

समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा
A Daily Current Awareness Service

Vol. 44 No. 204 23 Oct 2019



रक्षा विज्ञान पुस्तकालय
Defence Science Library
रक्षा वैज्ञानिक सूचना एवं प्रलेखन केन्द्र
Defence Scientific Information & Documentation Centre
मैटकॉफ हाऊस, दिल्ली - 110 054
Metcalf House, Delhi - 110 054

Ministry of Defence 'nominates' DRDO for building e-warfare systems

The Mountain EW system "would be designed and developed by DRDO and manufactured by design-cum-production partner from the Indian (private) industry," announced the MoD

By Ajai Shukla

New Delhi: The Defence Acquisition Council (DAC), chaired by Defence Minister Rajnath Singh, on Monday announced it had approved the purchase of Rs 3,300 crore of indigenously designed and developed military equipment.

The private sector is up in arms. Despite repeated Ministry of Defence (MoD) assurances that private firms would be allowed to compete for defence contracts on equal terms with the public sector — which includes the Defence Research and Development Organisation (DRDO), eight defence public sector units (DPSUs) and 41 ordnance factories — the DAC has ‘nominated’ the DRDO for designing and developing an indigenous lightweight electronic warfare system for mountains (hereafter, Mountain EW system).

The Mountain EW system “would be designed and developed by DRDO and manufactured by design-cum-production partner from the Indian (private) industry,” announced the MoD.

This denial of a design and development role to the private industry comes even as a private firm, Tata Power (Strategic Engineering Division, or SED), is building two far more complex integrated Mountain EW systems, a global tender it won in 2013 for Rs 926 crore. An amended order was placed in July, which is on track to be delivered in 24 months.

Meanwhile, a public sector partnership between DRDO and Bharat Electronics is floundering in developing two similar systems, for which they were ‘nominated’ by the MoD at twice the price bid by Tata Power (SED).

Federation of Indian Chambers of Commerce & Industry (Ficci) has strongly protested this sidelining of private firms. In a letter addressed directly to Rajnath Singh on October 10, [Ficci](#) wrote: “It is understood that serious considerations are being given to nominate (the Mountain EW system tenders) to DRDO/DPSUs, disregarding the private sector having equal, if not better, capability and skill sets in EW technologies,” wrote [Ficci](#).

“[Ficci](#) would request your personal intervention to advise that all the EW programme requests for proposals, or tenders, like all other capital acquisition programmes, as issued on competitive tendering basis,” the letter said.

Invoking Tata Power (SED)’s strong, two-decade-old track record in developing EW systems, Ficci wrote: “Private sector companies were involved in developing the critical command and control software and platform engineering for the integrated EW system Samyukta (in the 1990s). This was even acknowledged by Dr A P J Abdul Kalam, then DRDO chief”.

The MoD cites ‘security concerns’ to place orders for EW systems with the DRDO/DPSUs. This has been strongly protested by the private sector, which cites its own stringent security protocols.

“Any security concerns raised to justify DPSU/PSU nomination be discouraged as all ‘A category’ licensed private Indian vendors are covered under the same security guidelines issued by the MoD, as are DPSUs,” wrote Ficci.

Business Standard has reviewed Ficci’s letter to the defence minister.

EW systems are a crucial military force multiplier. They are built around a powerful receiver that picks up, records, and analyses enemy (or militant/terrorist) transmissions to obtain valuable intelligence. Its integrated direction finder establishes the precise location of the enemy transmitter. That location can then be attacked, using aircraft or ground forces. Alternatively, at a crucial stage of battle, the enemy's transmissions can be disrupted with high-power jammers, throwing his plan into disarray. Good EW systems allow an army to dominate the electromagnetic spectrum.

The Mountain EW system that the DAC cleared on Monday is a lightweight system that can be physically carried to remote locations, or heli-lifted onto high mountains. It is particularly useful in counter-militancy operations.

https://www.business-standard.com/article/current-affairs/mod-nominates-drdo-for-e-warfare-systems-ficci-protests-to-rajnath-119102201626_1.html



Wed, 23 Oct 2019

IAF test-fires BrahMos from Sukhoi

New Delhi: The Indian Air Force (IAF) successfully fired the BrahMos air version missile from its frontline Su-30 MKI fighter aircraft today. The launch from the aircraft was smooth and the missile followed the desired trajectory before directly hitting the land target, the IAF said.

The target was a remote island in the Bay of Bengal, sources said. The BrahMos can hit targets on the ground from sea, air and ground.

The air-launched BrahMos is a 2.5 tonne supersonic air-to-surface cruise missile with range of around 300 km.

In November 2017, the IAF became the first air force in the world to have successfully fired an air-launched 2.8 Mach speed surface-attack missile of this category on a sea target.

Today was the second such live launch of the weapon. The integration of the weapon on the aircraft was a very complex process, involving mechanical, electrical and software modifications.

The software development was undertaken by IAF engineers while HAL carried out mechanical and electrical modifications on the aircraft. Dedicated efforts of the IAF, DRDO and Hindustan Aeronautics Limited have proven the capability of the nation to undertake such complex integrations, the IAF said.

The BrahMos provides IAF 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. The capability of the missile, coupled with the superlative performance of the Su-30MKI aircraft, gives the IAF the desired strategic reach, according to the IAF.

First woman qualifies for operations

New Delhi: Flight Lieutenant Bhawana Kanth has become the first woman fighter pilot to qualify for operations. Though inducted with two other women, she has, after completion of flying training, become the first women fighter pilot to be qualified to undertake missions by day on a fighter aircraft. Bhawana joined the fighter squadron in November 2017 and flew the first solo on MiG-21 Bison in March 2018. She is at present based at a forward location in Rajasthan. TNS

<https://www.tribuneindia.com/news/nation/iaf-test-fires-brahmos-from-sukhoi/776879.html>

BrahMos successfully test-fired on 2 consecutive days by IAF! Missile system achieves “bull’s eye accuracy”

The aim of the two tests was to assess the mission readiness and swift deployment capability of the surface-to-surface BrahMos cruise missile over the long-distance range of 300 kilometres

By Smriti Jain

BrahMos test-fired successfully! In a huge boost for India’s defence preparedness, the Indian Air Force (IAF) has conducted two consecutive successful tests of the formidable BrahMos missile. The back-to-back tests on October 21 and October 22 prove the pinpoint accuracy of the BrahMos missile system, defence sources told Financial Express Online. Today’s launch was carried out in combat mode in the morning at 9:30 AM at Trek Islands in Car Nicobar Islands. According to IAF the twin successful launches were carried out by Indian Air Force’s user unit in operational configuration. The aim of the two tests was to assess the mission readiness and swift deployment capability of the surface-to-surface BrahMos cruise missile over the long-distance range of 300 kilometres.

The first test was done on October 21 at around 2:00 PM. According to IAF, the land-attack BrahMos missile in a practice configuration “flawlessly” followed the expected flight trajectory. The missile flew for almost its full range of 300 kms and hit the pre-set target with “bull’s eye accuracy”. Sources told Financial Express Online that this is the second time that two missiles have been launched on two separate days in the consecutive pattern have hit the targets with pinpoint accuracy. In 2017, the Indian Army fired missiles on May 2 and May 3 achieving accuracy. The second missile actually went through the crater created by the first missile.



The IAF has operationalised its land-based, mobile BrahMos missile system since 2014. It is now inching closer to deploying the lethal weapons system on its frontline fighter jet, the Sukhoi 30 MKI. The missile has already been integrated on the Su-30 MKI and is currently undergoing trials. In 2017 and 2019, the BrahMos missile was successfully test-fired from the Sukhoi-30 MKI hitting sea and land targets. According to BrahMos Aerospace MD Sudhir Mishra, the weapons system is the heaviest missile in the world to be integrated on a frontline fighter jet of a country.

BrahMos is the world’s fastest anti-ship cruise missile and has been jointly developed by Russia and India. An extended 450 kilometres range BrahMos missile has also been test fired successfully and an 800-km version is currently under development.

<https://www.financialexpress.com/defence/brahmos-successfully-test-fired-on-2-consecutive-days-by-iaf-missile-system-achieves-bulls-eye-accuracy/1743259/>

ब्रह्मोस मिसाइल ने 300 किलोमीटर दूर भी लगाया सटीक निशाना

इंडियन एयरफोर्स ने पिछले दो दिनों में जमीन से जमीन पर मार करने वाले ब्रह्मोस मिसाइल के दो परीक्षण किए। इन दोनों ही परीक्षणों में मिसाइलों ने 300 किलोमीटर दूर स्थित टारगेट को सीधे सीधे हिट किया।

हाइलाइट्स

- भारतीय वायुसेना ने पिछले दो दिनों के दौरान ब्रह्मोस मिसाइल के सफल परीक्षण किए
- इन दोनों मिसाइलों ने 300 किमी दूर स्थित लक्ष्य पर एकदम सटीक निशाना लगाया
- इन मिसाइलों से दूर स्थित लक्ष्य पर भी एकदम सटीक निशाना लगाया जा सकता है

अंडमान निकोबार: भारतीय वायुसेना ने पिछले दो दिनों में ब्रह्मोस मिसाइल के सफल परीक्षण किए। 21 और 22 अक्टूबर को दागी गई इन दोनों मिसाइलों ने 300 किलोमीटर दूर स्थित लक्ष्य पर एकदम सटीक निशाना लगाया और उसे ध्वस्त कर दिया। जमीन से जमीन पर हमला करने वाली इन मिसाइलों को अब छोटे प्लैटफॉर्म से लॉन्च करने के बावजूद दूर स्थित लक्ष्य पर भी एकदम सटीक निशाना लगाया जा सकता है।

जानकारी के मुताबिक, वायुसेना ने अंडमान निकोबार द्वीप समूह के ट्राक द्वीप से इन दो मिसाइलों को दो दिनों के भीतर फायर किया है। रूटीन ऑपरेशनल ट्रेनिंग के लिए फायर की गई इन मिसाइलों ने अपने लक्ष्य को एकदम सटीक ध्वस्त किया। बता दें कि ब्रह्मोस मीडियम रेंज की एक ऐसी सुपरसोनिक मिसाइल है, जिसे किसी एयरक्राफ्ट, शिप या छोटे प्लैटफॉर्म से भी दागा जा सकता है।

21 और 22 अक्टूबर दागी गई इन मिसाइलों का लक्ष्य लगभग 300 किलोमीटर दूर था। दोनों ही मिसाइलों ने अपने लक्ष्य को सीधे-सीधे हिट किया। इस परीक्षण के बाद भारतीय वायुसेना छोटे प्लैटफॉर्म से मिसाइल दागकर लक्ष्य पर सीधा हमला करने के मामले में और सशक्त हुई है और उसकी क्षमता बढ़ गई है।

<https://navbharattimes.indiatimes.com/state/other-states/other-cities/brahmos-surface-to-surface-missile-achieved-direct-hit-on-the-target-that-was-300-km-away/articleshow/71709245.cms>

THE HINDU

Wed, 23 Oct 2019

DAC clears indigenous projects worth ₹3,300 crore

Third generation ATGM and APUs included

New Delhi: The Defence Acquisition Council (DAC) chaired by Defence Minister Rajnath Singh, which met on Monday, approved three projects worth ₹3,300 crore of “indigenously designed and developed equipment.” These include third generation Anti-Tank Guided Missiles (ATGM) and Auxiliary Power Units (APUs) for the T-72 and T-90 Tanks to be executed by the Indian industry.

“The third indigenous project pertains to discrete electronic warfare systems for the mountain and high altitude terrain, which would be designed and developed by the DRDO and manufactured by design cum production partner from the Indian industry,” the ministry said.

Both these projects will be progressed under the ‘Make-II’ Category, the statement said and added: “With this, for the first time the Ministry of Defence has offered complex military equipment to be designed, developed and manufactured by the Indian private industry.”

<https://www.thehindu.com/news/national/dac-clears-indigenous-projects-worth-3300-crore/article29761430.ece>

#SWARAJYA

Wed, 23 Oct 2019

As Indian Army mulls induction of more Aakash missiles, here’s how they will guard against China-Pakistan intrusion

The Ministry of Defence is considering a proposal by the Indian Army to acquire two regiments of the Akash Prime missiles which will enhance the security architecture in the region and help prevent any intrusion of aircraft through the mountainous borders with Pakistan and China, reports *Economic Times*.

The proposal was discussed at the meeting of the Defence Acquisition Council held on Monday (21 October).

The latest ‘Akash Prime’ missiles have a higher performance range than their predecessors and can be deployed in high altitude areas above 15,000 feet, which becomes extremely important for high altitude regions of Ladakh bordering Pakistan and China.



Aerial targets like fighter jets, cruise missiles and air-to-surface missiles as well as ballistic missiles can be destroyed by the Akash missile.

Reportedly, the acquisition of the said regiments would be around Rs 10,000 crore, hinted a few government sources.

It is indigenously developed by Defence Research Research Organisation (DRDO) and produced by Bharat Dynamics Limited (BDL) for Missile Systems and Bharat Electronics (BEL) for other radars, control centres in India.

Notably, the Army already has two regiments of the Akash missile system and is considering addition of another two for deployment at the Pakistan and China border, while Air Force is set to acquire seven squadrons of the missile system.

About Akash Missile System

Akash is a medium range surface-to-air missile (Akash SAM) defence system which can target enemy missiles and aircraft from a distance of 18 to 30 km at an altitude up to 18 km.

Akash employs an integrated ramjet-rocket propulsion system. Ramjet is an air-breathing jet engine that uses the forward movement of the missile to compress air without a separate compressor. Since ramjets cannot produce thrust at zero airspeed, Akash has an a rocket assist to accelerate it to a speed where it begins to produce thrust.

Akash flies at supersonic speed of around Mach 2.5, that is, 2.5 times the speed of sound and ramjets work most efficiently at supersonic speeds of close to Mach 3. The ramjet engine gives it

thrust to intercept the target at supersonic speed without any speed deceleration, unlike Patriot missile of US, and the solid fuel system makes it more economic and accurate.

It can be fired from both static or mobile platforms, such as battle tanks, providing flexible deployment. The Air Force versions use a combination of tracked and wheeled vehicle.

Akash is a multitarget handling surface-to-air missile system. It can destroy manoeuvring targets such as unmanned aerial vehicles (UAV), fighter aircraft, cruise missiles and missiles launched from helicopters.

Akash SAM can target and destroy different aerial targets simultaneously with a kill probability of 88 per cent for the first and 99 per cent for the second missile on a target.

The missile could play an important role in the light of the recent incidents of Pakistan dropping ammunition in Indian territory via Chinese drones.

Apart from an integral ramjet propulsion, the Akash SAM system consists of a switchable guidance antenna system, a command guidance unit, an onboard power supply, a system arming and detonation mechanism, digital autopilot, radars and C4I centres.

The high-power, multi-function Rajendra phased-array radar is the most important part of the the Akash SAM system battery. The battery has four launchers, with three missiles each, and four Rajendra radars, interlinked and controlled by the group control centre (GCC).

Each launcher is controlled by one radar that can track 16 targets. The Rajendra radar can, therefore, guide 12 missiles simultaneously while eyeing 64 targets.

The 3D passive electronically scanned array Rajendra radar (PESA) can electronically scan and guide the missile towards targets. The communication links, command and control nodes, sensors and self-propelled launchers of the entire Akash SAM system are IT-integrated.

The PESA antenna array is situated on a rotating platform with a swivel of 360 degrees. With this, the Rajendra radar can detect up till a radius of 80 km, engage a target up till 60 km at an altitude of 8 km. Overall, the Akash can intercept from a range of 30 km and provide air defence missile coverage of 2,000 km².

The guidance system of the missile is such that it enables it to work through electronic countermeasures. The Rajendra radar completely guides the Akash missile, which increases its efficacy against electronic jamming of aircraft.

The missile has a 60-kg payload capacity and it could use prefabricated tungsten alloy cubes warheads or even a nuclear warhead. The warhead of the Akash missile is coupled with a digital proximity fuse. A detonation mechanism is put in place to control the detonation sequence. The missile is also integrated with a self-destructive device.

The Akash missile system was tested along with all other air defence missiles, including Israeli ones, in the Indian Air Force (IAF) inventory during an exercise in Suryalanka (Andhra Pradesh) in 2018 and was adjudged as the best performer.

<https://swarajyamag.com/news-brief/as-indian-army-mulls-induction-of-more-akash-missiles-heres-how-they-will-guard-against-china-pakistan-intrusion>

Deal with HAL for 83 Tejas Light Combat Aircraft soon: IAF

*In a previous order, the Indian Air Force had signed a deal
with the Hindustan Aeronautics Ltd for 40 Tejas LCAs*

New Delhi: The Indian Air Force (IAF) is likely to sign a deal with Hindustan Aeronautics Ltd (HAL) for acquiring 83 Tejas Light Combat Aircraft (LCA) as negotiations over the price of the fighter jets are almost done, defence sources said here on Tuesday.

In December 2017, the IAF had issued a single-vendor tender to the HAL for procuring 83 LCA. However, the deal is yet to be signed owing to delay in negotiations over the price of the aircraft.

"The cost negotiating committee is almost finished with the price negotiations of the aircraft. Once it is done, IAF will enter into a deal with the HAL," a senior IAF official told IANS.

As per sources, the deal for 83 Tejas LCA, which are of the Mark 1A variant, is expected to cost the IAF in the range of Rs 45,000 crore. The aircraft will have improved serviceability, faster weapon-loading time, enhanced survivability, a better electronic warfare suite and Active Electronically Scanned Array (AESA) radar that will significantly enhance its capability.

The Centre for Military Airworthiness and Certification (CEMILAC) had provided the Final Operational Clearance to the Tejas LCA earlier this year, certifying it as a multi-role fighter with capabilities including beyond visual range air-to-air and air-to-ground attack capabilities as well as longer endurance through mid-air refuelling.

In a previous order, the IAF had signed a deal with the HAL for 40 Tejas LCAs. So far, around 18 LCAs have been delivered to the IAF from this order.

India, at present, has a shortfall of around 10-12 squadrons of fighter jets in its inventory even as the first four of the 36 Rafale multi-role aircraft are scheduled to arrive into the country by May next year. At the formal receiving ceremony of the first Rafale jet in France on Dussehra this year, Defence Minister Rajnath Singh had said that the full consignment of 36 aircraft will arrive in India by the year 2022.

"India will receive the first 18 Rafale jets by February 2021. By April-May 2022 we will receive all 36 jets," Rajnath Singh had said.

<http://www.newindianexpress.com/nation/2019/oct/22/deal-with-hal-for-83-tejas-light-combat-aircraft-soon-iaf-2051462.html>



City scientists fuel space dream

Two IIT Bombay alumni, who are developing an eco-friendly propulsion system for satellites, recently won a DRDO award.

By Suktara Ghosh

Two IIT Bombay alumni are on the path of an innovation that can virtually transform how satellites work. Tushar Jadhav, 29, and Ashtesh Kumar, 26, under the aegis of their start-up Manastu Space Technologies and along with IIT B, are developing I Booster, a green propulsion system that uses high performance and eco-friendly fuel to boost the performance of satellites. It won them the third prize on October 15 at the Dare to Dream Innovation Contest 2019, organised by the Defence Research and Development Organisation (DRDO), which encourages innovations in defence and aerospace technologies. The duo is now all set to showcase I Booster next month at the S-Booster 2019 in Tokyo, Japan. Manastu is the only Indian space startup to be shortlisted to compete for a grand prize of 10 million yen (about Rs 65.22 lakh).



The I Booster comprises a thruster – a small scale rocket engine weighing approximately 200gm – which, aided with a catalyst and green fuel, can boost the performance of a satellite while bringing down production costs as well as risk factors. “We have cleared six of the nine levels of NASA’s Technology Readiness Levels (TLR), which measures the maturity level of a particular technology. We hope to clear the remaining three by 2021,” says Jadhav, who has worked with the DRDO.

2021 is a strategic year as far as space technology goes as the US and the European Union have decided to tax heavily, if not ban, hydrazine as a space fuel. “Hydrazine is a lowperforming, extremely

toxic and carcinogenic fuel. It's twice more dangerous than methyl isocyanate, the gas that caused the Bhopal gas tragedy. People have died on field while handling it," explains Jadhav.

Manastu's as yet unnamed fuel, which is a combination of hydrogen peroxide with an additive, once commercialised, would be competing with ammonium dinitramide (AND), being developed by the European Space Agency, and hydroxylammonium nitrate (HAN) that's being developed by NASA. "Our fuel is expected to be more efficient, and the entire propulsion system would be around 60 per cent cheaper than those fuels once we reach the market. That would give us an added advantage. This has aroused the interest of both the DRDO and ISRO in our product," he says. The IIT B has already applied for a patent, while they are in the process of writing three more, Jadhav says.

Dr Arindrajit Chowdhury, associate professor, Mechanical Engineering, who along with Jayesh Bellare, professor, Chemical Engineering, IIT Bombay, has been mentoring Kumar and Jadhav for years, says, "A lot of complex things happen simultaneously when we use hydrogen peroxide as a fuel. Manastu has made major strides in perfecting the process, and if we can successfully develop this safer and cheaper technology, we shall have a lucrative solution not only for the Indian space industry, but anybody who's launching a satellite across the world."



The encouragement and recognition, apart from bringing in the much-needed funds, is also paving the way for Manastu to scale up. The technopreneurs, who floated the company in 2017, are looking to scale up the business by expanding their seven-member team next month. They are scouting for a wellappointed facility of their own. They are also putting into good use the people management lessons they learnt as part of the historic IIT Bombay Student Satellite Project that launched the ISRO PSLV C35 satellite in 2016. "The technology is just one e part of it. Explaining the vision to people, and then getting them to actually execute it, was a huge lesson which is coming into use for us again now," says Jadhav, who along with his team, puts in an average of 12 to 13 hours' work every day.

The high of the innovation has indeed touched all who are part of the project. "Not many of our students delve into developing technology after leaving the institution. Personally, I'm extremely proud of the work Kumar and Jadhav are doing, and the hard work they do often puts me to shame," says Chowdhury.

<https://mumbaimirror.indiatimes.com/mumbai/other/city-scientists-fuel-space-dream/articleshow/71713682.cms>

DRDO to be key for Gaganyaan

Under Gaganyaan, a three-member Indian crew will be launched into low earth orbit (LEO) for an orbital mission of up to a week.

By Pathri Rajasekhar

Nellore: The Defence Research and Development Organisation (DRDO) will be playing an important role in Gaganyaan, India's first manned mission that is expected to be launched in 2022, the 75th anniversary of India's independence. Under Gaganyaan, a three-member Indian crew will be launched into low earth orbit (LEO) for an orbital mission of up to a week.

Prior to this, two unmanned missions are planned to validate various technologies. The Human Space Flight Centre (HSFC) and Vikram Sarabhai Space Centre (VSSC) of the Indian Space Research Organization (Isro) had inked a pact with various labs of DRDO last month for joint development of human-centric systems for Rs 10,000 crore.

Speaking to this newspaper, DRDO chairman Dr G. Sateesh Reddy said, "DRDO has developed various critical technologies for defence applications which will be customised to the requirement of human space flight."

<https://www.deccanchronicle.com/nation/current-affairs/231019/drdo-to-be-key-for-gaganyaan.html>

Army commissions study to Rationalise Supply Corps troops to augment fighting arms

Under the ongoing study, duplication of work was found between the two units of the ASC which are part of the peace areas

By Mayank Singh

New Delhi: In its bid to augment the fighting arms Indian Army has commissioned a new study to rationalize troops of the Army Supply Corps (ASC).

"Army has ordered a study to optimize the manpower of the ASC. It is part of the ongoing process to augment the teeth to tail ratio" told an officer aware of the development.

Under the ongoing study, duplication of work was found between the two units of the ASC which are part of the peace areas. Every division, a formation of around 12000 troops, in peace has one battalion of ASC Depot and another for Second Line Transport (to move stores).

"The study group in the initial stages has found that a compliment of 30 to 40 troops can carry out the task for which around 100 troops are involved at present," informed the officer. This duplication is taking place in peace areas where troops from the supply depot and second-line battalion of transport do the same work.

The work has already been successfully started at Mamoon Cantonment, Punjab and at Kalimpong, West Bengal. The troops will be optimized in the field areas in the fighting formations, said the officer.

Tooth to tail ratio is a military term that refers to the amount of military personnel it takes to supply and support (tail) each combat soldier (tooth).

The ASC is entrusted with the responsibility of mainly provisioning, procurement and distribution of supplies and petroleum products to the Army, Air Force, Navy and other Paramilitary forces.

Indian Army is undergoing the biggest overall restructuring after independence with the initiation of recommendations given after the four studies completed in December 2018.

Also, Lt Gen DB Shekatkar Committee had recommended 99 measures which will be implemented by the end of 2019. Shekatkar Committee was set up to recommend measures to enhance combat capability and rebalance defence expenditure of the armed forces.

<http://www.newindianexpress.com/nation/2019/oct/23/army-commissions-study-to-rationalise-supply-corps-troops-to-augment-fighting-arms-2051519.html>



Wed, 23 Oct 2019

India has never gone on the offensive, says Rajnath Singh

We have never invaded anyone nor has India annexed an inch of territory from anyone, the Defence Minister says

By Dinakar Peri

New Delhi: Indian Navy has taken steps to ensure that a 26/11-type terrorist attack does not happen again, Defence Minister Rajnath Singh on Tuesday while stating that India has “never been offensive”.

“Navy has taken steps to ensure that a 26/11-like situation doesn't happen again. The sea route is secure under the Navy's watch,” Mr. Singh said. He was speaking to the media after addressing the biannual Naval Commanders Conference which began on Tuesday.

Responding to questions on comments by Pakistani Ministers over war with India, Mr. Singh said India had never been offensive, “We have never invaded anyone nor has India annexed an inch of territory from anyone.”

However, he added that Indian armed forces were fully capable of giving a fitting reply to any evil designs against the country. Stressing on indigenisation and Make in India in defence, Mr. Singh said “we should reduce import dependence”.

The Navy said in a statement that in addition to operational issues, its top brass would also deliberate tri-service synergy and coordination. As all future operations would be planned and executed “jointly” by the three Services, ways to optimise joint planning structures, tri-Service synergy and operational readiness will be deliberated during the interaction with National Security Advisor Ajit Doval, Chiefs of Indian Army and Indian Air Force (IAF).

This comes in the backdrop of the government's decision to appoint a Chief of Defence Staff (CDS), for which modalities are being currently finalised by a committee. Tri-Service issues were also at the forefront at the just-concluded Army Commanders Conference.

<https://www.thehindu.com/news/national/india-has-never-been-offensive-says-rajnath-singh/article29765884.ece>

Wed, 23 Oct 2019

Rajasthan: Indian Army carries out integrated firepower exercise in desert to showcase operational preparedness

The Indian Army on Monday (21 October) carried out a firepower exercise in the desert sector of Rajasthan, showcasing its capabilities, proficiency and operational preparedness, officials said.

According to Defence PRO, Rajasthan, Colonel Sombit Ghosh, the tactical exercise involved integrated employment and firing of all arms including artillery guns, rockets, tanks, helicopters and air resources.

The Army aptly demonstrated the ability to hit hard and swiftly with precision, with the accuracy of multiple rocket launch systems and K-9 Vajra 155 mm Howitzer being particularly noteworthy.



Ghosh also shared that the effectiveness of combined arms and cohesion was of an exceptional order and all aims and objectives set for the exercise were fully achieved.

Southern Command chief, Lieutenant General SK Saini, witnessed the exercise and complimented the troops for their high professional standards.

(This story has been published from a wire agency feed without modifications to the text. Only the headline has been changed.)

<https://swarajyamag.com/insta/rajasthan-indian-army-carries-out-integrated-firepower-exercise-in-desert-to-showcase-operational-preparedness>



Wed, 23 Oct 2019

194 Out the door: Pipistrel completes Indian trainer deliveries

By Marc Cook

All of the 194 aircraft ordered by the Indian government for use by the Indian air force, Indian navy and the National Cadet Corps have been delivered, according to Pipistrel. Based on the Virus SW 80, the trainers are called the GARUD, a bird prominent in Hindu mythology.

Pipistrel began delivering aircraft in 2016, but also managed training of “a large number of technicians and engineers” from all branches of the Indian Ministry of Defense. The Indian government is expected to use the aircraft for at least the next 15 years.

“At the beginning also big players in the aviation warned me that working with India is not possible and we would never bring the contract to the end successfully, but all of us, working together as a strong team, succeeded in doing just that,” says Ivo Boscarol, Pipistrel’s CEO. “This deal opened many future doors for us.”

According to former Wing Commander Sanjay Thapar, who is now CEO of Skytec, a partner in the Pipistrel program, “Winning the contract in tough competitive environment was easy for Pipistrel as they offered the best product at the lowest price. But execution of contract was full of challenges, biggest being large number of delivery locations spread all over India from Srinagar to Trivandrum, Chabua to Naliya and Port Blair in high seas.”

The all-composite Virus SW uses an 80-HP Rotax 912 for this application and carries a claimed 132-knot cruise speed.

<https://www.avweb.com/aviation-news/pipistrel-completes-indian-trainer-deliveries/>



Wed, 23 Oct 2019

NewsX and The Sunday Guardian host India’s biggest defence conclave—the Indian Defence & Aerospace Summit

ITV Network's NewsX and The Sunday Guardian organized India’s biggest defence conclave—the Indian Defence & Aerospace Summit in New Delhi. Defence Minister Rajnath Singh, Army Chief General Bipin Rawat, IAF chief Air Marshal RKS Bhadauria, Chief of the Naval Staff Admiral Karambir Singh and other dignitaries marked their presence at the event

By Gaurav Sharma

NewsX and The Sunday Guardian, India’s finest Sunday newspaper, organised a major Aerospace Summit on 19 October involving the vibrant Indian Defence sector. The Summit provided a platform for key discussions pertaining to the growth of the defence, naval and aviation sectors. The Summit also explored modern themes such as the increasing use of Artificial Intelligence in such areas and the potential that lies within these techniques and exploring the importance of Indian ties with countries such as France, Russia, Israel and Afghanistan.

The Summit, held at Lalit Hotel in Delhi, was graced by the presence of many leaders who have contributed to the progress of the Indian Defence sector, including Rajnath Singh, Defence Minister of India, and General Bipin Rawat, Chair of COSC (Chiefs of Staff Committee).

Upon arrival, they were welcomed by Kartikeya Sharma, Founder and Promoter of iTV Network, with an inaugural speech. Following the speech, Rajnath Singh said that Integrated Goods and Service Tax (IGST) has been lowered on defence procurement and customs duty has been exempted on defence equipment. Understanding the importance of the involvement of the private sector in defence development, he said that talent and testing facilities have been opened for the private sector and the government is always open to new ideas suggested by the private sector in New India.

His insightful approach was highlighted when he said that the Central government led by Prime Minister Narendra Modi believes in “minimum government, maximum governance”. He said that India has achieved Rs 80,000 crore of the Rs one lakh crore which is the target for defence production in India.

He also said that in order for the defence sector to be self-independent, the import of weapons needs to be reduced. He commended the hard work done and the vision of the Centre, adding that two defence corridors have been announced in Uttar Pradesh and Tamil Nadu. These corridors will further boost local industry.

General Bipin Rawat said that the Indian Army will tap local resources and talent available in the country. Applauding the “Make in India” initiative, he said it helps in minimising defence expenditure. On the battle to eradicate terrorism, he said that terrorism poses new challenges to global and national security. He said that harsh and fluctuating weather conditions pose challenges for the army. Discussing the importance of defence ties between India and the UK, General Bipin Rawat suggested that India and UK armies can collaborate and share technologies to fight terrorism. Hinting at Pakistan’s grim situation involving terrorism and defence, he said that being in the Financial Action Task Force’s (FATF) grey list should be a matter of concern for any country. In a veiled attack on Pakistan, he spoke about how countries which harbour terror never agree on a definition of terror.

The event commenced with a skull session that tackled the profound topic of capacity-building for the forces and future security challenges, along with discussing the importance of Indo-UK military ties. Since there are advances being made all over the world, countries and their leaders have made defence as one of the biggest agendas of all times. Since it is both an intermediate and global affair, the presence of leaders from different countries and areas of defence is crucial to gain perspective. Admiral Tim Fraser CB, Vice Chief of Defence Staff, UK, hailed the professionalism and valour of the Indian armed forces and said that “we are witnessing the period of persistence and competition”. He said that there is a need to engage small, specialised business for game-changing capabilities.

Along with Sir Dominic Asquith KCMG, British High Commissioner to India, sharing his wise words, he said that the UK turning a blind eye to terrorism is not true and that it is very much committed to eliminating terrorism at any cost. Hinting to the hardships caused because of Brexit, he said that despite Brexit hurdles, international trade has increased and India tops the chart. He also pointed out to the evidence, saying that over 3,000 companies have invested in India and they pay taxes worth \$1 billion. Addressing the influx of university students in the UK and the massive number of opportunities offered to them, he said that in the last three years, UK has doubled the number of student visas.

Representing the Indian Army and Defence team, Lieutenant General M.M.Naravane was present. He said that the Indian defence sector is at the cusp of major transformation and that there is scope for export of Made in India defence hardware as our friends and neighbours need them. Talking about the unlimited possibilities of the Make in India initiative, he said that Make in India should not be seen as an exercise to manufacture defence equipment only.

As the sessions progressed, the panel focussed on modernisation and opportunities for public-private stakeholders. Lieutenant General S.S.Hasabnis, Deputy Chief Army, said AGDPI (Additional Directorate General of Public Information) issued statements on the internet to make the public aware of the requirements of the armed forces. The importance of HAL (Hindustan Aeronautics Limited) was showcased when Air Marshal Sandeep Singh, Deputy Chief, Indian Air Force, correctly said that HAL has created several industries around Nashik to boost indigenisation. Rear Admiral Sanjay Vatsayan, Assistant Chief of Naval Staff (Policy & Plans), said that in the past eight to nine years, 80% contracts related to safety and defence have been given to Indian industries. Retired Lieutenant General Subrata Saha was also present and moderated this session eloquently.

The strategic partnership between India and France was analysed by Emmanuel Lenain, Ambassador of France to India, who said that ties between India and France are growing rapidly. He said that France prioritises the Make in India initiative and France is fully ready to contribute and support the modernisation of the Indian armed forces. He said efforts are being made to bolster ties in the field of cyber security and space technology.

The question of “How can India fill the gap of 200+ fighter jets” was accurately answered by Dr Ajay Kumar, Defence Secretary. He said that the Indian defence sector has risen by 20% in the last few years and that India needs to focus on the development of defence technology, since that is the driving force. He added that defence expos and air shows have become platforms to showcase India’s expertise in aerospace technology.

The advancements and evolution of ties between India and Russia along with artificial intelligence and big data analytics, and the roles that they play in defensive strategies and in reducing global warming, are evidently noticeable. Roman Babushkin, Charge d’Affaires, Russia, said that 140 defence items, including AK-104 rifles, will be manufactured in India to boost the Make in India initiative. He also recognised Russia’s help in India in establishing the Kudankulam N-reactor to reduce New Delhi’s carbon footprints. He promised that Russia will supply India its modern S-400 anti-missile system soon.

India’s strategic partnership with other strong nations and defence acquisition was further discussed with the help of leaders such as Brigadier Gavin Thomson from UK, Colonel Ludovic Dumont from France, Captain Daniel Fillion from USA, Colonel Assaf Mahler from Israel and Captain Simon Bateman from Australia. Captain Daniel Fillionsaid that the USA is willing to work with India as there is professional, organised structure for defence partners. Colonel Assaf Mahler said that the Make in India initiative is good for both, India and Israel.

Adding to that he mentioned that India needs to make investors believe that it is worth investing here. Acknowledging India’s superiority in terms of defence and technology, Captain Simon Bateman said that India is much ahead in defence technology; Australian companies need to be made aware of the Make in India initiative.

Exploring the increasing importance of good defence relations between India and Afghanistan, Tahir Qadiry, Charge d’ Affaires, Afghanistan, said that ties between India and Afghanistan are deeply rooted, sharing history, culture, cricket and others. He proudly mentioned the fact that Afghanistan signed its first blueprint strategy with India in 2011 and hailed the Indian government. Bilateral trade between India-Afghanistan in 2017 was for \$1 billion, which extended by 48% in the next six months, he mentioned. Talking about the one sport that unites both India and Afghanistan, he said that cricket stadiums in Noida and Dehradun for Afghanistan team are much appreciated.

He commended India’s efforts by saying that India showed belief in Afghanistan’s democracy and helped in overcoming several challenges. He praised the Indian government’s dedication to education and the youth, stating that India gives scholarships to over 1 lakh students every year. Applauding the vigour of the youth, he said that 60,000 Afghan students who passed out of Indian colleges have joined ministerial and top posts in the government.

In order to dissect the good relations between India and Israel, Dr Ron Malka was present on the stage and said that a wide range of cooperation is strengthening relations between India and Israel. Understanding that terrorism is not just a personal but a global threat, he said that global terrorism requires a global solution. Mentioning Israel’s dominance in terms of cyber tech, he said that Israel is the leader in cyber security technology. Pressing on the importance of Israel-India ties, he said that working and sharing with India are part of a big vision.

Admiral KarambirSingh, Chief of the Naval Staff, talked about Indian Navy’s focus on methods of naval navigation, naval capability and industrial opportunities, saying that the Indian Navy is focused on capabilities rather than counting the number of vessels. Keeping in view the geo-political situation, India has the potential to emerge as a regional ship-building hub, he said. Adding to his praise of the direction that Indian Navy is going in, he said that the Indian Navy is capable of operating in all formats of naval combat situations.

Giving credit to indigenous methods, he said that 17% of the Navy’s budget is spent on indigenous sourcing and Indian Navy. Boasting about the Navy’s capabilities, he said that 26-storey naval ships can power half of Mumbai city. He emphasised the fact that the Navy wants to optimise the budget. Shipbuilding should be seen as an investment rather than as expenditure, he said.

Key officials responsible for the functioning of various divisions of air defence were also present, including Marshal R.K.S. Bhaduria, Chief of the Air Staff. On opportunities present for public and private stakeholders in the need for over 200 jets by the Indian Air Force, he said that LCA mark-2 will be a reality, and IAF is looking for 10 squadrons. He expressed the IAF’s support to the AMCA

(Advanced Medium Combat Aircraft) and DRDO (Defence Research and Development Organisation). Mentioning the troubling fact that aero engine development remains a key challenge, the AMCA project may suffer.

Advising the private sector, he said that stealth technology is absolutely new for the Air Force and the private sector should focus on it. He stressed on the fact that indigenous engine development is a must in the next 15 years. Hinting to the progressive approach of the IAF, he said that the IAF has made significant progress in the field of electronics and also rapid progress in the field of electronic warfare, communication and data link.

After an extensive and eventful day of discussing various defence strategies and exploring the importance of the bond between India and other strong nations, the event ended with a memorable hint of admiration and veneration in the air, a mutual respect for how far the countries, especially India, have come in terms of the forces of the Army, Navy and Air Force.

Emphasising on the Make in India initiative, Defence Minister Rajnath Singh said that the government is encouraging participation from Indian industries. Keeping in mind the necessity and dependence on technology, he said that the country should go ahead with the development of indigenous technologies. Praising the timing of the event, he felt that the Aerospace Summit was a timely step in the right direction.

<https://www.newsx.com/national/newsx-and-the-sunday-guardian-host-indias-biggest-defence-conclave-the-indian-defence-aerospace-summit.html>



Wed, 23 Oct 2019

Navy can play a key role in making India a \$5 tn Economy: Rajnath Singh

By Elizabeth Roche

- *Singh lauds the Indian Navy for its swift deployment and escort operations in the Gulf of Oman in May and June*
- *The minister also says after the 2008 Mumbai attack, the Indian Navy had made concerted efforts to strengthen security and stability of our waters and coastal regions*

New Delhi : Defence Minister Rajnath Singh on Tuesday said the Indian Navy had a crucial role to play in making India a \$5 trillion economy by 2025, helping create a “stable and balanced environment” around the country’s periphery and keeping India’s sea lanes of communication (SLOC) open for trade.

In his address to the three-day biannual naval commanders’ conference in New Delhi, Singh lauded the Indian Navy for its swift deployment and escort operations in the Gulf of Oman in May and June, protecting Indian oil tankers after attacks on some vessels in the wake of spiralling tensions between Iran and the US.

“Escorting Indian Flagged Merchant Vessels through this energy lifeline of the country during ‘Operation Sankalp’, the Navy has emphatically reiterated its ability to defend India’s critical national interests,” he said referring to the deployment that took place after the US withdrew from the 2015 Iran nuclear deal.

On the threat of terrorism faced by India, Singh said after the 2008 Mumbai attack, the Indian navy had “made concerted efforts to strengthen security and stability of our waters and coastal regions, and enhance inter-agency cooperation and coordination.” He urged the navy’s top officers to continuously

review procedures and strengthen the coastal security framework to deal with emerging threats and challenges, effectively. The 2008 Mumbai terrorist attacks were executed by 10 terrorists of the Lashkar-e-Toiba group who set sail from Karachi and landed in Mumbai after sailing through Indian waters undetected. The Indian Navy has since then put in place many measures including increased patrolling with sea and air assets to ensure India's coastline is secure. It has in particular activated a coastal radar system that allows monitoring of ships and vessels in its area of influence.

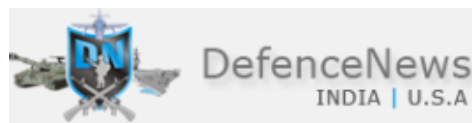
In his speech, Singh also commended the Indian navy's anti-piracy role in the Gulf of Aden since 2008 which he said "have been successful in safeguarding our maritime interests, and contributed immensely to maintaining maritime security of the region."

Later speaking to reporters, Singh noted that India had never been the aggressor but its armed forces are capable of responding to threats. India, he said, has never been "offensive".

India's "character is such that it has not attacked any country nor conquered even an inch of land belonging to another nation," Singh said.

The comments come days after India took out terrorist launch pads situated in Pakistan occupied Kashmir after Pakistan opened fire on Indian troops killing two personnel in Kashmir's Tangdhar region on Sunday.

<https://www.livemint.com/news/india/indian-navy-can-play-a-key-role-in-making-nation-a-5-tn-economy-rajnath-singh-11571753126846.html>



Wed, 23 Oct 2019

Italy approved \$762-mn arms sales to Pakistan in 2018

In its "Report on the Authorized Transactions Carried for Export, Import and Transit Control of Armament Materials," the Italian government revealed that it approved €682.91 million (or \$762 million US) in arms exports to Pakistan.

Pakistan was Italy's second largest buyer, following Qatar (which received approvals worth €1.92 billion).

The sales for Pakistan in 2018 were roughly four times larger than those booked in 2017, which stood at €174.1 million (or \$194.15 million US).

The official report did not disclose exactly what Italy approved for sale to Pakistan, but it does state that the systems in question include the following:

- 12.7 mm caliber (plus lower and higher caliber) weapons and automatic weapons;

- Ammunition;

- Bombs, torpedoes, rockets, missiles, and accessories;

- Equipment for the direction of shooting

- Land vehicles

- Aircraft

- Electronic devices

- Protective and construction equipment

- Specialized equipment for military training or for the simulation of military scenarios

- Devices for the vision of images

Continue reading the article here.

Notes and Comments

Since 2016, Pakistan's main defence purchases from Italy comprised of the Leonardo AW139 search-and-rescue (SAR) and utility helicopter, surplus M109L tracked 155 mm self-propelled howitzers (SPH), and a range of other surplus armoured vehicles.

However, Italian arms sales to Pakistan in 2016 and 2017 were priced at €97.2 million and €174.1 million, respectively. While Leonardo did announce another AW139 sale to Pakistan in April 2018 (with deliveries slated for early 2019), it would have to be a significantly larger order to justify such a jump in sale figures.

Moreover, the Pakistan Air Force (PAF) has replaced its Alouette IIIs in the SAR role with the AW139, so a follow-up order may have come from another service branch (e.g., the Army, Navy or Government).

Interestingly, the near-4X growth in sales could also indicate new defence programs. So, for example, the PAF officially stated that it requires a new lead-in-fighter-trainer (LIFT). The Leonardo M-346 was among the top options (alongside the Chinese L-15 and South Korean T-50).

Moreover, the PAF's current Chief of Air Staff (CAS), Air Chief Marshal (ACM) Mujahid Anwar Khan stated that the LIFT must "have an air interdiction radar and a datalink training system." [1]

Interestingly, in July 2019, Leonardo announced that it sold six M-346FAs to an undisclosed "major international customer." The M-346FA happens to meet the PAF's two main requirements (i.e., a radar and data-link system). A small batch order of M-346FA could fit in the sales figures announced for 2018.

Alternatively, the most recent Ministry of Defence Production (MoDP) report stated that the Directorate General of Defence Purchase (DGDP) ordered 10 "low-level radars" for \$130 m. This could be a gap-filler radar meant for supplementing – and eventually replacing — the PAF's Siemens Mobile Pulse Doppler Radars (MPDR). A Leonardo KRONOS LAND purchase could be a possibility.

[http://www.defencenews.in/article/Italy-approved-\\$762-mn-arms-sales-to-Pakistan-in-2018-737589](http://www.defencenews.in/article/Italy-approved-$762-mn-arms-sales-to-Pakistan-in-2018-737589)