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THE NEW INDIAN EXPRESS

Mon, 24 June 2019

Foreign firms keen to set up plants in India to supply raw materials for bulletproof jackets

Former DRDO chief said that four to five foreign companies have shown interest to set up units in India

New Delhi: In a boost to the Centre's 'Make In India' drive, four to five overseas companies have evinced interest in setting up plants in India to provide some of the raw materials used for manufacturing bulletproof jackets for the Army, a NITI Aayog member said on Sunday.

VK Saraswat, who is also a former DRDO Chief, said Indian companies producing bulletproof jackets import Chinese raw materials due to price advantage. "There are efforts going on now to invite collaboration from foreign companies who are willing to set up companies in India to produce some of the raw materials used for manufacturing bulletproof jackets for the Army. So far, four to five foreign companies have shown interest to set up units in India. It will be premature to give their names at this stage," the NITI Aayog member said.

The Prime Minister's Office (PMO) had asked the NITI Aayog to prepare a road map for "incentivising" domestic manufacturing of lightweight body armours (bulletproof jackets). The Bureau of Indian Standards (BIS) has also finalised quality norms for body armours to be used by Indian forces, according to Saraswat. He said it has been agreed that future tendering of bulletproof jackets will be as per BIS norms.

According to government projections, more than 3 lakh bulletproof jackets will be required by Indian armed forces, Saraswat said, adding that "based on that, armed forces have already placed order with private companies in India for production of bulletproof jackets". Indian companies were earlier procuring raw materials for bulletproof jackets from the US and Europe.

Now, most of them are being obtained from China due to lower prices. The idea of manufacturing lightweight body armours in India was mooted as the bulletproof vests currently in use by the Indian forces are very heavy.

Indian companies like Kanpur-based MKU and Tata Advanced Materials export body armours to armed forces of many countries. If the lightweight bulletproof vests and helmets are produced in bulk in the country, it will ensure low-cost supplies and end to the endless wait for foreign vendors to supply the equipment.

http://www.newindianexpress.com/business/2019/jun/23/foreign-firms-keen-to-set-up-plants-in-india-to-supply-raw-materials-for-bulletproof-jackets-1994205.html

Tue, 25 June 2019

IAF upgrading Mirage 2000, eyeing 5th generation LCA

The Indian Air Force is in the process of making a 5th Generation Light Combat Aircraft and the prototype of the same would be ready in 10 years

Upgrading Mirage 2000 and getting a 5th Generation Light Combat Aircraft will help the Indian Air Force in bridging the technological divide and ensuring a lethal arsenal, top air forces officers said on Monday. Air Marshal Raghunath Nambiar, the Air Officer Commanding-in-Chief, Western Air Command, pointed out that countries like China and Russia were already developing 5th Generation fighter jets.

He said, "China and Russia are trying to reach the 5th Generation fighter and our technology is of the 4th Generation." He further said that the Indian Air Force was in the process of making a 5th Generation Light Combat Aircraft and the prototype of the same would be ready in 10 years.

The senior IAF officials also confirmed that Mirage 2000, which were used for bombing terror camps in Pakistan's Balakot on February 26, were undergoing an upgrade. According to Air Officer Commanding-in-Chief, Central Air Command, Air Marshal Rajesh Kumar, the upgradation would extend the life of Mirage 2000 by 20 years.

Air Chief Marshal Birender Singh Dhanoa, Air Marshal Nambiar and Air Marshal Kumar were addressing at a press conference on 20 years of Kargil War commemoration at the Gwalior Air Force base. Air Chief Marshal Dhanoa talked about the advancement made by the IAF since the Kargil War. He said that the role of the IAF was of "reconnaissance", which means military observation of a region to locate an enemy.

"Even since before Kargil, the role of the air force has been that of reconnaissance, and if something abnormal is noticed, the same is reported. Earlier, the process was film-based but there's digital technology," said the Air Chief Marshal.

The IAF chief added that there are unmanned armed vehicles and aircraft that provide report on real time basis.

Referring to the 20 years of Kargil War, the IAF chief said that purpose of all attacks by India has always been to show "our resolve and capability".

https://zeenews.india.com/india/iaf-upgrading-mirage-2000-eyeing-5th-generation-lca-2213914.html

Tue, 25 June 2019

Upgraded planes in tough skies

The Indian Air Force must lay down clear red lines for continued operational effectiveness

By Arjun Subramaniam

The recent crash of an AN-32, which was on an air maintenance sortie to the Mechuka Advanced Landing Ground in Arunachal Pradesh, has raised questions on flight safety in the Indian Air Force despite accident rates having declined exponentially over the past few decades.

Air crashes today are subjected to the full glare of the media, exposing vulnerable families of the crash victims to needless trauma and also seriously hampering the remedial measures and outcomes that would flow from professionally conducted accident inquiries. In this milieu, it is important to explore some of the less-dissected issues that continue to plague aviation safety in the IAF.

The IAF flies 38 different types of aircraft and has the most varied fleet among modern air forces. Its fleet comprises aircraft like the MiG-21 and the Avro that hardly fly anywhere else. Seven of these have not had a major accident in the last five years. The long-serving IL-76 has had an accident-free innings in the IAF, a fact that is missed by most.

The U.K.'s Royal Air Force flew the Jaguar for 34 years (1973 to 2007) during which it had 67 accidents. In comparison, the IAF has lost 52 Jaguars over four decades. The U.S. Air Force flew slightly over two million flying hours in 2017 and suffered 83 'Category A' mishaps. During the same period, the IAF flew 2,51,405 hours and had an accident rate of 0.24 for every 10,000 hours of flying. This translates to 8-9 'Category A' mishaps — a comparable ratio. It would be unfair to make literal comparisons as the U.S. Air Force was and continues to be a dispersed force engaged in multiple locations like Afghanistan, Iraq and Syria.

Comparing the mishap rates

While there was a rise of 17% when we consider the 'Category A' mishaps in the U.S. Air Force between 2013 and 2017, there was a decline in the IAF's accident rate from 0.29 (2013-14) to 0.24 (2017-18). Similarly, when one compares the mishap rates between the F-16 fleet in the U.S. Air Force and the Mirage-2000 fleet in the IAF over the last five years, there is a positive story that emerges.

There is constant criticism as regards the slow phasing-out of the older variants of the MiG-21 and the MiG-27 fleets, which merits reflection. That these aircraft have no business continuing to fly is a proposition upheld even by senior IAF leadership. However, further investigation reveals a complex web of operational necessities that have forced the IAF to stretch their life and manage the ensuing risks.

For the IAF to remain combat ready for full-spectrum operations, it needs a continuously trained cockpit-to-crew ratio of between 1:1.75 to 1:2 that can undertake operations and seamlessly manage the switch to more advanced platforms as they get inducted into service. Currently, the ratios can barely sustain a limited conflict, leave alone extended ones.

The MiG-21s and MiG-27s were supposed to have been replaced by Light Combat Aircraft (LCA) and Medium Multi-Role Combat Aircraft (MMRCA), a process that is unfolding at a snail's pace.

Hypothetically, had all the MiG-21s and MiG-27s been phased out without replacement, there was no scope to increase the flying of other fleets to feed the residual pilots, due to maintenance and budgetary constraints. The IAF would then have been down to 25 squadrons and saddled with large numbers of fighter pilots without operational continuity. It would then have been tough to induct advanced platforms like the LCA and Rafale, which need pilots who are current and proficient.

The IAF had very little choice in the matter and the bottom line is that the risks are rising and must be addressed with greater urgency. The way out is simple — an accelerated LCA production, no hiccups in the ongoing Rafale induction and a fast-tracking of the new deal for 114 fighter jets.

Shortage of training aircraft

As far as other flying accidents are concerned, human error is responsible for around 50% of them while issues revolving around technical, environmental and miscellaneous factors are responsible for the rest. One of the major reasons for human error is training deficiencies due to a shortage of training aircraft.

The non-availability of the HTT-40 to complement the reliable Pilatus, a delayed induction of the Intermediate Jet Trainer and a lack of clarity within the Ministry of Defence about the IAF's proposal to buy additional Pilatus aircraft means that the IAF has keep the 40-year-old Kiran fly-worthy and

compromise on training quality and future operational proficiency. The IAF flies air maintenance sorties to support the Indian Army and conducts humanitarian assistance and disaster relief missions in the most inclement of weather conditions and highly varied and inhospitable terrain.

Several weather- and terrain-related accidents on helicopter and transport aircraft like the MiG-17 and AN-32 are caused due to the non-availability of on-board equipment like Ground Proximity Warning Systems and Terrain Following Radar that allow such missions to be conducted in near-blind conditions. The recent accident may never have happened had there been a fleet of medium-lift aircraft with such systems.

Navigating crest tops

An AN-32 can fly well above the crest tops but in case of a single-engine failure, it has to descend below 8,000 ft, which is below the crest tops in the region; hence the ground below has to be in contact at all times. Therefore, in sorties such as this, the route has to planned through known valleys — informed sources point out that the crashed aircraft may have been impacted by a visually obscured mountain located at some distance below the crest top.

Replacing the Avro aircraft with a modern platform that can share the workload of the AN-32, particularly in high-altitude areas, is another key suggestion that can be considered. The Tata-Airbus C-295 with all modern systems has been clearly the IAF's first choice and can maintain 19,000 ft on a single engine that would keep it above mountain tops in all areas serviced by the AN-32.

Accidents will continue to happen and the IAF will have to balance risks with operational necessity. Speedy replacements for MiG-21s and MiG-27s, Jaguars, Avros, Kiran trainers and Cheetah/Chetak helicopters; fast-track modifications and upgrades that are required for operations in remote and hostile terrain; and upgrading of simulators as force enablers and not merely as training aids are among the necessary measures to improve flight safety. Finally, the IAF leadership must lay down clear red lines for continued operational effectiveness — a 'we will fight and train with what we have' attitude has ominous signals.

(Air Vice-Marshal Arjun Subramaniam is a retired fighter pilot from the IAF and a visiting professor at Ashoka University)

https://www.thehindu.com/opinion/op-ed/upgraded-planes-in-tough-skies/article28128586.ece

DefenceNews

Tue, 25 June 2019

Make in India: HAL delivers gun bay door for the F/A-18 Super Hornet

It was time to celebrate when the State owned Hindustan Aeronautics Limited (HAL) on Monday delivered the 150th gun bay door for the F/A-18 Super Hornet of Boeing Company.

These gun bay doors being manufactured at the HAL facility in Bengaluru are an example of American aerospace Boeing Company's ongoing commitment to India and its robust investment in Indian defence and aerospace ecosystem.

The F/A-18 Super Hornet, a twin-engine supersonic all weather, carrier-capable multirole combat jet delivering cutting-edge, next-generation multi-role strike fighter capability and is expected to be offered to the Indian Navy and the Indian Air Force (IAF).

As has been reported by Financial Express Online, the IAF will soon invite Expressions of Interest (EoI) from foreign manufacturers for 114 combat aircraft. Top company officer had said that Boeing is

ready to set up a completely new production facility in India for the production of its F/A-18 Super Hornets, depending on the numbers of machines ordered by both the Navy and IAF.

State-owned HAL has been Boeing's long-term supplier in India for quarter of a century and was awarded the contract to manufacture gun bay doors for the Super Hornet in 2007.

Said Salil Gupte, president, Boeing India, "This delivery of the 150th gun bay door for the Super Hornet demonstrates that Indian suppliers are an integral part of Boeing's global supply chain. This milestone is yet another endorsement of our commitment to India, which is well recognized today, because we've been investing and making in India for several years now."

Adding, "Our investments in India are robust and ongoing, spanning technology, hi-tech innovation, production capacity, establishing a supply chain network, and developing skilling centres for aerospace manufacturing in India."

"HAL is committed to strengthening aerospace manufacturing in India. This delivery is not just an important milestone for the company but also for Boeing and the Indian industry, " said its chairman and managing director R Madhavan.

To help realize the Make in India vision to its full potential, the US Company has offered to build a 21st century aerospace ecosystem in India for manufacturing the F/A-18 Super Hornet with Indian partners, HAL and Mahindra Defence Systems (MDS). Such a move is expected to create thousands of jobs and hundreds of suppliers in India.

So far Boeing Company's sourcing from India stands at $1 billion with over 160 existing industrial partners.

http://www.defencenews.in/article/Make-in-India-HAL-delivers-gun-bay-door-for-the-F/A-18-Super-Hornet-585440

DefenceNews

Tue, 25 June 2019

MoD approves using pain inducing 'Sound Canons' for crowd control in Kashmir

Security personnel who often face off with stone-pelters and civilians during crucial anti-terror operations in Kashmir will no longer depend on pellet guns to disperse the human obstacles.

The Ministry of Home Affairs has approved the use of 'sound cannon', devices that can emit pain-inducing sound waves, on rampaging mobs in the Valley. The move follows criticism of pellet guns that have left several people with eye injuries.

Known as Long Range Acoustic Device (LRAD), the sonic weapon was used for the first time in Pittsburgh, US, to control an agitated crowd during a G20 summit in 2009.

"It is much needed. During an encounter with terrorists, locals start pelting stones at the forces. LRAD will help us immediately disperse the crowd and also take terrorists off guard, giving a strategic edge to our forces in action," a senior IPS officer told DNA.

The use of LRAD has been criticised world over as the sound can cause pain in humans and permanently damage hearing. Official sources said the ministry is clear that the warning tone won't cross the human threshold of pain and that the forces should be able to control its intensity.

The ministry has directed the Central Armed Police Forces to start the process of procuring LRADs while stressing the need for development and manufacture of the 'sound cannons' in the country.

In an internal note, the government has said, "The manufacturers must mention the threshold impact of equipment output on human ears and have to have certification from Indian and medical organisations."

The ministry has sought detailed information about the equipment from the manufacturers. The note read, "Previous implementation of the subject project in other sectors may also be brought out to ascertain the credibility of the product."

Going by its experience with pellet guns, sources said the government has been careful about drawing unwanted attention in its mob management efforts in the restive Valley. It has also sought details about "normal threshold of pain for children" considering the use of kids as shields by protesters in Kashmir.

While security forces in the Valley have been using pellet shotguns to police protests since 2010, it has left scores of people injured. According to Amnesty International, pellet guns have so far killed 14 people in Kashmir.

Pellet guns are pump-action shotguns which fire a cluster of small, round, metal pellets with high velocity over a wide area. A pellet shotgun cartridge can contain up to 630 pellets. Once shot, the cartridge explodes and the pellets disperse in all directions, hitting everyone in their path. Pellet guns are, however, less lethal than bullets but can cause serious injuries, especially if they hit the eye.

TOO LARD

162 dB – Max continuous volume of sound cannon

130 dB – Usual threshold of pain

110 dB – Sutli bomb

60 dB – Normal conversation

http://www.defencenews.in/article/MoD-approves-using-pain-inducing-Sound-Canons-for-crowd-control-in-Kashmir-585436

THE TIMES OF INDIA

Tue, 25 June 2019

India lining up defence deals worth $10 billion with US amid trade row

By Rajat Pandit

Highlights:

- ***The latest deal being finalised by India under the foreign military sales programme of the US is for the acquisition of 10 more Poseidon-8Ilong-range maritime patrol aircraft***
- ***The other deals in the pipeline include 24 naval multi-role MH-60 'Romeo' helicopters***

New Delhi: India is lining up defence deals worth around $10 billion for the US over the next two-three years despite ongoing trade disputes and immigration concerns, even as New Delhi and Moscow have worked out a payment mechanism to get around Washington's sanctions regime against acquisition of Russian weapon systems.

The latest deal being finalised by India under the foreign military sales programme of the US is for the acquisition of 10 more Poseidon-8I long-range maritime patrol aircraft for over $3 billion, defence ministry sources said. "The procurement case for the 10 P-8I aircraft was cleared by a MoD committee last week. It will now be sent for approval to the Defence Acquisitions Council headed by defence minister Rajnath Singh by August. These 10 P-8Is will be more advanced than the 12 such aircraft already procured by India," a source said.

The Navy inducted the first eight Boeing-manufactured P-8Is, which are packed with sensors and armed with Harpoon Block-II missiles, MK-54 lightweight torpedoes, rockets and depth charges to detect and destroy enemy submarines, under a $2.1 billion deal inked in January 2009. The next four P-8Is are slated for delivery by 2021-2022 under another $1.1 billion contract signed in July 2016.

The Navy wanted over a dozen more P-8Is but agreed to 10 aircraft because of the concurrent tri-Service proposal to acquire 30 armed Sea Guardian (Predator-B) drones for over $2.5 billion from the US. The case for the 'hunter-killer' drones, with 10 each slated for Navy, IAF and Army, is now headed for the DAC.

The other deals in the pipeline include 24 naval multi-role MH-60 'Romeo' helicopters ($2.6 billion), the National Advanced Surface to Air Missile System-II for the missile shield over Delhi (almost $1 billion) and six more Apache attack helicopters ($930 million). With the US having already bagged Indian arms contracts worth $17 billion since 2007, and the two countries expanding their strategic partnership on several fronts, India is riled at the continuing threat of financial sanctions under the CAATSA.

The Trump administration has expressed its opposition to India's inking of the $5.43 billion contract for S-400 Triumf missile systems with Russia in October 2018, which was followed by another $3 billion deal for lease of a Akula-1 nuclear-powered attack submarine in March 2019. India's case for waivers from CAATSA is likely to figure when US secretary of state Mike Pompeo comes visiting on Tuesday.

India has resumed some payments to Russia for defence contracts inked earlier through a new mechanism that uses a mix of foreign currency and a Rupee-Rouble transfer system. Indian banks with "exposure to the US" had earlier suspended payments and installments to Russia to avoid the threat of punitive sanctions under CAATSA. "The US has to realize that India has a separate longstanding strategic partnership with Russia… it cannot be wished away. There is no plan to cancel the S-400 deal," said a source.

https://timesofindia.indiatimes.com/india/india-lining-up-defence-deals-worth-10-billion-with-us-amid-trade-row/articleshow/69919916.cms

DefenceNews

Tue, 25 June 2019

Why is India buying more Russian air-to-air missiles?

Why is India ordering $700 million worth of missiles from Russia?

One reason may be humiliation over Pakistan using long-range air-to-air missiles to shoot down an Indian fighter last February. Yet the purchase comes amid reports that of problems with Russian missiles.

"Close to 300 short-range air-to-air missiles, the R-73, and 400 medium-range air-to-air guided missiles, the RVV-AE, also known as the R-77, have been ordered," according to Indian newspaper The Print.

The choice of the R-77 is interesting. It is the Russian equivalent of the radar-guided U.S. AIM-120 AMRAAM (Advanced Medium-Range Air-to-Air Missile). First introduced in 1991, the AIM-120 is a beyond-visual-range weapon: it is listed by the U.S. Air Force as having a range of 20-plus miles, though an extended-range version under development would considerably increase the missile's reach.

But the Indian Air Force has had an unpleasant taste of AMRAAM. It was probably an AIM-120, fired by a Pakistani F-16 at long range, that downed an Indian Air Force MiG-21. On February 26, Indian warplanes struck inside Pakistan, hitting bases used by militants who regularly attack attacked Indian forces in the long-disputed Kashmir region. Pakistan retaliated the next day with an airstrike on Indian positions along the border. "The Pakistani Air Force strike package included eight F-16s, four Mirage-3 aircraft, four Chinese made JF-17 'Thunder' fighter," said India's NDTV news site. "Other aircraft in the formation were escort fighters to protect the Pakistan strike formation from any IAF retaliation. The large Pakistani attack formation was detected at 9.45 am, when they came within 10 kilometers [6 miles] of the Line of Control. A small number of these fighters then proceeded to cross the Line of Control, when they were intercepted by eight IAF jets, which included four Sukhoi 30s, two upgraded Mirage 2000s and two MiG-21 Bisons."

What happened next is unclear. Pakistani jets intercepted the attackers: India says U.S-made F-16s were involved, though Pakistan denies this. India claimed to have shot down an F-16, which Pakistan also denies. At a news conference soon after the incident, India displayed debris marked "AIM-120," which it claimed as proof that American-made weapons were involved. Those claims are significant because Pakistan's use of F-16s to strike India could violate agreements with the United States.

But India had little choice in admitting that one of its old MiG-21s was shot down, after its pilot was captured and paraded on Pakistani television. At the same time, Indian press has portrayed the AIM-120 as less than effective. "The American make was unsuccessfully used by the Pakistan Air Force (PAF) to target Indian Su-30 MKIs on 27 February, a day after the IAF strikes on Balakot," claimed The Print.

In any case, India now seems eager to upgrade its air-to-air missile arsenal, especially longer-range weapons. But India's polyglot collection of aircraft and missiles poses integration problems. "Integrating other missiles — for instance, the Israeli Derby air-to-air missiles — with the Su-30 will require permission from Russia," Indian defense sources told The Print. "Russia and India can jointly implement the program of modernization of the IAF's air-to-air missiles. All the requirements of the Air Force can be discussed and met. The work could start as soon as possible once the formal request is made."

http://www.defencenews.in/article/Why-Is-India-Buying-More-Russian-Air-to-Air-Missiles-585430

DefenceNews

Tue, 25 June 2019

Russian S-400 'superior' than US Patriot missile system – experts

Even as the US has reiterated its reservations about Turkey and India's purchase of the S-400 missile system, Indian and Pakistani military experts believe that it was the best available air defence system in the world.

They maintained that American alternatives at present were no match to this tested Russian system.

Former deputy chief of Indian Air Force (IAF) Kapil Kak and ex-director general of Pakistan's powerful Inter-Services Intelligence (ISI) Gen Ehsanul Haq told Anadolu Agency that the US attempts to foist its interests on sovereign countries, would prove counterproductive.

Both of them believed that the US behaviour was in a way an attack on the strategic autonomy of these countries.

"My view is that Turkey and India will very jealously protect autonomy in their strategic decision making. They will find it very difficult to align with the US dictate on the S-400 issue. The US administration should find a diplomatic solution to the issue and retain its political and military linkages with Turkey," said the former ISI chief.

A US government official on Monday warned against purchase of the Russian equipment while speaking to Indian journalists in Washington ahead of an expected visit by US Secretary of State Michael Pompeo to New Delhi as part of preparations to arrange a meeting between US President Donald Trump and Indian Prime Minister Narendra Modi on the sidelines of the G-20 summit in Japan later this week.

“With respect to S-400, we are urging all our allies and partners, India included, to forgo transactions with Russia that risk triggering CAATSA (Countering America’s Adversaries Through Sanctions Act) ... This is a time we will be encouraging India to look at alternatives,” said the official, according to Indian media reports.

Retired Air Vice Marshall Kapil Kak, who has commanded fighter jets and is involved in strategic planning in India, said in terms of tracking and scanning of radars, height parameters and the area it can cover, the S-400 system was the best in the world.

He said the US offer to supply American Patriot missile defence system was not an alternative to match their strategic requirements.

"My back up on calculation is that S-400 is superior than any other system, be that the American Patriot. It also depends on Patriot derivate that is on offer. For S-400, we know exactly what it means. We are not sure when Americans talk to us about Patriots. It has been used in the Gulf war and upgraded subsequently. But as far as the configuration, we know, it is not superior to S-400. I do not think, it will either interest Turkey or India," said Kak, who has also served as chief instructor at the Defense Services Staff College at Wellington, the capital of New Zealand.

He said given the geopolitical realities in the region, Turkish armed forces were in need to purchase the best defence system.

The former air force officials said the US argument that the purchase will compromise the configuration of its fifth-generation F-35 aircraft, does not hold the ground.

He reminded that as NATO allies, Turkey and the US are already committed to the Communications Compatibility and Security Agreement (COMCASA), which secures the US military equipment.

It also facilitates interoperability between militaries and sale of high-end technology.

India also signed this agreement last September after the conclusion of a meeting between the foreign and defense ministers of both countries in New Delhi.

The former Indian air force official, however, said there was a marked difference between Turkey and India.

Even as the US was pushing both to relinquish the deal, Kak said at the end New Delhi may succeed to secure an American waiver.

"My own reading is that the US approach towards Turkey will be far harder than towards India, because of various geopolitical and regional factors," he said.

"We have been told at the senior most levels that India will be exempted. India will not have to pay the price in way of economic sanctions if it goes ahead with purchasing the Russian missile system. But there is no clarity still. My own reading is that India is closely watching America's approach towards Turkey. But I feel they [Americans] will be generous towards India," said Kak.

He also disclosed that like Turkey, the US has been offering alternatives to India as well.

"They [Americans] have been also offering us not only the F-21 aircraft, which is an upgrade of F-16 but have assured to set up their production line in India itself. So, India can become exporters of these jets," he said.

The setting up of production line is an attractive proposition, given the fact that there are 4,000 F-16s and F-21s in the world.

But when deciding about the French Rafale aircraft, the IAF had already rejected the American F-16 deal. In April 2015, India purchased 36 French Rafale fighter jets, rejected American and other offers.

On whether the American approach will affect Pakistan as well, which is another major non-NATO ally, Haq said the military relationship between the two countries has lost its momentum.

"Fortunately, or unfortunately, the status of non-NATO military ally has not given any benefit to Pakistan. The US Pakistan military relationship has gradually lost its momentum. There are hardly any military transfers to Pakistan, even military training arrangements have been at a standstill. Consequently, the US ability to do anything about Pakistan's defence procurement from Russia is minimal," he said.

http://www.defencenews.in/article/Russian-S-400-superior-than-US-Patriot-missile-system-%e2%80%93-experts-585457

hindustantimes

Tue, 25 June 2019

Achieved our objective: Dhanoa on Balakot strike

Dhanoa asserted that the IAF achieved its stated military objective but the Pakistani side did not. "But none of them [PAF aircraft] crossed the LoC [Line of Control] into our side," he told reporters

By Sudhi Ranjan Sen

Gwalior: Pakistani Air Force jets could not enter the Indian airspace in retaliation to the Balakot air strike earlier this year, Air Chief Marshal BS Dhanoa said on Monday. He stressed that the Indian Air Force achieved its objective in the operation.

In Gwalior, Dhanoa also spoke on how Mirage-2000 "turned the tide" in favour of India during the Kargil War in 1999, and asserted that AN-32 aircraft will continue to fly in mountainous areas despite a crash in Arunachal Pradesh earlier this month.

On the Balakot airstrike, which was carried out in retaliation against the February 14 terror attack on a security convoy in Jammu and Kashmir's Pulwama, Dhanoa said, "They did not come into our airspace. And what was our objective? Our objective was to strike the [terror] camp and we have done that. We have achieved our objective. Their [Pakistani] objective was to hit our army places. They could not and that is the bottom line."

He was replying to a question at a press conference held during a day-long event at the Gwalior Air Base to mark 20 years of the Kargil War.

On February 26, IAF jets targeted a Jaish-e-Mohammed terror camp in Balakot, deep inside Pakistan, about two weeks after a suicide bomber of the group killed at least 40 Central Reserve Police Force personnel in Pulwama. Tensions spiralled in the aftermath of the two incidents, prompting the international community to ask the nuclear-armed neighbours to exercise restraint.

Dhanoa asserted that the IAF achieved its stated military objective but the Pakistani side did not. "But none of them [PAF aircraft] crossed the LoC [Line of Control] into our side," he told reporters.

A day after India's strike, Pakistan tried to retaliate, albeit unsuccessfully, by attempting to target various military installations in Jammu and Kashmir. The two countries put restrictions on their

airspace following the dogfight on February 27. Though India has lifted the restrictions, such curbs are still in place on the Pakistani side. “Our economy is vibrant and air traffic is a very important part and you have noticed that the Air Force has never stopped our civilian air traffic,” he said.

Asked about AN-32, Dhanoa said the aircraft will continue to fly in mountainous areas as “we do not have any replacement”. He added, “We are in process of getting more modern aircraft which will be put in critical role once received, and AN-32 will be out and used for transport and training purposes.” All 13 air warriors on board the transport aircraft died in the crash in a heavily forested mountainous area in Arunachal Pradesh on June 3.

On the Kargil war, the Air Chief Marshal said modification of multi-role fighter aircraft Mirage-2000 was in process back then and was “expedited” for its deployment in the operation.

He described Mirage-2000 as the “sword arm of the IAF”, adding that its integration with targeting pods and 1000-pound laser-guided bombs (LGBs) were done in a “record time of 12 days”.

During the day, the IAF chief also took part in a re-enactment of the Tiger Hill attack and its recapture in Kargil. At the press meet, he spoke how the LGB-equipped Mirage-2000 was used in the Tiger Hill attack in 1999 and how the Spice Bomb-equipped Mirage-2000 was deployed in Balakot operation. Dhanoa said Mirage-2000 jets and air support to ground forces turned the tide of the 1999 war in favour of India.

https://www.hindustantimes.com/india-news/achieved-our-objective-dhanoa-on-balakot-strike/story-7Ps5585tUVltRqTj27WJdI.html

DefenceNews

Tue, 25 June 2019

HAL has concrete orders to build Su30, LCA, Tejas and Chetak helicopters: Rajnath Singh

The HAL has concrete orders to manufacture Su30 MKI, Light Combat Aircraft Tejas, Dornier, Advanced Light Helicopter, Chetak, Cheetal helicopters among others and defence services have paid the aerospace major Rs 8,140 crore in the last six months, Defence Minister Rajnath Singh said June 24. Arrears of Rs 868.14 crore are outstanding with Hindustan Aeronautics Limited for its contractors, he said.

"The present capacity available in HAL is adequate to fulfil the existing orders, projects in hand. Currently, HAL has firm orders to manufacture platforms like Su-30 MKI, LCA, DO-228 (Dornier), ALH, Chetak and Cheetal helicopters," Singh in a written response to a question in the Rajya Sabha.

He said that as and when required the HAL borrows from banks to meet its working capital requirements.

Just before the polls, the Congress had launched an offensive against the government alleging that Dassault Aviation, the makers of Rafale fighter jet, overlooked the PSU and gave the offset contract to another private company.

The issue also reverberated during the Lok Sabha polls.

Earlier this year, the aviation major was forced to borrow Rs 1,000 crore to pay salaries to its employees for the first time in years.

Last month, HAL has posted an all-time high turnover of Rs 19,705 crore, registering a growth of 7.8 per cent in 2018-19.

http://www.defencenews.in/article/HAL-has-concrete-orders-to-build-Su30,-LCA,-Tejas-and-Chetak-helicopters-Rajnath-Singh-585455

INDIA TODAY

Tue, 25 June 2019

Severe manpower crisis in Army

Rs 8 crore has been spent on recruitment publicity

By Abhishek Bhalla

The Indian Army is facing a shortage of more than 45,000 personnel including over 7,000 officers above the rank of lieutenant, the Ministry of Defence informed parliament on Monday.

The Army is focusing on setting up recruitment camps over the last few years to overcome the problem.

There were 45,634 vaccines in the Army as on January 1, 2019, including 7,399 posts which are above the rank of Lieutenant, Rajnath Singh , Minister of Defence said in a written reply in Rajya Sabha on Monday.

In the last three years, the Army has conducted 200 recruitment camps across the country. During this financial year, 13 such recruitment camps have been set up with another 80 scheduled.

"Recruitment in the Army is a continuous process and vacancies occur due to various reasons like accretions of posts from time to time, tough selection procedures, difficult service conditions coupled with perceived high degree of risk involved in the service career as also inherent limitation of number that could be trained without compromising the quality of training. Vacancies are filled progressively through recruits who complete training," the reply stated.

In the last three financial years, over Rs 8 crore have been spent on publicity to reach out to the youth to join the Army.

https://www.indiatoday.in/mail-today/story/severe-manpower-crisis-in-army-1555496-2019-06-25

THE ECONOMIC TIMES

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Chinese military tests heavy aerial delivery with unmanned transport aircraft

This is the first time China has conducted a parachuted aerial delivery of cargo weighing more than 500 kilograms on a flight distance of more than 500 kms

The Chinese military has tested an unmanned transport plane that successfully delivered cargo at a designated area, making it a future prospect for airdropping cargo through parachutes in real battle conditions, official media here reported on Monday.

Jointly held by the National Defence University of the People's Liberation Army (PLA) and the state-owned China Aerospace Science and Technology Corporation, the aerial delivery exercise took place recently in Zhangye, Northwest China's Gansu Province, China Central Television (CCTV) reported.

The exercise featured an unmanned single-engine biplane, the designation of which was not revealed, as it carried a cargo of military supplies and successfully airdropped it into a target zone, according to the CCTV report.

This is the first time China has conducted a parachuted aerial delivery of cargo weighing more than 500 kilograms on a flight distance of more than 500 kms with an unmanned transport aircraft, CCTV

quoted Li Ruixing, the president of the PLA National Defence University's joint logistics academy as saying.

"We explored a new model of military cargo delivery in joint combat as well as in strategic and tactical logistics support," Li said. Since transport planes usually do not need to make intense and complicated manoeuvres like fighter jets, even heavier cargo delivery missions could become unmanned if this technology becomes mature, a Chinese military expert told the Global Times.

Airdrops often take place within the range of hostile anti-aircraft fire, so being unmanned lowers risk to life, the expert said. The exercise also means that the Chinese military now has the first large unmanned equipment in its logistics arsenal, the CCTV report said, noting that the mission was carried out on a plateau with a complicated terrain.

"The exercise met our expected objective. It is very significant for our unmanned logistics chain in future warfare," said Bi Guangyuan, executive director of the exercise, CCTV reported.

Chinese military analysts predicted that more unmanned transport aircraft could join the army's logistics arsenal for long-range and heavy delivery in the future, state-run Global Times reported.

https://economictimes.indiatimes.com/news/defence/chinese-military-tests-heavy-aerial-delivery-with-unmanned-transport-aircraft/articleshow/69924889.cms

THE HINDU

Tue, 25 June 2019

Modi, Xi, Putin to meet in Osaka

Leaders of the three countries will hold their second trilateral meet during G-20 summit in Osaka

By Atul Aneja

Beijing: China on Monday confirmed that Prime Minister Narendra Modi, Chinese President Xi Jinping and his Russian counterpart Vladimir Putin will hold their second trilateral summit in Osaka.

During a media briefing on the upcoming two-day G-20 summit in Osaka that begins on June 28, Assistant Minister of Foreign Affairs Zhang Jun said that the meeting of the leaders, who recently met at Bishkek at the Shanghai Cooperation Organsiation (SCO) summit, was of "great significance."

He also signalled that the trilateral mechanism of Russia, India, and China (RIC) had now become institutionalised.

"Indeed, during the Osaka summit, the leaders of China, Russia and India will have a trilateral meeting. The mechanism of the China, India, Russia trilateral meeting has maintained a sound momentum of development," Mr. Zhang observed.

"Last year during the Buenos Aires G20 summit, the three leaders also had a meeting. And this time, given the current international landscape, their meeting is also of great significance," he said, when asked to comment on the geopolitical and geo-economic significance of the trilateral summit.

Without naming the U.S., the Chinese diplomat stressed that ahead of the summit, the "international community has fully recognised the repercussions of unilateralism, protectionism and bullying practices".

China's Vice-Minister of Commerce Wang Shouwen, who also briefed the media, asserted, in reference to Washington, that "some individual country has been insisting on unilateralism, protectionism, abusing trade remedial measures (and) national security exceptionalism. That country has slapped tariffs on its trading partners, causing major threat to global trade, investment and economic growth".

Eastern Economic Forum

The trio will meet again in September in Vladivostok for the Eastern Economic Forum where Mr. Modi will be the chief guest.

Apart for adding weight to the global significance of Eurasia, the trilateral meeting in Osaka would also have a positive impact on bilateral relations, Mr. Zhang said.

"As you know, China's relations with India and Russia are showing a sound momentum of growth, and the leaders of the three countries have also maintained close exchanges. At the recently concluded SCO summit and the CICA summit, and also other meetings [that are] taking place of the leaders of the three countries...it is important for the three countries to strengthen coordination of major global issues and jointly uphold multilateralism, oppose protectionism and deepen cooperation on multilateral and international affairs to make important contribution to global peace," he noted and asserted that the Osaka trilateral could also strengthen ties "at the bilateral level," and "will produce positive outcomes".

China would also provide leadership to the Financial Action Task Force (FATF), which has continued to "grey list" Pakistan, because Islamabad had been found wanting in curbing terror financing. However, China, which was about to chair the FATF, would conduct "a strategic review" of the organisation and adopt a "clear responsive strategy," a Chinese official said.

Chinese officials also made it plain that during the Osaka summit, which is taking place in the teeth of a trade war with the U.S., Beijing would back a revamp of the World Trade Organisation (WTO) and bat for reform of the global financial system, under the International Monetary Fund (IMF).

Referring to the meeting of the Brazil-Russia-India-China-South Africa (BRICS) countries on the sidelines of the G20, Mr. Zhang hoped that in view of uncertainty in the global economy, BRICS would play "a bigger role in upholding multilateralism, an open and non-discriminatory trading system, building an opening economy and (contributing to) world economic governance."

https://www.thehindu.com/news/international/modi-xi-putin-to-meet-in-osaka/article28123557.ece

The Indian EXPRESS

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Explained: What is Lunar Evacuation System

Evacuation System Assembly, or LESA. Developed by the European Space Agency (ESA), LESA is a pyramid-like structure whose purpose is to rescue an astronaut should he or she suffer an injury on the lunar surface

Among preparations for NASA's 2024 Moon mission, one has been to test a device called Lunar Evacuation System Assembly, or LESA. Developed by the European Space Agency (ESA), LESA is a pyramid-like structure whose purpose is to rescue an astronaut should he or she suffer an injury on the lunar surface. Astronauts will be wearing heavy extravehicular activity (EVA) suits and, as ESA head of spacewalk training Hervé Stevenin said in a statement, "There is no way an astronaut could carry their fallen crewmate over their shoulder while wearing an EVA suit."

LESA can be operated by a single astronaut to rescue a fallen colleague. It enables an astronaut to lift their crewmate onto a mobile stretcher in less than 10 minutes, before carrying them to the safety of a nearby pressurised lander, the ESA statement said. Astronauts are testing LESA under the sea. With its rocky, sandy terrain and buoyant salt water, the bottom of the ocean floor has much in common with the lunar surface, ESA said.

https://indianexpress.com/article/explained/explained-what-is-lunar-evacuation-system-5798182/