समाचार पत्रों से चयित अंश
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THE FINANCIAL EXPRESS

Thu, 19 Dec 2019

Two successful launches of Made in India BrahMos from land and air platform validates its lethality

With today's launch, IAF has got the capability to strike from large stand-off ranges on any target both at sea or on land with accuracy in different weather conditions and day and night

By Huma Siddiqui

New Delhi: The Indo-Russian BrahMos Air-Launched Cruise Missile (ALCM) was successfully launched by the Indian Air Force (IAF) from the Russian Su-30 MKI against a sea target. With this success, the IAF gets the desired strategic reach and become the ultimate "game-changer" in the 21st century.

With today's launch, IAF has got the capability to strike from large stand-off ranges on any target both at sea or on land with accuracy in different weather conditions and day and night.

According to the officials, the test, conducted in user configuration revalidated the ship attack capability of the advanced air-launched cruise missile. At the time of the launch, the missile was gravity dropped from the air combat platform's fuselage and the two-stage weapon's engine fired up and straightaway propelled towards the intended target positioned at the sea piercing the same with pinpoint accuracy.

With today's successful launch of BrahMos from Su-30MKI has re-established it as the world's most powerful conventional airborne weapon to attack targets on sea and land from the air. As has been reported earlier, in May this year had successfully tested the missile against a land-based target in the Car Nicobar Islands region.

The air version of the BrahMos missile is a 2.5 ton and with a range of 300 km, it has been developed and designed by BrahMos Aerospace Pvt Ltd (BAPL). Also, there has been major participation by the IAF from the time of the inception of the missile and has worked closely with the Defence Research and Development Organisation (DRDO), state owned Hindustan Aeronautics Limited (HAL) and BAPL.

The IAF has played a significant role in developing the software of the SU-30 MKI and the state-owned HAL has made both mechanical and electrical modifications on the fighter aircraft enabling it to carry the missile. Says IAF, "The integration of the weapon on the aircraft is a complex process and it involves all stakeholders including the HAL, DRDO and BAPL to carry out the modifications on board the Su-30 MKI."

Today's test was the third live launch of the weapon, November 2017 witnessed the first time it was launched making IAF the first air force in the world to have successfully fire an air-launched surface attack missile of this category on a sea target.

Under the joint venture between India and Russia, efforts are on to increase the speed of the missile to up to Mach 5 which will make it into a hypersonic weapon.

Earlier in the day, the BrahMos was successfully launched from a land-based mobile launcher where maximum components were of Indian origin, primarily the missile airframe, fuel management system and DRDO designed seeker.

https://www.financialexpress.com/defence/two-successful-launches-of-made-in-india-brahmos-from-land-and-air-platform-validates-its-lethality/1797721/

THE ECONOMIC TIMES
WWW.ECONOMICTIMES.COM

Thu, 19 Dec 2019

How air, land-attack versions of BrahMos missile are strengthening Indian defence forces

BrahMos missile successfully test-fired

India successfully test-fired two BrahMos supersonic cruise missiles from land and air platforms to check its capability to hit targets with precision and accuracy.

Land-attack missile fired from a mobile launcher

According to the officials, the land-attack missile was fired from Launch Pad-3 of the Integrated Test Range (ITR) at a base off the coast of Odisha by the Defence Research and Development Organisation (DRDO) and targeted a ship.

Air version testfired from IAF's Su-20MKI

The air version of the missile was launched by the Indian Air Force (IAF) from Sukhoi-30MKI and it also successfully hit a target in the sea. During the test, the missile was gravity dropped from the air combat platform's fuselage and the two-stage weapons engine fired up and the missile straightway propelled towards the intended target positioned at the sea, piercing it with "pinpoint" accuracy, defence officials said in a statement.

How it boosts IAF?

BrahMos missile provides Indian Air Force with a much-desired capability to strike from large stand-off ranges on any target at sea or on land with pinpoint accuracy by day or night and in all weather conditions.

Who developed the missile?

A medium-range ramjet supersonic cruise missile, BrahMos can be launched from submarines, ships, fighter jets, or land. The missile has been developed as a joint venture between the DRDO and the Federal State Unitary Enterprise NPO Mashinostroyenia (NPOM) of Russia.

https://economictimes.indiatimes.com/news/defence/how-air-land-attack-versions-of-brahmos-missile-are-strengthening-indian-defence-forces/how-it-boosts-iaf/slideshow/72868899.cms

DefenceNews

Thu, 19 Dec 2019

IAF and defence ministry bargain on 83 LCA deal, bring down cost by over Rs 10,000 crores

The finance wing of India’s Defence Ministry with the Indian Air Force negotiated with the government-owned Hindustan Aeronautics Limited and got the price of the 83 Light Combat Aircraft (LCA) reduced by more than Rs 10,000 crores in New Delhi today, December 18.

Long Wait ::

The original price of the 83 Tejas Mark-1A was stipulated at Rs 50,035 crores. This deal was made final by the Defence Acquisition Council (DAC) in November 2016, when the biggest decision-making body in the Defence Ministry approved the IAF to purchase these aircraft at the original price.

Defence sources told ANI that: "The draft contract of the deal has been readied by the HAL and the cost of the deal has now come down to around Rs 40,000 crore. This is Rs 10,000 crore less than the Acceptance of Necessity given by the Defence Ministry in 2016."

Negotiations for the procurement of the 83 LCA have been going on since 2017. The IAF had issued a single-vendor tender to the HAL for the same in 2017, but the deal hasn't been closed due to issues over the price.

Crossed fingers ::

This is the biggest contract for HAL ever by the defence forces. The Defence Ministry is looking forward to closing the deal during the Defexpo-2019, which is to be held in Union Defence Minister Rajnath Singh's constituency, Lucknow, in February 2020.

The deal offered in the LCA Mark-1A had not been able to be sealed due to issues over the price. The former Defence Minister Nirmala Sitharaman had formed a committee to investigate and negotiate into the matter. Numerous meetings have been held between HAL and the Defence Ministry's finance wing since then, and the contract is now in the final stage, just waiting to be inked by the two parties.

Features of the LCA ::

The new LCA will have improved serviceability, faster weapon-loading time, enhanced survivability, a better electronic warfare suite and Active Electronically Scanned Array (AESA) radar that will enhance it's capability significantly.

Tejas LCA had been cleared and provided the Final Operational Clearance (FOC) by the Centre for Military Airworthiness and Certification (CEMILAC) earlier this year in Bengaluru during Aero India. The CEMILAC had given a thumbs up to the aircraft's capabilities including the 'beyond visual range' air-to-air and air-to-ground attack capabilities. The aircraft was also deemed to have longer endurance because it can refuel mid-air.

The IAF had inked a contract for 40 Tejas LCAs with the HAL previously. As many as 18 LCAs have been delivered to the IAF so far from the previous deal and a squadron has been formed in Tamil Nadu's Sulur town. The 45 total squadrons have participated in various exercises and demonstrations to exhibit its capabilities to the world.

Critics say…

Critics say that the Indian Air Force should drop its plan to make more Tejas Mark-2s and focus on AMCA fighter jets. The Tejas AF Mark 2 MWF is an enhanced version of the Tejas Light Combat Aircraft (LCA) and the purchase of these aircraft are called 'a bad bet'. As published in a reputable news website, the fourth generation Medium Weight Fighter (MWF) is a bad bet as it will probably be ready by the end of next decade. China has already procured two fifth-generation fighter jets, which it can sell to Pakistan.

https://www.defencenews.in/article/IAF-And-Defence-Ministry-Bargain-On-83-LCA-Deal,-Bring-Down-Cost-By-Over-Rs-10,000-Crores-808451

पंजाब केसरी

Thu, 19 Dec 2019

रक्षा मंत्रालय के मोल-भाव का कमाल

83 लड़ाकू विमानों के सौदे में देश के 10 हजार करोड़ बचाए

नई दिल्ली, (एजेसी):रक्षा मंत्रालय के वित्त विभाग और वायु सेना के नेतृत्व वाले हिंदुस्तान एरोनॉटिक्स लिमिटेड (एचएएल) ने मोलभाव कर लड़ाकू विमानों की खरीद में देश के करोड़ों रुपये बचाए हैं। मोलभाव की वजह से 83 हल्के लड़ाकू विमानों की डील अब 10 हजार करोड़ रुपये कम पर हुई। रक्षा अधिग्रहण परिषद (डीएसी) ने नवंबर 2016 में 83 तेजस मार्क-1ए विमानों को 50,025 करोड़ रुपये में खरीदने के सौदे पर मुहर लगाई थी। रक्षा मंत्रालय के खरीद संबंधित सभी फैसले डीएसी ही लेता है। रक्षा सूत्रों ने बताया कि रक्षा सौदे का मसौदा एचएएल ने तैयार किया है और मोलभाव के बाद इसकी कीमत 40 हजार करोड़ रुपये तक आ गई है।' अब रक्षा मंत्रालय को स्वदेशी इंडस्ट्री के लिए अब तक के सबसे बड़े रक्षा सौदे पर मुहर लगाने की कोशिश में है। दिसंबर 2017 में

- नवंबर 2016 में 83 तेजस मार्क-1ए विमानों को 50,025 करोड़ रुपये में खरीदने के सौदे पर मुहर लगाई थी

वायु सेना ने एचएएल को 83 हल्के लड़ाकू विमान खरीदने के लिए टेंडर जारी किए थे। मगर इसके बाद से कीमतों के लिए बातचीत का दौर जारी था। रक्षा मंत्रालय की वित्तीय शाखा को लगा कि एलसीए मार्क 1ए की कीमतें ज्यादा लगीं और इसके बाद तत्कालीन रक्षा मंत्री निर्मला सीतारमण ने इस मामले को देखने के लिए एक समिति का गठन किया। इसके बाद से दोनों पक्षों के बीच कई दौर की बैठकें हुईं, लेकिन अब अनुबंध अंतिम चरण तक पहुंच गया है।

अत्याधुनिक सुविधाओं से लैस है ये विमान : अत्याधुनिक सुविधाओं से लैस विमान यह विमान अत्याधुनिक सुविधाओं से लैस है। इसमें हथियारों को तेजी से लोड किया जा सकता है। इसकी निगरानी प्रणाली और इलेक्ट्रॉनिक प्रणाली भी बेहतर है।

THE HINDU BusinessLine

Thu, 19 Dec 2019

Aerospace, defence ecosystem in Hyderabad catalysed by US OEMs, says KT Rama Rao

Telangana to build two more aerospace parks

By V Rishi Kumar

Hyderabad: The Aerospace and defence ecosystem in Telangana has witnessed unprecedented growth in the past five years and the US OEMs have contributed significantly to this growth, KT Rama Rao, Telangana Industries Minister, said.

Given the potential for growth in the sector, Telangana is in the process of creating two more aerospace parks, he said.

Speaking at the US-India Defence Ties Conference, Rao said: “In a short span, the State ecosystem has attracted large investments from US OEMs such as Lockheed Martin, Boeing, GE Aviation, Pratt and Whitney, Honeywell and Collins Aerospace.”

Tata Lockeed Martin is looking at doubling its capacity and expanding further in Hyderabad. The entire manufacturing is export-oriented and not linked to any offset or supply to India’s armed forces. This shows how Hyderabad has evolved as a preferred low cost manufacturing ecosystem for global production, he said.

The real Make-in-India in defence programmes successfully demonstrated by Lockheed Martin has attracted several other US OEMs such as Boeing to establish their factories in Hyderabad. Aero structures for Boeing Apache Attack helicopters and Chinook Helicopters are built and exported from Hyderabad, he said.

When GE started the GE Aero engine facility in Hyderabad, they could easily find highly skilled talent available locally. Their production started in record time and is currently running well ahead of schedule, he said.

Rao said, “We have leading OEMs sourcing critical components, and subsystems from Hyderabad based local industries. Global aviation majors have also established their Technology development, engineering and R&D centres in Hyderabad.”

Among Strategic Indian players, TATA group has a significantly large operation in Telangana and currently runs over 90 per cent of its aerospace manufacturing from Hyderabad. Other leading defence majors such as Adani Group and Kalyani Group also have established their various projects in Telangana.

Rao highlighted the presence of four dedicated aerospace parks in Hyderabad and 50 general-engineering parks with quality infrastructure for precision industry. Two more aerospace parks are proposed in the State.

https://www.thehindubusinessline.com/news/aerospace-defence-ecosystem-in-hyderabad-catalysed-by-us-oems-says-kt-rama-rao/article30341286.ece

The Tribune
VOICE OF THE PEOPLE

Thu, 19 Dec 2019

Gen Rawat: Situation along LoC can escalate any time

Ties with Pak strained, Army has to be ready for escalatory matrix

By Ajay Banerjee

New Delhi: In February this year, after the terror attack near Pulwama and the subsequent airstrikes on Balakot, matters between nuclear armed neighbours India and Pakistan were tense. How was it tackled what were the tensions? Army Chief General Bipin Rawat, whose three-year tenure ends on December 31, told a group of mediapersons, "Situation along the LoC (Line of Control) can escalate any time. The Indian Army has to be always prepared for an escalatory matrix."

Gen Rawat did not specify what could have been the retort of the Army had there be another Pulwama-style terror attack or had the Pakistan Air Force jets attacked the ammunition dump on February 27 during the air duel post-Balakot. Pakistani missiles were dropped close to the ammunition dump.

Gen Rawat, when he had taken over as Chief of the 1.3 million-strong Army at the end of 2016, had laid down three targets: Restore the image of the Army; remain prepared for operations and address the rumblings within the force.

During his tenure, the Army has moved the concept of integrated battle groups (IBGs) which would start off with the area around Pathankot and Jammu. Another IBG will be in 33 Corps area in Sikkim and possibly the Mountain Strike Corps will also get an IBG. The IBG's rollout will be completed over the next five years and will actually reduce troops.

In these three years, the Army also mulled using technology to keep an eye on the Line of Actual Control (LAC) with China. The first attempt is expected in Sikkim which is a settled border. The Army's proposal is to use technology instead of troops on each peak for surveillance. This can bring down cost of logistics. The engagement with China is well established now and discussions are done even at formation level along the LAC that is not demarcated on ground.

The restructuring of the Army started by Gen Rawat is yet to be completed as a Cabinet decision is awaited on creation and rejig of some senior posts.

The Army aims to have Major Generals head each of the IBG — the biggest change in the Army since the declared "Cold Start" doctrine.

Matters with Pakistan remain tense. Border action teams of the Pakistani army are active attempting to strike at Indian Army posts along the 749-km LoC.

In race to be first Chief of defence staff?

- Army Chief General Bipin Rawat's remarks came in the backdrop of spurt in ceasefire violation by Pakistan along the LoC since the abrogation of Article 370 in August
- Gen Rawat played a key role in pursuing a policy of hot pursuit in dealing with cross-border terrorism in the Valley after he took over as Army Chief on December 31, 2016
- He is due to retire on Dec 31 but it is likely that he will be appointed as India's first Chief of Defence Staff. PTI

https://www.tribuneindia.com/news/gen-rawat-situation-along-loc-can-escalate-any-time-13870

hindustantimes

Thu, 19 Dec 2019

India, US hold 2+2 dialogue to boost strategic ties

According to top diplomats in New Delhi and Washington, there are no arms deals on the table at the 2+2 meeting as the two sides have decided to keep the hardware relationship separate from bilateral political ties

By Shishir Gupta

New Delhi: India and the US are set to deepen their strategic relationship with the Pentagon in favour of increased engagement between the Tampa-based Central Command and South Block, besides ongoing cooperation with the Hawaii-based Indo-Pacific Command.

The Central Command's area of responsibility includes West Asia, Central Asia, Afghanistan and Pakistan.

India's defence minister Rajnath Singh and external affairs minister S Jaishankar met their US counterparts Mark Esper and Mike Pompeo for the 2+2 ministerial dialogue on Wednesday, with both sides exchanging notes on developments in West Asia, the Af-Pak region, and the growing shadow of China over the Indo-Pacific.

While Jaishankar is expected to take questions from the US Congress over the Citizenship (Amendment) Act, or CAA, when he visits Capitol Hill, he is prepared to walk the Congress through community-specific citizenship laws by Washington in the past. The nullification in August of Articles 370 and 35A — which granted special status and privileges to Jammu & Kashmir — and the purchase of Russian arms with a historical legacy are not listed in the agenda.

The two Indian ministers are also not expected to meet President Donald Trump even as India-US trade issues are being separately handled by commerce minister Piyush Goyal and US trade representative Robert Lighthizer.

According to top diplomats in New Delhi and Washington, there are no arms deals on the table at the 2+2 meeting as the two sides have decided to keep the hardware relationship separate from bilateral political ties.

The India-US relationship is currently at a level where any global event can come up for candid exchange of assessments, people familiar with developments said.

The US decision of engaging the Taliban for stabilising Afghanistan was expected to figure in discussions as India is wary of the Sunni fundamentalist group with umbilical links to the deep state in Pakistan.

Beijing's beefing up of the Peoples' Liberation Army (PLA) Navy, with two aircraft carriers and nuclear submarines, and its impact on the Indo-Pacific, is also a matter of concern for both countries.

Terrorism emanating from the Af-Pak region with the so-called Islamic State-Khorasan threatening the Durand Line and Pakistan's continued support to terror groups targeting India is also expected to figure prominently in the agenda, with both sides keen that perpetrators of the 2008 Mumbai attacks and the Pulwama attack be brought to justice in Pakistan.

https://www.hindustantimes.com/india-news/india-us-hold-2-2-dialogue-to-boost-strategic-ties/story-vUHEfKSmVErI66TLrR5F1O.html

नवभारत टाइम्स

Thu, 19 Dec 2019

राजनाथ सिंह ने अमेरिकी नौसैन्य हवाई अड्डे का दौरा किया, संबंध और मजबूत होने की उम्मीद जताई

वाशिंगटन: रक्षा मंत्री राजनाथ सिंह ने अमेरिका के वर्जीनिया में नॉरफॉक स्थित नौसैन्य हवाई अड्डे का दौरा किया। इस दौरान उन्होंने वाणिज्यिक विमान प्रदर्शनी तथा बोईंग लड़ाकू विमानों का प्रदर्शन भी देखा। उन्होंने उम्मीद जताई कि दोनों देशों के बीच जो ''मजबूत रक्षा संबंध'' हैं, वह निकट भविष्य में और मजबूत होंगे। सिंह और विदेश मंत्री एस जयशंकर बुधवार को होने वाली दूसरी 'टू प्लस टू' वार्ता के लिए अमेरिका आए हैं। अमेरिकी रक्षा मंत्री मार्क एस्पर और विदेश मंत्री माइक पोम्पियो ने उनकी अगवानी की। सिंह ने मंगलवार को ट्वीट किया, ''अमेरिका के नॉरफॉक में नौसेना के हवाई अड्डे ओशियाना का दौरा किया और अत्याधुनिक वाणिज्यिक विमान प्रदर्शनी और लड़ाकू एवं हमलावर विमान 18ई का प्रदर्शन देखा।'' उन्होंने एक अन्य ट्वीट में लिखा, ''नॉरफॉक के नौसैन्य अड्डे पर मुझे निमिट्ज श्रेणी के यूएसएस विमान वाहक 'ड्वाइट डी आइजनहावर' में सवार होने का अवसर मिला। हमने भारत और अमेरिका के बीच मजबूत रक्षा संबंधों को प्रदर्शित किया।'' आधिकारिक बयान में कहा गया कि यह दौरा अमेरिका और भारत के बीच रक्षा साझेदारी की गहराई को और दोनों देशों की नौसेनाओं के बीच करीबी संबंधों को रेखांकित करता है। रक्षा मंत्री के साथ यहां अमेरिका में भारतीय राजदूत हर्षवर्धन श्रृंगला, रक्षा सचिव अजय कुमार, भारत सरकार के अन्य वरिष्ठ अधिकारी तथा सैन्य अधिकारी भी आए हैं। अमेरिकी अधिकारियों ने कहा कि इस दौरे से दोनों देशों के बीच साझेदारी और मजबूत होगी। वक्तव्य में कहा गया कि भारत और अमेरिका सैन्य अभियानों, रक्षा व्यापार, आधिकारिक दौरों और आदान-प्रदान समेत दुनिया के सबसे बड़े अमेरिकी नौसैन्य अड्डे के इस दौरे के साथ रक्षा सहयोग को मजबूत बना रहे हैं। वायुसेना अड्डे पर सिंह का दौरा खास माना जा रहा है कि क्योंकि इससे ऐसे संकेत मिलते हैं कि भारत वायुसेना और नौसेना के लिए लड़ाकू विमान के संबंध में इन विकल्पों को भी गंभीरता से देख रहा है। एफ/ए-18ई (सुपर हॉर्नेट) के उत्पादक बोइंग ने इन लड़ाकू विमानों की ब्लॉक तीन श्रेणी का प्रस्ताव दिया है। ''बोइंग डिफेन्स, स्पेस एंड सिक्योरिटी'' की एक शाखा ''स्ट्राइक, सर्विलान्स एंड मोबिलिटी, ग्लोबल सेल्स एंड मार्केटिंग'' के उपाध्यक्ष थॉम ब्रेकेनरिज ने हाल में एक साक्षात्कार में कहा था कि सुपर हॉर्नेट में फिनलैंड, स्विट्जरलैंड, भारत और जर्मनी समेत कई देशों की दिलचस्पी है। उन्होंने कहा, ''भारत के विमान वाहकों के साथ एफ/ए-18 का जुड़ाव 'प्रमुख रक्षा साझेदार' बनने के भारत के संकल्प और एशिया पेसिफिक रिएश्योरेंस पहल की बानगी होगा। यह अमेरिका और भारत के बीच नए संबंधों का एक महत्वपूर्ण प्रतीक बनेगा।'' ब्रेकेनरिज ने कहा, ''भारत के लिए हमारा नया प्रस्ताव है 'भारत द्वारा-भारत के लिए', इसमें रखरखाव, प्रशिक्षण सेवा और अद्यतन करना शामिल है।'' उन्होंने यह भी कहा था कि भारत में बोइंग भारतीय वायुसेना और नौसेना को रखरखाव एवं प्रशिक्षण सेवा मुहैया करवा रहा है। ब्रेकेनरिज ने कहा, ''भारतीय नौसेना, भारत के निजी और सार्वजनिक क्षेत्र के संगठनों और अमेरिका स्थित उद्योग के साझोदारों के साथ मिलकर बोइंग विशेष क्षमताओं को स्थानीय स्तर पर उपलब्ध करवाने की दिशा में काम करेगा। इससे एफ/ए-18 सुपर हॉर्नेट का इसके

पूरे सेवाकाल में रखरखाव भारत में ही संभव हो जाएगा।''(यह आर्टिकल एजेंसी फीड से ऑटो-अपलोड हुआ है। इसे नवभारतटाइम्स.कॉम की टीम ने एडिट नहीं किया है।)

Business Standard

Thu, 19 Dec 2019

Navy Chief to leave for Sri Lanka on 4-day visit to bolster maritime ties

The Sri Lanka Navy is a member of the Indian Ocean Naval Symposium (IONS) and participates in the activities conducted under the IONS construct

New Delhi: Indian Navy Chief Admiral Karambir Singh will leave for Sri Lanka on Thursday on a four-day visit to "consolidate and enhance" the bilateral maritime relations between the two countries, according to an official statement.

The visit of the Indian Chief of Naval Staff (CNS) comes a month after newly-elected Sri Lankan President Gotabhaya Rajapaksa came to India.

Singh will hold bilateral discussions with Vice Admiral Piyal De Silva, Commander of Sri Lanka Navy, other service chiefs and senior Sri Lankan government officials, according to the official statement.

"CNS will interact with the Sri Lanka Navy Board of Management which comprises senior hierarchy of the Sri Lanka Navy," it said.

"The CNS will also take part as the chief guest during the commissioning and passing out parade of the '60th Intake Midshipmen' scheduled to be conducted at the Naval Maritime Academy, Trincomalee, on December 22," the statement added.

The Sri Lanka Navy is a member of the Indian Ocean Naval Symposium (IONS) and participates in the activities conducted under the IONS construct.

"The Indian Navy regularly interacts with the Sri Lankan Navy through the medium of staff talks, Annual Defence Dialogue and other operational interactions which includes port visits, passage exercises, training, hydrography etc," the statement said.

https://www.business-standard.com/article/pti-stories/indian-navy-chief-to-leave-for-sri-lanka-on-thursday-119121801427_1.html

THE TIMES OF INDIA

Thu, 19 Dec 2019

China commissions its first home-built aircraft carrier

Beijing — President Xi Jinping attended the commissioning of China's first entirely home-built aircraft carrier, underscoring the country's rise as a regional naval power at a time of tensions with the U.S. and others over trade, Taiwan and the South China Sea.

The Shandong is the second Chinese aircraft carrier to enter service after the Liaoning, which was originally purchased as a hulk from Ukraine and entirely refurbished.

State media reported that about 5,000 representatives from the naval forces and aircraft carrier construction groups attended the commissioning ceremony Tuesday at a naval base near the city of Sanya.

The base in the southern island province of Hainan opens onto the South China Sea, where China is engaged in an increasingly heated dispute over territory and undersea oil and gas resources. China's claim to virtually the entire strategic waterway, through which passes an estimated $5 trillion in trade annually, overlaps partially or in whole with five other governments.

Countries in the region, along with U.S. treaty allies including Japan and Australia, are also beefing up their navies and maritime law enforcement capabilities in response to Chinese actions such as the construction of man-made islands that Beijing has equipped with airfields and missile batteries.

State television footage showed Xi being applauded as he boarded the ship to present a flag and certificate, sign the log and visit with sailors. He also inspected aircraft and toured the bridge and flight coordination operations center.

"Commending China's achievements in aircraft carrier construction, Xi encouraged them to continue their efforts to make new contributions in the service of the party and the people," the official Xinhua News Agency reported.

Like the Liaoning, the Shandong is named after a northern province and is based on a Soviet design with a "ski jump" style flight deck for takeoffs rather than the flat decks used by much larger U.S. aircraft carriers. It is powered by a conventional oil-fueled steam turbine power plant, rather than the nuclear fuel American carriers and submarines use.

The 50,000-ton Shandong completed sea trials last year before returning to its construction yard in the northern port of Dalian. Following the arrival of its air complement Chinese J-15 fighter jets, it was due to be commissioned before 2020. It sailed through the Taiwan Strait on its way to Hainan last month, prompting the island's military to scramble ships and planes to monitor its passage.

China is seen as striving to overtake the U.S. as the dominant naval power in Asia and already boasts the world's largest navy in numbers of vessels.

Beijing says aircraft carriers are needed to protect its coastline and trade routes, but they are also seen as backing up Beijing's claims to self-governing Taiwan and the South China Sea.

The Tribune
VOICE OF THE PEOPLE

Thu, 19 Dec 2019

India is world's third largest publisher of scientific articles: Report

Washington: India has emerged as the world's third largest publisher of science and engineering articles, according to a latest US report.

China, which accounts for 20.67 per cent of all global publications in scientific articles, is at the top position, followed by the US at 16.54 per cent, as per the statistics compiled by the US National Science Foundation (NSF).

The data, which was released on Tuesday, stated that in 2008, India published 48,998 science and engineering articles. This increased to 1,35,788 articles in 2018 and the country now accounts for 5.31 per cent of the total world publications in science and engineering.

In China, the number of global scientific publications increased from 2,49,049 in 2008 to 5,28,263 in 2018, in a growth rate of 7.81 per cent per annum.

The US, the total global publications in science and engineering articles grew at a rate of 0.71 per cent from 3,93,979 in 2008 to 4,22,808 in 2018.

Though a long way to go, as compared to the US and China in terms of the number of scientific article publications, India's emergence as the third largest publisher is mainly due to a phenomenal double-digit growth rate in the last one decade from 2008 to 2018, the report noted.

The global research output, as measured by peer-reviewed science and engineering (S&E) journal articles and conference papers, grew about four per cent annually over the last 10 years.

The other countries which made it to the top 10 list are Germany (1,04,396), Japan (98,793), the UK (97,681), Russia (81,579), Italy (71,240), South Korea (66,376) and France (66,352). PTI

https://www.tribuneindia.com/news/india-is-world%E2%80%99s-third-largest-publisher-of-scientific-articles-report-13668

दैनिक जागरण

Thu, 19 Dec 2019

वैज्ञानिक लेखों के प्रकाशन में भारत दुनिया में तीसरे स्थान पर

वाशिंगटन, प्रेट्र: विज्ञान और अभियांत्रिकी (साइंस एंड इंजीनियरिंग) पर लेखों के प्रकाशन में भारत दुनिया में तीसरे स्थान पर पहुंच गया है। 2018 में भारत में 1.35 लाख से ज्यादा लेख प्रकाशित हुए। इस मामले में चीन शीर्ष पर जबकि अमेरिका दूसरे स्थान पर है।

अमेरिकी सरकार की एजेंसी 'नेशनल साइंस फाउंडेशन' (एनएसएफ) के आंकड़ों के मुताबिक, 2018 में दुनियाभर में वैज्ञानिक लेखों के प्रकाशन की संख्या बढ़कर 25,55,959 हो गई जबकि 2008 में यह संख्या 17,55,850 थी। वैश्विक स्तर पर यह वृद्धि 10 साल में औसतन चार प्रतिशत सालाना रही।

भारत में 2008 में विज्ञान और अभियांत्रिकी पर 48,998 लेख प्रकाशित हुए थे। 2018 में यह 10.73 प्रतिशत की औसत सालाना वृद्धि के साथ बढ़कर 1,35,788 हो गए। दुनियाभर में विज्ञान और अभियांत्रिकी पर प्रकाशित कुल लेखों में भारत का हिस्सा अब 5.31 प्रतिशत हो गया है। वहीं, प्रकाशित लेखों की संख्या में चीन की औसत सालाना वृद्धि दर 7.81 फीसद रही।

The Indian EXPRESS

Thu, 19 Dec 2019

Chandrayaan-2: Three months on, ISRO yet to make public Vikram lander failure report details

So far, the only official statement on causes of the crash has come in the form of an answer to a question on Chandrayaan-2 mission in Lok Sabha on November 20 from Minister of State in Prime Minister's Office Jitendra Singh

By Johnson T A

Bengaluru: In a break from precedence, the Indian Space Research Organisation (ISRO) is yet to make public details of a Failure Analysis Committee's (FAC) report on the space agency's Chandrayaan-2 mission, which looked at causes for the crash of Vikram lander on the Moon on September 7.

While a brief answer was provided by the government in Parliament last month, ISRO has had a tradition of making public details of failure analysis reports after failed missions.

"Generally ISRO has been open about failure analysis studies of missions. I would prefer that. Each government and each person, however, sees it differently,'' a former senior ISRO official who was part of the Chandrayaan-2 failure analysis committee said.

Although an FAC report has been submitted by a panel of experts, its details are yet to be made public nearly three-and-a-half months since the lander crashed.

So far, the only official statement on causes of the crash has come in the form of an answer to a question on Chandrayaan-2 mission in Lok Sabha on November 20 from Minister of State in Prime Minister's Office Jitendra Singh.

Singh said the moon lander separated from Chandrayaan-2 orbiter on September 2 as planned and was positioned "to achieve soft landing on the moon surface'' on September 7.

The minister said: "The first phase of descent was performed nominally from an altitude of 30 km to 7.4 km above the moon surface. The velocity was reduced from 1683 m/s to 146 m/s. During the second phase of descent, the reduction in velocity was more than the designed value. Due to this deviation, the initial conditions at the start of the fine braking phase were beyond the designed parameters. As a result, Vikram hard landed within 500m of the designated landing site."

ISRO chairman K Sivan had said Singh's statement was based on the FAC report.

But the details made public so far remains sketchy on aspects such as what caused the exaggerated reduction in velocity and how these problems will be addressed if a Chandrayaan-3 mission is undertaken in 2020.

This is unlike the ISRO's previous record.

For instance, after the failure of an operational fourth flight of the heavy lift GSLV rocket — the GSLV-F02 mission — on July 10, 2006, a 15-member FAC was tasked with providing a report in a month. After the report was submitted to the government, ISRO made the details public on September 6, 2006, on its website. In 2010, when GSLV D3, a developmental flight and the fifth heavy lift GSLV rocket, failed after launch on April 15, an FAC report was submitted with the government on May 24, 2010. Details of the report were made public on July 9.

The same year, when GSLV F06, an operational sixth flight for GSLV rocket, failed on December 25, ISRO went public on December 31, with findings of an analysis of failure done by a preliminary FAC comprising space experts.

The agency has also made public causes of failures in past missions such as its first experimental satellite launch vehicle SLV 3 in July 1979, failures of the first and second developmental flights of Augmented Satellite Launch Vehicle in March 1987 and July 1988, and the first developmental flight of ISRO's Polar Satellite Launch Vehicle in September 1993.

https://indianexpress.com/article/technology/science/chandrayaan-2-three-months-on-isro-yet-to-make-public-vikram-lander-failure-report-details-6174092/

the pioneer

Thu, 19 Dec 2019

Scientists develop self-cleaning surface

As the world battles with anti-microbial resistance that is posing huge health burden, scientists have developed a self-cleaning surface that repels the superbugs and deadly pathogens. The one of its kind technique is based on the water repelling properties of the lotus plants and can be useful in the settings ranging from hospitals to kitchens as well as ideal for food packaging.

According to the team of researchers at McMaster University, the plastic can be shrink-wrapped onto door handles, railings, IV stands and other surfaces that can be magnets for bacteria such as MRSA and C. difficile. The study is published in the international journal ACS Nano.

The treated material is also ideal for food packaging, where it could stop the accidental transfer of bacteria such as E. coli, Salmonella and listeria from raw chicken, meat and other foods, said the researchers led by engineers Leyla Soleymani and Tohid Didar who collaborated with colleagues from McMaster's Institute for Infectious Disease Research and the McMaster-based Canadian Centre for Electron Microscopy.

The research is important given that antimicrobial resistance has become a huge burden on the health system, responsible for thousands of deaths each year. Unless this threat is urgently addressed, it may lead to more than 10 million people dying every year by 2050, as per the WHO reports.

The surface is textured with microscopic wrinkles that exclude all external molecules. Citing an example, the researchers said that like a drop of water or blood simply bounces away when it lands on the surface, the same is true for bacteria.

One of the lead engineers on the project, Leyla Soleymani, said: "We're structurally tuning that plastic. This material gives us something that can be applied to all kinds of things."

The surface was also treated chemically to further enhance its repellent properties, resulting in a barrier that was flexible, durable and inexpensive to reproduce.

Tohid Didar, co-lead on the project, said: "We can see this technology being used in all kinds of institutional and domestic settings. As the world confronts the crisis of anti-microbial resistance, we hope it will become an important part of the anti-bacterial toolbox."

The researchers had tested the material using two of the most troubling forms of antibiotic-resistant bacteria: MRSA and Pseudomonas, with the collaboration of Eric Brown of McMaster's Institute for Infectious Disease Research.

After verifying the effectiveness of the surface by capturing electron microscope images which showed virtually no bacteria could transfer to the new surface, the researchers are now aiming to develop commercial applications for the wrap.

https://www.dailypioneer.com/2019/india/scientists-develop-self-cleaning-surface.html