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CURRENT AFFAIRS

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Saras the pheonix rises again

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CURRENT AFFAIRS

Saras the Phoenix rises again

First flight trial of the new version of the indigenous civilian airplane proves successful , took off from the HAL Airport , touches 8,500 feet Those in the know-how said the first of the over six "design confidence building" trials went off successfully. For 40 minutes, the aircraft, accompanied by a defence escort, flew to speeds of 140 knots and reached a height of 8,500 feet. "In the coming weeks, subsequent design and altitude alterations can see the flight reach closer to its top speed of 184 knots and 30,000 feet in height," . Conceptualised in 1990s while four pilots from ASTE (Aircraft and Systems Testing Establishment) have been trained for the trials, two of them (Wing Commander U.P. Singh and Group Captain B. Panicker) flew the aircraft The aircraft programme, named after the Indian crane Saras, was first conceptualised in the 1990s as a way to establish a short-haul civil aviation market. It was only in 2015-end that the project restarted, and by Aero-India 2017 in Bengaluru, NAL announced that CSIR had given the go-ahead and flight tests would begin in 2018. "It is a big morale booster for NAL to see a long-pending project gather steam," said an official, when asked about what the short-flight means to the defence public sector unit.

Source: http://www.thehindu.com/

India successfully test-fires Agni-5 ballistic missile

India test-fires Agni-5, the most advanced missile in the Agni series with a strike range of over 5,000 km from a test range off Odisha coast India on Thursday successfully test-fired its nuclear capable surface-to-surface ballistic missile Agni-5—the most advanced missile in the Agni series with a strike range of over 5,000 km from a test range off Odisha coast. The user associate test-flight of the missile has further boosted indigenous missile capabilities and deterrence strength of the country. All radars, tracking systems and range stations monitored the flight performance, defence sources said. Describing the trial as "fully successful", the sources said, the sophisticated missile travelled for 19 minutes and covered 4,900 km. The sleek missile was test-fired from a canister launcher, mounted on a mobile platform, at about 9.54 am from No. 4 launch pad of the Integrated Test Range (ITR) in Abdul Kalam Island, earlier known as Wheeler Island, they said. "After four successful developmental trials, this was the first user associate test of Agni-5 missile," the sources added. 'Agni-5' is most advanced missile in the Agni series with new technologies incorporated in it in terms of navigation and guidance, warhead and engine. It has a range of over 5000 km. "The redundant Navigation systems, very high accuracy Ring Laser Gyro based Inertial Navigation System (RINS) and the most modern and accurate Micro Navigation System (MINS) had ensured the missile reached the target point within few metres of accuracy. "The high speed on board

computer and fault tolerant software along with robust and reliable bus guided the missile flawlessly," said an official of Defence Research and Development Organization (DRDO).

Source: https://www.drdo.gov.in/

Rocket expert Dr K. Sivan new Space Secretary

Rocket scientist Dr K. Sivan, currently Director of the Vikram Sarabhai Space Centre, is to be the next Secretary of the Department of Space, and Chairman of the Space Commission and the Indian Space Research Organisation (ISRO), with a term of three years. Dr. Sivan will shortly take over from A.S. Kiran Kumar as the ninth head of the country's Space establishment. Mr.Kiran Kumar ends his three-year term on January 14 2018. Mr. Kiran Kumar, Dr. Sivan and the entire Space set-up are currently preoccupied with preparations for Friday's PSLV launch. Dr. Sivan told his name was approved by the Appointments Committee of the Cabinet based on the recommendation of the SCSC, according to an order issued on Wednesday by the ACC Secretary under the Ministry of Personnel, Public Grievances and Pensions. A graduate in aeronautical engineering from the Madras Institute of Technology, ME from Indian Institute of Science, Bengaluru, and doctorate in aerospace engineering from IIT Bombay, Dr. Sivan became Director of VSSC in June 2015. He joined ISRO in 1982 in the then young PSLV project and has been project director of the GSLV rocket.

Source: http://www.deccanherald.com/

PSLV Successfully Launches 31 Satellites in a Single Flight

ISRO's Polar Satellite Launch Vehicle, in its forty second flight, successfully launched the 710 kg Cartosat-2 Series Remote Sensing Satellite along with 30 co-passenger satellites today (January 12, 2018) from Satish Dhawan Space Centre SHAR, Sriharikota. This flight is designated as PSLV-C40. After a flight lasting 16 minutes 37 seconds, the satellites achieved the polar Sun Synchronous Orbit of 503 km inclined at an angle of 97.55 degree to the equator. In the succeeding seven minutes, Cartosat-2 series satellite, INS-1C and 28 customer satellites successfully separated from the PSLV in a predetermined sequence. The fourth stage of PSLV-C40 fired twice for short durations to achieve a polar orbit of 365 km height in which India's Microsat successfully separated. After separation, the two solar arrays of Cartosat-2 series satellite deployed automatically and ISRO's Telemetry, Tracking and Command Network (ISTRAC) at Bengaluru took over the control of the satellite. In the coming days, the satellite will be brought to its final operational configuration following which it will begin to provide remote sensing data using its panchromatic (black and white) and multispectral (colour) cameras. The 11 kg INS-1C and and the 100 kg class Microsat, the two Indian co-passenger satellites of Cartosat-2, are also being monitored and controlled from ISTRAC, Bengaluru. The 28 international customer satellites belong to Canada, Finland, France, Republic of Korea, UK and the USA. So far, PSLV has successfully launched 51 Indian satellites and 237 customer satellites from abroad.

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

China's Newly Tested Ballistic Missile Armed With a Hypersonic Glide Vehicle

China carried out the first flight-tests of a new kind of ballistic missile with a hypersonic glide vehicle (HGV) in November, The Diplomat has learned. According to a U.S. government source who described recent intelligence assessments on the People's Liberation Army Rocket Force (PLARF) on the condition of anonymity, China recently conducted two tests of a new missile known as the DF-17. The first test took place on November 1, 2017 and the second test took place on November 15, 2017. The November 1, 2017 test was the first Chinese ballistic missile test to take place after the conclusion of the first plenum of the Communist Party of China's 19th Party Congress in October.

Source: https://timesofindia.indiatimes.com

Indian airpower: go big on Tejas, or go home

The Indian Air Force's decision to issue a request for proposal (RFP) to Hindustan Aeronautics Limited (HAL) for the procurement of 83 Tejas MK-1A light combat aircraft (LCA) bodes well for the cause of military-industrial indigenisation in India. And since this RFP has been issued at a time when HAL is putting in place the means to double annual production rates for the Tejas, it shows that the Ministry of Defence (MoD) is hopeful that the homegrown fighter will contribute towards

shoring up IAF's squadron strength in a major way. Indeed, the significant investment made into setting up a second advanced manufacturing line for the Tejas by HAL would be wasted if the intention were to truncate production at just the numbers projected till now, which as of date is some 123 units once we take into account the recent RFP. Instead, the focus needs to be on taking the Tejas programme to its logical conclusion, which would be the development and production of a more capable MK-2 variant in sizeable numbers. Such a move would not only serve the purpose of obsolescence management and traditional product improvement, it would consolidate the gains made in terms of creating an aeronautical base in India via the LCA programme and provide the industrial pre-adaptation necessary for credibly producing a homegrown fifth-generation fighter. Meanwhile, it is imperative that various imported sub-systems used in Tejas variants be indigenised as soon as possible to both reduce operational risk as well as increase the domestic value capture of the programme. The MK-1A variant of the Tejas is a step up from the baseline MK-1 (of which a total of 40 are on order) in terms of its avionics fit, maintainability and the fact that it will have in-flight refuelling capability. However, both the active electronically scanned array (AESA) radar and the self-protection suite that the MK-1A will sport are expected to be of imported origin. HAL has floated tenders to procure the same from international vendors. HAL also intends to license-produce these sub-systems at its Avionics Division in Hyderabad and will also assume the responsibility to maintain, repair and overhaul (MRO) them. The company has decided to do so because indigenous alternatives to these items, such as the Defence Research and Development Organisation's 'Uttam' AESA radar and unified electronic warfare suite (UEWS) are both still under development. Clearly, HAL wishes to reduce the risk to the overall Tejas build programme by first firming up supplies from abroad and then undertaking license-production of the same, while creating another value stream for itself in the process. It is well understood that the total orders that HAL may end up receiving over the course of the Tejas programme is contingent upon its ability to deliver this combat aircraft on schedule. At the moment, due to a firm order of only 40 of these fighters, HAL has taken its time in executing the same, with only five serial production jets having been delivered to the IAF's 45th Squadron as on date. However, with serious movement on the MK-1A front, HAL knows that it will now have to demonstrate the ability to build up to 16 Tejas fighters a year. For this, HAL is currently scurrying to get its component and sub-assembly supply chain in place. Now, as far as the imported AESA radar for the MK-1A is concerned, a certain amount of engineering work will have to be done to fit it inside the nose of the plane, since its dimensions are the same as the MK-1. Mk-2, the real deal Due to the fact that the MK-1A will essentially have the same aero-body as the MK-1, it will not really be compliant with all the aerodynamic performance parameters desired by IAF in its air staff qualitative requirement (ASQR) for the Tejas design. It is only with the MK-2 variant that the developers of the Tejas, DRDO's Aeronautical Development Agency (ADA), expect near-total compliance with the IAF's requirement. But for this, the addition of a pair of canards and an engine of higher thrust capability than the current Tejas engine will be necessary, according to one top former DRDO official.

Source: http://www.thehindu.com/

UDAN 2 to link 73 airports, helipads

The Centre on said 73 underserved and unserved airports and helipads would be connected under the phase 2 of the regional connectivity scheme UDAN. Of the 90 proposals awarded to provide flight connectivity to more than 300 regional routes, Interglobe Aviation, the parent firm of IndiGo, was awarded a maximum of 20 proposals followed by SpiceJet with17. Jet Airways won 4 proposals. "The scheme will provide around 26.5 lakh seats per annum that will be covered with [an] airfare cap of ₹ 2,500/hr of flying," said R. N. Choubey Secretary, Ministry of Civil Aviation. "In addition, around two lakh RCS (regional connectivity scheme) seats per annum are expected to be provided through helicopter operations," he said. The States with maximum number of airports and helipads which will see activation under UDAN 2 scheme include Uttarakhand (15), Uttar Pradesh (9), Arunachal Pradesh (8), Himachal Pradesh (6), Assam (5) and Manipur (5).Some of the cities that would now be connected include Kargil, Darbhanga, Kasauli, Bokaro, Dumka, Hubli, Kannur and Pakyong, among others. This was the first time bids were received from helicopter operators under the scheme. Viability gap funding These proposals would required a viability gap funding (VGF) of ₹ 487 crore per annum for fixed wing operations and ₹ 130 crore per annum for helicopter operations in the priority areas — which include the north-eastern and hill States, taking the total funding need for the scheme in phase 2 to ₹ 617 crore. In the first phase, this amount stood at ₹ 213 crore per annum. The Centre said it had decided not to increase the ₹ 5,000 regional air connectivity levy charged from airlines flying on major routes to fund the UDAN scheme. It would now be partly funded by the dividend that AAI (Airports Authority of India) paid to the Government of India. "The Finance Ministry has agreed to fund the UDAN scheme through the dividend that AAI pays to the government

every year," said Mr. Choubey. "We already have got 200 crore from AAI as dividend share for this year. Next year also, a similar exercise will be done," he said. Under the first round of RCS, which concluded in March last year, a total of 128 routes were awarded to five airline operators

Source: http://www.deccanherald.com/

69th Republic Day: Rich exhibition of India's defence capabilities and cultural heritage at New Delhi's Rajpath

India on Friday celebrated its 69th Republic Day as the Rajpath, the capital's main promenade, came alive with march pasts and colourful tableaux to showcase the country's military might, cultural legacy and its initiatives, with 10 ASEAN leaders as chief guests watching the proceedings. The parade ceremony commenced with Prime Minister Narendra Modi laying the wreath at the Amar Jawan Jyoti at India Gate to pay homage to the fallen soldier. President Ram Nath Kovind took his first Republic Day salute from various wings of the Indian Army, the Air Force and the Navy. India for the first time in its history of republic hosted 10 heads of state or government of the ASEAN countries as guests of honour for the annual parade. Earlier, Kovind presented the Ashok Chakra - India's highest peace-time gallantry award - to Corporal Jyoti Prakash Nirala's widow and mother. The 31-year-old IAF commando was killed in an anti-terror operation in Jammu and Kashmir last year that also led to the killing of six terrorists. The parade was commanded by Lt. General Asit Mistry, General Officer Commanding, Headquarters Delhi Area. Major General Rajpal Punia, Chief of Staff, Headquarters Delhi Area was the parade second-in-command.

Source: http://www.deccanherald.com/

CASC to carry out 35 aerospace launches in 2018

China Aerospace Science and Technology Corporation (CASC) said Wednesday that the corporation would conduct 35 launches in 2018, the most missions in its history. The missions include the launches of the Chang'e-4 lunar probe, Long March-5 carrier rocket and BeiDou navigation satellites, the corporation said. CASC said 2018 would be its busiest and most important year, as many of its projects would enter key phases, and the numbers of experiments and launches would be the highest in its history. The company will continue to improve its innovation capability and push forward the commercial development in aerospace industry in 2018, CASC said. The Chang'e-4 lunar probe will undertake the first ever soft landing on the far side of the moon, conduct in situ and roving detection, and relay communication at the Earth-Moon Lagrangian 2 point, according to China's Lunar and Deep Space Exploration Center. In 2018, China plans to launch 18 BeiDou-3 satellites to expand navigation services to countries along the Belt and Road routes.

Source: http://www.thehindu.com/

TECHNOLOGY

Space tech being used for 125 govt projects: ISRO Chief

Indian Space Research Organisation (**ISRO**) is providing space technology to government departments in 125 areas to help them work on projects effectively and efficiently. After taking over as ISRO Chairman, Dr K Sivan said, "ISRO is helping the Centre make the most of space technology for social-welfare and development projects. Explaining how it all started, he said, "Prime Minister Narendra Modi had held a meeting of all ministries some time back where he asked all departments to use the full potential of space technology for the betterment of the common man. In that meeting, 156 areas where identified where ISRO could provide space technology solutions to fast-track projects. Out of those 156 areas, ISRO is currently training government officials using space technology for 125 such projects like MGNREGA, navigation system and land demarcation plans. Gradually, the number of such areas will be increased."The ISRO chairman said, "ISRO currently has 42 satellites of different types in space. We are trying to synergise the data obtained from communication, navigation and remote sensing satellites so that it can be used in innovative ways for the societal good. For example, we are working on providing NavIC (Navigation with Indian Constellation or desi GPS) receivers to fishermen so that they can access ISRO 's navigation system for boat navigation and locating fishing areas on high seas. The NaVIC receiver, along with a mobile app, will also help them track weather and keep themselves updated about any tsunami warning." Dr Sivan said, "The agency has already demonstrated the usage of the NaVIC receiver, containing an indigenously-made miniaturised chip, to

fishermen in Kerala and Tamil Nadu in the presence of state officials. The fishermen had shown great interest in the NavIC receiver. Thereafter, the agency has requested the industry to mass-produce these receivers so that they can be used by people, including fishermen, for accessing the Indian regional navigation system."

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

A Norwegian plane went from New York to London in 5 hours and 13 minutes - the fastest subsonic commercial transatlantic flight ever

A Norwegian Boeing 787-9 Dreamliner departing from New York JFK reached London Gatwick in five hours and 13 minutes on Monday - the fastest subsonic transatlantic flight recorded on a commercial aircraft, beating the previous record of five hours, 16 minutes. There were 284 passengers on board, who, after leaving New York at 11.44 a.m. EST, were probably pretty happy to arrive in London at 9.57 p.m. GMT - 53 minutes ahead of schedule. Strong tailwinds over the Atlantic Ocean pushed the aircraft to a top speed of 776 mph during the flight. Although impressive, the flight time is nowhere near rivalling transatlantic crossings made by Concorde when the supersonic aircraft was in service. The fastest Concorde flight from New York to London came on 7 February 1996, when it crossed the pond in just shy of 2 hours and 53 minutes. The Norwegian captain, Harold van Dam (shown below), said: "We were actually in the air for just over five hours and if it had not been for forecasted turbulence at lower altitude, we could have flown even faster." He added: "The 787 Dreamliner is a pleasure to fly and it's a great feeling to know that we have set a new record in this aircraft." The airline uses that same aircraft on its two daily flights between London and New York. Just the day before, Gatwick-based captain Pascal Niewold also recorded his fastest ever transatlantic flight - New York to London in five hours and 20 minutes. Niewold said: "The passengers and crew were very pleasantly surprised that we were already landing in London. It was a very smooth flight with almost no turbulence and as a result of the jet stream we arrived 25 minutes early."

Source: https://www.businessinsider.in

NAL confident of desi civil aircraft project taking off

Saras, the Light Transport Aircraft (LTA) developed by the National Aeronautics Laboratories(NAL) completed a successful 40-minute flight, bringing back hopes of a revival, even as no funding has been committed so far. The project, which was first conceived in 1989 was to be shelved after the aircraft's infamous crash in March 2009 but was given a second chance by the Centre in late 2016, the announcement about which came in Aero India 2017. TOI caught up with NAL Director Mr Jitendra J Jadhav, who spoke about the challenges of Saras and other programmes. Jadhav said they reviewed the flight data from Wednesday and yes it was a complete success, but before going into production we will need at least another 15-20 flights to have enough data to begin the limited series production (LSP). Once we have that data, we'll be ready to move into producing three LSPs production. The second flight is scheduled for January 31, 2018.

Source: http://www.thehindu.com/

ISRO Chief on a mission to cut expenses on launches

The Department of Space (DoS) is anticipating an increase in financial outlay in next month's Budget, even as its new Secretary K. Sivan said the Indian Space Research Organisation (ISRO) was working to reduce the cost of its satellite and launch vehicle missions. Dr. Sivan, who formally took charge on January 22, 2018 as DoS Secretary and ISRO Chairman, said the space body was trying to lower the cost of satellites by using miniaturised avionics, advanced electronics and the recently tested EPS — electric propulsion system — among others. On the launch vehicles or rockets that put these satellites into space, the use of low-cost, space-grade materials and components can reduce the weight of the rocket and allow it to carry heavier payloads. With an allocation of 9,093 crore last year, Dr. Sivan said, "We definitely would like a larger allocation. More satellites are required, and more launch vehicles to launch them. We also need new facilities to make them. We have to bring the manufacture of launch vehicles to industry and this needs extra money. All this is projected [in the requirement made to the government.]" However, he stressed that, "We never had any problem with the budget. The problem is in executing [spending] it. In fact we should aim for reducing the total mission cost." A medium-sized two-tonne [2,000-kg] communication satellite costs roughly 200 crore as also the rocket that puts it in a geostationary orbit in space. "We are targeting a substantial lowering of cost and attacking it on all sides with available technology. It is difficult to name the percentage of reduction right now," Dr. Sivan said. Enhanced GSLV Among the innovations and value additions being developed is the augmentation of the GSLV Mark II launch vehicle. Dr. Sivan said its lifting capability would soon be enhanced from 2.2 tonnes to 3.3 tonnes. The capability then would go up by 1.5 times and would reflect in its per-kilo cost, which could make it quite competitive to future commercial users in the launchers market. The first launch of the enhanced

GSLV, after necessary tests and confirmations, will be the 3.2-tonne Chandrayaan-2 spacecraft, scheduled to be launched in April. It carries the first Indian moon lander and rover. To reduce the size of the satellite without affecting its efficiency, ISRO has begun experimenting with EPS in place of chemical propulsion. The system was first used in GSAT-9 (South Asia Satellite) in May last year to manage satellite functions in orbit and ISRO officials had then said it reduced fuel cargo to 25%. Dr. Sivan said the EPS is a promising technology. By bringing this in, a four-tonne satellite can do the job of a six-tonne spacecraft; it will also cost less to launch it. However, its full use in orbit correction is yet to be explored as the satellite will then take six to 12 months to reach its orbit. He said smaller, cheaper satellites could also be made using miniaturised and low-cost components.

Source: http://www.deccanherald.com/

Boeing comes up with its vision for a hypersonic spy aircraft

Boeing seems to have come up with the early details of its own design for a hypersonic tech demonstrator that would be a spiritual successor to the SR-71 Blackbird. This means that this is meant to be a logical extension of the company's X-51A Waverider: the wedge-shaped, twin-tail body is designed to minimize drag while gulping in as much air as possible. With features of the new model being about as long as the Blackbird, its Mach 5-plus top speed would definitely supersede Mach 3.2 jet. The progress on the design depends on if the American officials select it for development (or not) under both DARPA's Advanced Full Range Engine program and the US Air Force's Turbine-Based Combined Cycle study. And if by chance, it fails to go ahead, it'll be a while before a production aircraft comes up. Boeing is expected to start by making a single-engine proof of concept vehicle and would move on to a full-sized, dual-engine version. Boeing's Kevin Bowcutt reportedly told Aerospace Daily that the design is still evolving, so this is more a reflection of the current state of affairs than anything.

Source: http://www.thehindu.com/

BUSINESS

India begins talks with Russia for Rs 39,000 cr Triumf missile shield deal

India has now begun final contract negotiations with Russia for the Rs 39,000 crore (over $5.5 billion) acquisition of five advanced S-400 Triumf air defence missile systems+ , which can detect, track and destroy hostile strategic bombers, stealth fighters, spy planes, missiles and drones at a range of up to 400 km and altitude of 30 km. India wants to conclude the major deal in the 2018-19 financial year, with the first S-400 surface-to-air (SAM) missile system, with its associated battle-management system of command post and launchers, acquisition and engagement radars, and all-terrain transporter-erector-launcher vehicles, slated for delivery two years after the contract is inked. "All the five S-400 systems, which can even take on medium-range ballistic missiles, apart from cruise missiles, will be delivered in 54 months. The force-multiplier will change the dynamics of air defence in the region," a defence ministry source said. India's final commercial negotiations with Russia after extensive field trials come at a time when China has already begun to get deliveries of six S-400 batteries - designated 'SA-21 Growler' by NATO - under a $3 billion deal inked in 2014. There were, however, reports that some auxiliary components of the S-400 systems being shipped to China from Russia were damaged in a storm last week. Russia, which has deployed the S-400 in Crimea for airspace protection along the Ukraine border, is also set to sell the air defence systems to Turkey and Saudi Arabia. India can deploy the highly-mobile S-400 system to protect a city during war, or even use it to neutralise Pakistan's short-range Nasr (Hatf-IX) nuclear missiles. Pakistan often recklessly brandishes its Nasr missiles as a battlefield counter to India's 'Cold Start' strategy of swift, high-intensity conventional attacks into enemy territory. With long-range radars to track 100 to 300 targets simultaneously, the S-400 has different kinds of supersonic and hypersonic missiles to intercept incoming aerial threats at different ranges. The system's cost depends on the configuration a customer wants. India, for instance, is mainly going in for long-range (120-370-km) interception missiles.

Source: https://timesofindia.indiatimes.com

UDAN-2: 325 more routes; IndiGo, Jet Airways join with chopper operators

Affordable regional connectivity by air could soon be a widespread reality with India's biggest airlines joining the Modi government's ambitious UDAN (ude desk ka aam nagrik) scheme. The aviation ministry on Wednesday said IndiGo and Jet Airways are among the players awarded 325 routes in the second round of UDAN bidding. SpiceJet and Alliance Air,

which had joined the regional connectivity scheme (RCS) in the first round itself, have got more routes. “In the second round, we have given RCS routes to helicopter operators also. In all, we got 141 proposals for 502 routes (for both planes and choppers). Letters of award have been given to 90 proposals for 325 routes. Out of these, 129 routes are in a newly created category of ‘priority areas’ that include Jammu and Kashmir, Himachal, Uttarakhand, North East, Andaman and Nicobar Islands and Lakshadweep Islands,” aviation secretary R N Choubey said. In the first round of UDAN where fares are capped at Rs 2,500 for an hour of flying in a plane for a specified number of RCS seats on each flight, 128 routes were awarded last March. But only 40 per cent of those have got operational till now as two airlines — Air Deccan and Air Odisha, which got 84 of those routes — are yet to start flying on a majority of them. Big Boys SpiceJet and Alliance Air started operating the routes given to them. Now with IndiGo and Jet also joining RCS, more routes will get operational. IndiGo has got 20 routes Kannur-Bangalore; Kannur-Trivandrum; Cochin-Hubli-Goa; Bangalore-Allahabad-Pune; Nagpur-Bhubaneswar-Allahabad; Mumbai-Allahabad; Hindon-Allahabad-Dehradun; Hindon-Gorakhpur-Allahabad and Hindon-Jaisalamer-Udaipur. SpiceJet was awarded 20 new sectors. “Out of these 20, 15 will cater to unserved markets of Kannur (Kerala), Darbhanga (Bihar), Ozar (Nashik), Pakyong (Sikkim), Kishangarh (Rajasthan)”

Source: http://www.deccanherald.com/

CSIR-NIO wants to be more self-reliant in FY 2018-19'

With around 30 per cent of its funding coming from non-CSIR sources, Goa-headquartered National Institute of Oceanography (NIO) is hoping to become more self reliant in the next financial year.In a major innovative programme, the world-renowned science institute is researching how sea weeds or other underground flora and fauna can be used for the betterment of mankind and to explore whether they can be used as nutrition, or a drug or as a cosmetic product.”The NIO is relying on the funding made available from CSIR (Council of Scientific & Industrial Research), which the parent body governing us. But we also get the funds from other sources, including private bodies, to the tune of 30 per cent,” CSIR-NIO Director Sunil Kumar Singh told PTI recently. He said the CSIR-NIO was executing projects for other government organisations like the Ministry of Earth Sciences (MOES), Ministry of Environment and Forest and the Directorate of BioTechnology (DBT) besides providing service to the private industries. Singh said the NIO wanted to increase this share of 30 per cent revenue collected from the non-CSIR organisations so that the institute becomes self-reliant.”The budget of CSIR-NIO is Rs 100-120 crore annually of which Rs 30-40 crore is generated from the non-CSIR projects,” he added. The NIO has also been associated with the Oil and Natural Gas Commission and private firms like Reliance and Adani for which it is undertaking offshore survey to locate petroleum and hydro-carbon, besides laying underwater pipeline for their projects. The CSIR-NIO has also been doing a survey for the power grid, which also adds to the revenue collected by the science institute. Singh said the revenue generated from the non-CSIR bodies cannot be relied upon as “sometimes some year, NIO gets a good project but for some year, it (revenue) goes down”.”We would like to get more and more of non-CSIR fundings so that there is a self-reliance, but we have not set any such target to earn the funding. We have to keep the lower limit at least 30 per cent to get the funding,” he added. Singh said the NIO wanted to strengthen the existing facilities as well as to expand the research programme.”Oceanographic research is more towards understanding the processes and it is towards the basic science,” the CSIR-NIO director said. He said the stress would be on utilising the research benefit of research for the societal benefit. Singh said one of big programmes the NIO was planning to undertake was the poly-metallic nodule programme.”We have already surveyed and exploratory work is already done. We have identified the areas where we can do mining. This is one area where we would like to strengthen so that mining is possible as soon as it can be,” Singh said. In one of its most innovative projects, the CSIR-NIO is also researching how sea weeds or other underground flora and fauna can be used for the betterment of mankind.”Other area in which CSIR-NIO would be very much trying to push is about converting sea weeds and other flora and fauna for the benefit of mankind, whether they can be used as a nutrition, or drug or as a cosmetic product,” he said. The director said the extensive research was going on this aspect with breakthrough is being achieved in one of the projects.”Recently, we have transferred one technology to a private firm in which our scientists were able to get some bacteria out of the ocean which can be used as a sunscreen to protect the skin from ultra violet rays,” he said. “These bacterias were on the sponges. We have given the technology to a private company which will commercially explore the research and see how they can take it further. This was found off the Cochin area,” he added. The researchers are also working on extracting nutrition from the ocean which could be of enormous potential.”Lot of food colour is required for the people. Sea weed could be a source for colour. We are exploring

the possibility whether it can be exploited at industrial scale," Singh stated. The CSIR-NIO is also working in the field of gas-hydrates."We have been working on this project for some time and we have explored some area in the Krishna Godavari basin where there is potential for gas hydrate. The challenge is how to extract them. We will have to do a lot of technology enhancement for that so that these gas hydrates can be extracted," he added.

Source: http://www.business-standard.com

Members Column

Dr G Satheesh Reddy conferred with National Design Award

Dr G. Satheesh Reddy, Scientific Adviser to Raksha Mantri and Director General, Missiles and Strategic Systems, has been conferred with the prestigious National Design Award. He has bagged this award for his significant national contribution towards indigenous design and development of diversified missile systems, guided weapons, avionics technologies and for his sustained efforts leading to the advancement of aerospace technologies and industries in India. Satheesh Reddy spearheads Dr APJ Abdul Kalam Missile Complex, 'the Missiles hub of India', steering the design and development of a wide variety of tactical and strategic missile systems. His contributions have left a lasting imprint on the technology map as well as on the defence preparedness of the country and paved the way for self sufficiency in missile systems and technologies. He has played a major role in indigenous design and development of weapon systems, formulation of national policies, harnessing the research and innovation in industry, academia and R&D institutes. He will be receiving the award during the Indian Engineering Congress on December 21 2017 at Chennai. National Design Research Forum (NDRF) established by the Institution of Engineers (India), promotes research, design, development, productisation and innovation through collaborative effort since 1969. It is anchoring inter-disciplinary technological research in many engineering disciplines, including for societal applications, and plays a major role in deploying engineering and technology services, systems, and solutions for nation building. NDRF continues the tradition of identifying and recognising outstanding contribution to engineering design through national design awards since its inception. These activities and facilities of NDRF are open to industry, academia and research organisations for collaborative research and development. He is known for being a navigation expert and is the only scientist from India holding the distinction of being inducted as Fellow of Royal Institute of Navigation, London and Royal Aeronautical Society, UK.

American Institute of Aeronautics and Astronautics (AIAA) Confers Associate Fellowship to Dr PC Jain Scientist, DRDL, Hyderabad

Dr Prakash Chan Jain , Fellow of Aeronautical Society of India and Scientist with Defence Research and Development Laboratory (DRDL), Hyderabad , has been inducted to the grade of Associate Fellow-Class of 2018 in the American Institute of Aeronautics and Astronautics (AIAA). The distinguished individuals comprising the Class of 2018 Associate Fellows exemplify extraordinary accomplishments and leadership in the Global Aerospace Community. Dr Jain is the only Scientist working in India who figures in the list of 2018 Associate Fellows.Dr Jain an alumnus of IIT Rookie, IIT Bombay and BOYSCAST(DST) Fellow from Pennsylvania State University USA is specialized in the areas of Structural Optimization, Structural Dynamics and Nonlinear Structures Technologies. He has made Outstanding contributions in Aero Space Engineering through application to the DRDO's prestigious Programs. He is a Fellow of Aeronautical Society of India , Fellow of Telangana Academy of Sciences and Fellow of Institution of Engineers India. He is also associated with Indian Institute of Technology Delhi as AICTE INAE Distinguished Visiting Professor. Dr Jain is recipient of prestigious Dr Biren Roy Space Science Award from Aeronautical Society of India and conferred by Governor of Karnataka. The AIAA is an

association of nearly 30,000 Engineers and Scientists , and 95 corporate members, from 85 countries who are dedicated to advancing the Global Aerospace profession. AIAA serves aerospace professionals around the world who are shaping the future of aerospace by providing the tools, insights, and collaborative exchanges to advance the state of the art in Engineering and Science for Aviation, Space, and Defence.

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