional marketing, Boeing Commercial Airplanes said. Salil Gupte, the president, of Boeing India, said, India continues to develop as one of the world’s largest civil aviation markets as it ramps up its capabilities and capacity in infrastructure and services. “At Boeing, we are committed to supporting this growth through our Make in India supplier partnerships, next-generation products and solutions, technologies and services, to advance the future of commercial aviation,” Gupte said. India’s air cargo growth is expected to average 6.3 per cent annually, driven by the country’s manufacturing and e-commerce sectors, including its Make in India initiative. Boeing forecasts demand for more than 75 freighters, including 10 wide-bodies and 737 Boeing Converted Freighters. India’s civil aviation industry will require close to 100,000 new pilots, technicians and cabin crew personnel, with an increasing number of women pursuing aviation careers, Boeing added.

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

Star Air wins best domestic airline at Wings India 2022

Star Air has recently won the prestigious award for Best Domestic Airline (RCS) by Wings India 2022. Star Air, which launched in 2019, flew the Indian skies to connect travellers across various unconnected routes at affordable rates Today, it is one of India’s fastest-growing regional airlines under the popular RCS-UDAN scheme. Over the course of 3 years of Connecting Real India, Star Air has excelled in accomplishing its goal of enriching the lives of others by fulfilling the common man’s dream of flying by launching pioneering routes on city pairs that were never connected before. “Winning the award for the Best Domestic Airline (RCS) by Wing India 2022 marks a remarkable achievement for Star Air. I would like to thank our beloved customers for the faith bestowed in us, our team for their dedication and

effort towards offering a world-class travel experience. As we look forward to providing our star flyers seamless and stress-free travels, we would also like to thank Wings India 2022 for the recognition,” said Sanjay Ghodawat, Founder & Chairman – Star Air. Currently, Star Air offers scheduled flight services to 15 Indian destinations such as Ahmedabad, Ajmer (Kishangarh), Bengaluru, Belagavi, Ghaziabad (Hindon), Hubballi, Indore, Jodhpur, Kalaburagi, Mumbai, Nashik, Surat, Tirupati, Jamnagar, and Hyderabad. We are also about to begin operations in Nagpur.

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

India Has The Potential To Become World's Startup Hub: Piyush Goyal

‘Our aspiration is to be the world’s number one startup destination. The startup bug has caught India’s imagination,’ Piyush Goyal, Minister of Commerce & Industry, Consumer Affairs & Food & Public Distribution and Textiles, has said. Addressing a session, ‘Gateway to Growth - Roundtable on Indian Startup Ecosystem’ in Abu Dhabi, the Minister said that presently India is the third-largest startup ecosystem. The entire innovation ecosystem that the startup industry represents is giving a new direction, new momentum to India. He said that India offers a special blend between investors and entrepreneurs to achieve a balanced outcome and achieve a win-win solution. Appreciating the promotion of 700 Indian startups at the EXPO2020 Dubai, he emphasised that the startups need to experiment, fail and learn from their experiences. On the government’s role in promoting startups, the Minister said that India needs to provide the level playing and best business ecosystem to the startups. The government has recently finalised the Comprehensive Economic Partnership Agreement (CEPA) with the UAE, which is expected to further enhance bilateral trade, B2B engagement and explore attractive investment opportunities, he said. ‘I can assure you that we will take this partnership to newer heights in the areas of sustainability, aerospace, space technology, connectivity, AI, data analytics, 5G, Metaverse and others. We look forward to leveraging each other’s offerings and expertise,’ Goyal added. The Roundtable on the Indian Startup Ecosystem was co-chaired by the, Ahmad Belhoul Al Falasi, UAE Minister of State for Entrepreneurship & SMEs, Dr Thani Zeyoudi, Minister for International Trade and Mohamed Al Sharaf, Chairman, Abu Dhabi Economic Development Department. Besides representatives of ADGM, ADQ, Mubadala, Masdar, ADIO, AD Residents Office, G42, Hub71, Ardent Advisory, and Chimera Investment also participated in the session.

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

Hyderabad: Wings India 2022 concludes at Begumpet airport

Wings India 2022, Asia’s biggest civil aviation show, concluded at the Begumpet Airport on Sunday evening. The show was a big success as it attracted 125 exhibitors from all over India and abroad and over 5,000 business delegates and 60,000 general visitors graced the show. More than 125 international and domestic exhibitors along with 11 hospitality chalets, over 15 country delegations and more than 29 states and union territories participated in the Indian aviation industry’s ace event, a release said. Embraer displayed its largest commercial aircraft, the E195-E2, at Wings India 2022. The aircraft is the largest member of the new generation E-Jets family, the E-Jets E2, and is designed to seat up to 146 passengers in its signature two by two seating. During the show fly big signed a letter of intent with De Havilland to acquire ten de Havilland Canada DHC-6 Twin Otter Series 400 aircraft. These 19-seater aircraft will help in serving small and remote communities that are not accessible by air, the release said. Twin Otter 400 Series has a proven track record of safe, dependable operations, as well as versatility, which includes the ability to land on land or water. Some of the participants in the event include Telangana government (host state), Haryana government, CSIR – National Aerospace Laboratories, Government of Madhya Pradesh, Andhra Pradesh Airports Development, Airbus, Embraer, GMR Infrastructure Ltd., Pawan Hans Ltd., Pratt & Whitney, Rolls Royce, Turbo Aviation, etc. There were around 29 states and UTs and 127 meetings were held. The next Wings India show will be held at Begumpet Airport, from March 14 to 17, 2024.

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

Wings India Expo 2022 leaves all visitors yearning for more

From delegates to the Page 3 crowd, from officials to the high-flyers, from the selfie-crazy to those keen to add to their knowledge, Begumpet airport where Wings India-2022 was inaugurated, was the place to be on Friday. Some visitors said they would be back for more. While the aircraft on display attracted visitors, the exhibit area where both private and government aviation stalls are set up was as popular. There were also stalls selling food as well as memorabilia. The air show performed by Team Sarang from the Indian Air Force was the highlight of the day, and the crew was all too willing to pose for selfies with the visitors. Not surprisingly, the memorabilia stall was the most popular with people queuing up to buy t-shirts, badges, miniature helicopters and masks. Model aeroplanes and toy planes too were in high demand. Also spotted United Kingdom's Deputy High Commissioner to Telangana Andrew Fleming who came with his son, who was as enamoured with the show as the other visitors.

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

Newly elected members in 224st Grading Committee Meeting of AeSI

Sl. No.	Name	Designation	Grade	Member No.	Branch
1	Mr. Mani Kesava Sarma	Scientist/Engineer G, H and OS	Member	M-20737	Trivandrum
2	Mr. Ashish Mishra	Scientist/Engineer SE	--do--	M-20738	Trivandrum
3	Mr. Rajesh Johare	Manager	--do--	M-20739	Nasik
4	Mr. M. Suresh	Manager	--do--	M-20740	Kanyakumari
5	Mr. Umesh Yadav	Manager	--do--	M-20741	Nasik
6	Mr. Jafrulla Ibrahim Kwatla	Senior Manager	--do--	M-20742	Nasik
7	Mr. Sanjeev Kaushal	Chief Manager	--do--	M-20743	Nasik
8	Mr. Jason Nathan Julias	Licensed Aircraft Engineer Avionics	--do--	M-20744	Bangalore
9	Mr. Gorthi Rameswara Srinivas	Engineering Officer	--do--	M-20745	Hyderabad
10	Mr. Dheeraj Kumar Singh	Manager	--do--	M-20746	Nasik
11	Mr. Ganesh S	Scientist	--do--	M-20747	Bangalore
12	Dr. Sankar Velamury	Director(Retd), Academic & Planning	--do--	M-20748	Pune
13	Mr. Himalya Bansal	Business Development Manager	--do--	M-20749	Delhi
14	Dr. Debi Prasad Mishra	Director	--do--	M-20750	Kolkata
15	Dr. Yamini Singh	Scientist E	Associate Member	AM-7582	Delhi
16	Mr. Sai Vinay Sandapeta	Engineer	--do--	AM-7583	Hyderabad
17	Dr. Charulatha Siva	Associate Professor	--do--	AM-7584	Chennai
18	Mr. Arun Nema	Associate Professor	--do--	AM-7585	Chennai
19	Dr. Raja Munusamy	Associate Professor	--do--	AM-7586	Chennai
20	Dr. Krushna Gouda	Assistant Professor	--do--	AM-7587	Chennai
21	Ms. Sangeetha Subramani	Assistant Professor	--do--	AM-7588	Chennai
22	Mr. Balaji K	Visiting Faculty	--do--	AM-7589	Chennai
23	Dr. Rohith I J	Assistant Professor & Associate Project Director	--do--	AM-7590	Chennai
24	Mr. Vijay Kumar Singh	Chief In Charge	--do--	AM-7591	Goa
25	Mr. Shanti Bhushan Rai	Supervisor Ajit Hawk	--do--	AM-7592	Goa
26	Mr. Manoj Kumar S P	AE Supervisor	--do--	AM-7593	Goa
27	Mr. Aneesh Rajan	Scientist/Engr	--do--	AM-7594	Trivandrum
28	Ms. Archana Thangavelu	Project Lead	--do--	AM-7595	Chennai
29	Mr. Muthuram A	Assistant Professor	--do--	AM-7596	Chennai
30	Ms. Pallavi Nandkumar Patil	AeSI Graduate	Graduate	G-13519	Mumbai
31	Ms. Anjali K	AeSI Graduate	--do--	G-13520	Trivandrum
32	Mr. Nikhil Kumar	AeSI Graduate	--do--	G-13521	Delhi
33	Ms. Shabna T	AeSI Graduate	--do--	G-13522	Kochi
34	Mr. Raushan Kumar	Scientist/Engineer SC	--do--	G-13523	Trivandrum
35	Ms. Catherine Victoria	Assistant Professor	--do--	G-13524	Chennai