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DRDO DG defends high imports of military equipment

Defending high imports of military, defence equipments, DRDO Director General SK Mishra on Wednesday said unfortunately we are living in a neighbourhood of most dangerous terrorist country in the world. There are many reasons for it and one is that we are living in neighbourhood of most dangerous terrorist country in the world, another is that there are 19 weather models which are possible, out of which we have 13 in India ranging from -55 degree Celsius to +55 degree Celsius, 100 degree humidity on sea to mountains where also humidity is high, different terrains, dessert.

So our requirements are different and adverse, which means we have to source from variety of suppliers to be prepared to wage a war, he said replying to a query on why India still has high imports even decades after Independence. The combination of all this plus our history of a importing country makes us very vulnerable to this kind of import-export business, Mishra said.

He was talking about "Role of DRDO in making India a world class defence hub" in a session at Global Partnership Summit.

The DRDO Chief said we have a fund available for research and development of new technologies with a corpus of around Rs 1000 crore. One can apply for it but there are only few applications. It should be a practical idea, i.e an idea which can be converted into a product.

The problem is we do not have many applicants for it, he said talking about a severe shortage of entrepreneurs in defence related fields.

In a presentation earlier, he said according to Mckinsey, it is expected that India's defence system requirement for next five years is around \$150 billion. Indian manufacturing sector must capture a large portion of this domestic defence requirement for achieving self-reliance and enter into export market.

He said they have managed to reduce the delivery time of equipments, ie the whole process of conceptualising and implementing from 20-25 years earlier to now 3-5 years. But, still there is demand to bring it down further. Till now, DRDO's total portfolio cleared for production stands at Rs 2.56 lakh crore.

Mishra is also CEO and MD of BrahMos Aerospace, a joint venture between India and Russia.

In November, the Indian Air Force became the first one in the world to successful test an air version of BrahMos supersonic cruise missile. The missile is a nuclear capable short-range supersonic cruise missile that can be launched from submarines, ships, aircraft or land.



Fri, 15 Dec, 2017

Old torpedoes in new sub for Navy

By Ajit K Dubey

After a delay of around five years, India on Thursday inducted its first modern conventional submarine, INS Kalvari, into the Navy on Thursday, a first in almost two decades. The submarine, which was earlier supposed to be inducted in the middle of this year, had to wait for six to seven months more for its commissioning as senior government functionaries insisted that the platform should be ready for operational deployment with its weapons at the time of being commissioned by the Prime Minister.

Due to this, the Navy borrowed the torpedoes of another class of submarines and fired them about three months ago to prove that the platform was ready for operational deployment, sources said. The Navy has been facing long delays in the procurement of heavyweight torpedoes for the Scorpenes, which will be known as Kalvari class, due to the cancellation of a tender to procure the weapons from the scam-tainted Finmeccanica group of Italy which has now been named Leonardo. Sources said that due to lack of new heavyweight torpedoes, the Navy had to pull out weapons from another line of submarines and integrate them with the Kalvari in the recent times.

“The integration of the torpedoes is still going on but the main weapon for Kalvari would only be the new heavyweight torpedo for which a multi-vendor competition is going to be initiated in the near future,” a source said.

The heavyweight torpedoes for Kalvari would also be deployed on the nuclear submarine fleet of the Navy, including the boats of the Arihant Class nuclear powered submarines. Putting it into commission in Mumbai, Prime Minister Narendra Modi lauded the efforts of the Navy for its role from disaster management to combating piracy.

“Be it terrorism via sea, piracy, drug smuggling or illegal fishing, India is playing an important role in combating them,” he said.

“I call it SAGAR — security and growth for all in the region.” Addressing the gathering, Union defence minister Nirmala Sitharaman said, “Peace in Indian Ocean, which is the lifeline of global trade is better off with INS Kalvari.” Kalvari is the first of the six Scorpene-class submarines that will be handed over by shipbuilder Mazagon Dock Limited (MDL) to the Navy.

Designed by the French, these are being built by MDL in Mumbai as part of Project-75 of the Navy. Kalvari would be followed by five more submarines at a gap of nine months each.



Fri, 15 Dec, 2017

PM Narendra Modi commissions INS Kalvari: ‘Proof of Make in India’

INS Kalvari, a diesel-electric submarine, has been built by the Mazagon Dockyard Limited (MDL) in collaboration with the French builder, M/s Naval Group.

Inducting the first of six Scorpene-class submarines into the Navy on Thursday, Prime Minister Narendra Modi commissioned INS Kalvari at the Naval Dockyard in Mumbai and said the induction was testimony to the significance of the government’s Make-in-India initiative.

“To dedicate this submarine to the nation is an equally proud moment for me. After a gap of nearly two decades, India has got this kind of a submarine and Kalvari is a fine example of the Make-in-India initiative. It is also a good model for international collaboration,” Modi said.

INS Kalvari, a diesel-electric submarine, has been built by the Mazagon Dockyard Limited (MDL) in collaboration with the French builder, M/s Naval Group.

The Commissioning Warrant of the submarine was thereafter read out by the Commanding Officer, Captain S D Mehendale. Subsequently, the Naval Ensign was hoisted onboard for the first time, followed by the breaking of the commissioning pennant.

The state-of-the-art technology used in the Scorpene gives it superior stealth features such as advanced acoustic silencing techniques, low radiated noise levels, hydro-dynamically optimised shape and the ability to launch a crippling attack on the enemy using precision guided weapons. An attack can be launched with both

torpedoes and tube-launched anti-ship missiles, while underwater or on surface. The stealth is enhanced by the special attention given to various signatures.

The second of the Scorpenes under construction at the MDL, the Khanderi, was launched in January 2017 and is currently undergoing sea trials. The third Scorpene, Karanj, is being readied for a launch. The remaining three submarines are in various stages of outfitting. The project is expected to be completed by 2020.

As is the tradition, ships and submarines of the Navy are “re-incarnated” after decommissioning. So is it with Kalvari, named after the Tiger shark. The first Kalvari, commissioned in December 1967, was also the first submarine of the Indian Navy. She was decommissioned on May 31, 1996 after almost 30 years of service.

Modi said India was fully alert with regard to its global, strategic and economic interests in the Indian Ocean and the Navy plays a leading role in promoting peace and stability in the region.

Defence Minister Nirmala Sitharaman, Navy chief Admiral Sunil Lamba, National Security Advisor Ajit Doval, Maharashtra Governor Ch Vidyasagar Rao and CM Devendra Fadnavis were present at the ceremony.

Business Standard

Fri, 15 Dec, 2017

Five years late, Scorpene submarine INS Kalvari joins Navy

Kalvari is an excellent example of 'Make in India' and will boost Navy's might, says PM Modi

By Ajai Shukla

After 11 years in construction at Mazagon Dock Ltd, Mumbai (MDL), the first Scorpene (French for scorpion) submarine, INS Kalvari, was commissioned into the Indian navy by Prime Minister (PM) Narendra Modi in Mumbai on Thursday.

The Kalvari is the first of six conventional submarines for which the navy signed a Rs 18,798 crore contract in 2005 with French-Spanish submarine consortium, Armaris. That company was taken over by France’s Direction des Constructions Navales Services (DCNS), and its cost went up to Rs 23,562 crore. In June, DCNS changed its name to Naval Group.

All six Scorpenes were to be delivered between 2012 and 2015, but that schedule has slipped to 2017-2020. The second vessel, INS Khanderi, is currently undergoing sea trials and is on track for delivery in March. The other four are scheduled for delivery, according to the defence ministry, at nine-month intervals till mid-2021. Naval Group however said in a statement on Thursday that the Scorpenes “will be delivered at a rate of one every 12 months. By that estimation, the last Scorpene would be delivered in early 2022.

Compounding the five-year delay in building the Kalvari, the submarine has been languishing for almost three months after it was handed over to the navy, fully built and tested, in September. Since then, it has awaited the PM’s availability for half a day for the commissioning ceremony.

In the event, a galaxy of VIPs attended the ceremony, included Maharashtra governor, Vidyasagar Rao, Chief Minister Devendra Fadnavis, Defence Minister Nirmala Sitharaman, Minister of State for Defence, Subhash Bhamre and National Security Advisor Ajit Doval.

According to the “commissioning warrant”, read out by Kalvari’s first commanding officer, Captain SD Mehendale, the vessel has joined the navy’s Western fleet. This means it will primarily operate in the shallow waters of the Arabian Sea, blockading Pakistani ports and naval bases in wartime and sneaking up on enemy warships to destroy them with torpedoes and anti-ship missiles. It could also be used to blockade shipping from West Asia, entering the Arabian Sea through the Strait of Hormuz.

In a war with China, Indian submarines would blockade four major south east Asian straits – Malacca, Lombok, Sunda and Ombai Wetar – preventing Chinese warships based in the South China Sea from crossing into the Indian Ocean.

Even in peacetime the Indian Navy has, since June, continuously maintained a submarine and a surface warship off the Andaman Islands on “Malacca Domain Awareness” patrols, as part of a new posture of “mission based deployment”.

In fulfilling multiple operational tasks, the six Scorpene boats (as navies refer to submarines) will be a

welcome addition to the navy’s aging fleet of 13 conventional submarines. These include four 20-30 year-old, German-origin HDW Type 209 boats (called the Shishumar-class); and nine 10-20 year-old, Russian-origin Kilo class 877 EKM vessels (called the Sindhughosh-class).

DEEP SECRET: UNDERWATER STEALTH

- The new Kalvari is a tech marvel compared to its forebear. Displacing 1,565 tonnes, it is 67.5 m long and 12.3 m high, and is powered by a quiet permanently magnetised propulsion

motor that drives it underwater at 20 knots (37 kmph) and, while surfaced, at 12 knots (22 kmph)

- A submarine’s key attribute is stealth. Stealth comes from

reducing engine noise and from silencing the boat’s internal systems

- In the Kalvari, systems are mounted on shock absorbing cradles to dampen vibrations and reduce its noise

The Kalvari is being commissioned almost exactly on the Silver Jubilee of the navy’s submarine arm. On December 8, 1967 the navy commissioned its first submarine, a Soviet Foxtrot-class boat that was the original INS Kalvari. That boat’s captain, Commodore (Retired) Subramanian attended the commissioning in Mumbai today.

The new Kalvari is a technological marvel compared to its forebear. Displacing 1,565 tonnes, it is 67.5 metres long and 12.3 metres high and is powered by a quiet “Permanently Magnetised Propulsion Motor” that drives it underwater at 20 knots (37 kilometres per hour, or kmph) and, while surfaced, at 12 knots (22 kmph). There are plans to equip the last two Scorpenes with advanced “air independent propulsion”.

A submarine’s key attribute is stealth, since it is extremely vulnerable once an enemy detects it. Stealth comes from reducing engine noise and from silencing the boat’s internal systems. In the Kalvari, systems are mounted on shock absorbing cradles to dampen vibrations and reduce its noise signature.

The defence ministry says the Kalvari is armed with the heavyweight, 533-millimetre, wire-guided Surface and Underwater Target (SUT) torpedo, an old German armament acquired in the 1980s for the navy’s four 877 EKM (Sindhughosh class) submarines. The navy had initially chosen the modern Black Shark torpedo, built by WASS. That option fell through when the defence ministry banned all buys from Finmeccanica group companies (including WASS) after Italy began investigating corruption by Agusta Westland (a Finmeccanica company) in selling VVIP helicopters to India.

Besides the outdated SUT torpedo, the Kalvari packs the Exocet SM39 anti-ship missile, built by the Franco-British-Italian conglomerate, MBDA. The defence ministry says the Kalvari has already “undertaken successful torpedo launch as well as the navy’s maiden SM 39 Exocet combat missile firing on 02 Mar 2017.”

Like all underwater predators the Kalvari is superbly equipped to detect targets. It uses sonar and ranging equipment that is integrated into a digital Submarine Tactical Integrated Combat System (SUBTICS). This includes a Low Frequency Analysis and Ranging (LOFAR) sonar, which detects and classifies targets at long ranges (exact ranges are a closely guarded secret). Its periscopes are equipped with infrared and low light cameras and laser range finders.

Naval Group says the Kalvari is the fifth Scorpene submarine in the world. It has already delivered two each to Chile and Malaysia. In addition, four are under construction in Brazil.

While commissioning the Kalvari, the PM described INS Kalvari as a prime example of “Make in India.” In fact, Project 75, as the Scorpene procurement is named, pre-dates “Make in India” by 18 years. In

1999, the cabinet approved the navy's 30-year submarine building programme, which involves the indigenous construction of 24 submarines by 2029. Project 75, to build six submarines, is the first part of that.

Alongside Project 75, six more submarines with "air independent propulsion" are to be indigenously built under Project 75-I. The defence ministry has allocated this to the private sector under the "Strategic Partner" policy, and a Request for Information has gone out to global vendors. Subsequently, Project 76 would kick off, which envisages the indigenous design and construction of 12 more submarines.



Fri, 15 Dec, 2017

(Online)

लड़ाकू विमानों, पनडुब्बियों के लिए सामरिक गठजोड़ मॉडल :मोदी

मुम्बई : प्रधानमंत्री नरेन्द्र मोदी ने कहा है कि सरकार देश को रक्षा क्षेत्र में आत्मनिर्भर बनाने के लिए भारत के निजी क्षेत्र के साथ सामरिक गठजोड़ मॉडल लागू कर रही है और हमारी कोशिश है कि विदेशों की तरह ही भारतीय कंपनियां भी लड़ाकू विमान से लेकर हेलीकॉप्टर, टैंक और पनडुब्बी तक का निर्माण इसी धरती पर करें।

छह स्कार्पीन श्रेणी की पनडुब्बी की श्रृंखला में पहली पनडुब्बी आईएनएस कलवरी के जलावतरण समारोह को संबोधित करते हुए मोदी ने कहा कि हमारा प्रयास है कि हमारी रक्षा शक्ति, आर्थिक शक्ति, तकनीकी शक्ति के साथ अंतरराष्ट्रीय संबंध की शक्ति, लोगों के विश्वास की शक्ति, देश की साफ्ट पावर की शक्ति, इन सभी अवयवों में एक प्रकार का सामंजस्य हो। ये परिवर्तन आज के समय की माँग हैं।

उन्होंने कहा कि सरकार देश को रक्षा क्षेत्र में आत्मनिर्भर बनाने के लिए भारत के निजी क्षेत्र के साथ सामरिक गठजोड़ मॉडल लागू कर रही है। हमारी कोशिश है कि विदेशों की तरह ही भारतीय कंपनियां भी लड़ाकू विमान से लेकर हेलीकॉप्टर, टैंक से लेकर पनडुब्बी तक का निर्माण इसी भूमि पर करें। भविष्य में यही सामरिक गठजोड़ भारत के रक्षा उद्योग को और मजबूत बनाएंगे।

प्रधानमंत्री ने कहा कि सरकार ने रक्षा क्षेत्र से जुड़े सामान की खरीद में भी तेजी लाने के लिए भी अनेक नीतिगत फैसले लिए हैं। रक्षा मंत्रालय और सेना मुख्यालय स्तर पर वित्तीय अधिकारों में भी बढोतरी की गई है। पूरी प्रक्रिया को और सरल तथा कारगर बनाया गया है। इन महत्वपूर्ण सुधारों से रक्षा-व्यवस्था और देश की सेनाओं की क्षमता और भी मजबूत होंगी। उन्होंने कहा कि पिछले तीन साल में रक्षा और सुरक्षा से जुड़ी पूरी पारिस्थितिकी में बदलाव की एक शुरुआत हुई है। बहुत नई पहल की गई है। जहाँ एक ओर हम आवश्यक साजो सामान के विषय को प्राथमिकता के साथ ले रहे हैं, वहीं देश में ही आवश्यक प्रौद्योगिकी के विकास के लिए सक्रिय एजेंटा भी तय किया जा रहा है।

मोदी ने कहा कि लाइसेंस की प्रक्रिया से निर्यात की प्रक्रिया तक, हम पूरी प्रणाली में पारदर्शिता और संतुलित प्रतिस्पर्धा ला रहे हैं। विदेशी निवेश को प्रोत्साहन देने के लिए भी हमारी सरकार ने अनेक कदम उठाए हैं। अब 49 प्रतिशत प्रत्यक्ष विदेशी निवेश आटोमेटिक रूट से किया जा सकता है। उन्होंने कहा कि रक्षा सेक्टर के कुछ क्षेत्रों में तो अब 100 प्रतिशत एफडीआई का रास्ता खुल गया है। रक्षा खरीद प्रक्रिया में भी हमने बड़े बदलाव किये हैं। इनसे मेक इन इंडिया को भी बढावा मिल रहा है। इससे रोजगार के भी नए अवसरों का सृजन हो रहा है।

प्रधानमंत्री ने कहा कि भारतीय कंपनियां रक्षा सेक्टर के उत्पाद बनाएं और उसे दुनिया भर में निर्यात करें, इसके लिए रक्षा निर्यात नीति में भी हमने आमूल-चूल परिवर्तन किया है। जो उत्पाद यहां बन रहे हैं, वो हमारे सैन्य बल भी आसानी से खरीद सकें, इसके लिए लगभग डेढ़-सौ उत्पादों की एक सूची बनाई गई है। इनकी खरीद के लिए सैन्य बलों को आर्डनेस फैक्टरी से मंजूरी की जरूरत नहीं है, वे सीधे प्राइवेट कंपनियों से ये उत्पाद खरीद सकते हैं।

उन्होंने कहा कि मुझे बताया गया है कि आईएनएस कलवरी के निर्माण में लगभग 12 लाख मानव दिवस लगे हैं। इसके निर्माण के दौरान जो तकनीकी दक्षता भारतीय कंपनियों को, भारतीय उद्योगों को, छोटे उद्यमियों को और हमारे इंजीनियरों को मिली है, वो देश के लिए एक तरह से प्रतिभा खजाना है। यह कौशल हमारे लिए एक पूंजी है जिसका लाभ देश को भविष्य में लगातार मिलेगा।

THE ASIAN AGE

Fri, 15 Dec, 2017

Major review of ordnance factories on, says Nirmala Sitharaman

The minister added that the ministry is going to support start ups in the defence sector.

New Delhi: Defence minister Nirmala Sitharaman said on Thursday that her ministry is undertaking a major review of the role of ordnance factories.

Speaking at an event to mark 90 years of the setting up of leading industry body FICCI, Ms Sitharaman said: "This may be a proper and suitable occasion to say that I am doing a major review of the ordnance factories, to make sure we understand where they are, what is it that they have to be given, are they going to be in a position to be joint venture partners for people trying to benefit from transfer of technology... so OFBs (ordnance factory boards) are also being looked into."

Tracing its origin to British India in 1787, the ordnance factories are the oldest and largest organization in India's defence industry where 41 factories are divided into five verticals—ammunition and explosives; weapons, vehicles and equipment; materials and components; armoured vehicles; and ordnance equipment. The 41 OFs are under the administrative control of the OFB which is under the MoD's department of defence production.

In February, the Prime Minister's Office (PMO), in a stringent tone, had asked OFBs to furnish a report on their achievement from 2013 onwards. In 2013, OFBs could meet the targets on only 39 per cent of the items required by the Armed Forces.

The defence minister also said that her biggest priority is to ensure 100 per cent transparency in defence procurement while speeding up implementation of long-pending acquisition process.

Ms Sitharaman said her government has been encouraging the private sector to produce defence platforms for the armed forces, insisting that the recently-unveiled strategic partnership model is being implemented to support the domestic defence manufacturing.

The biggest compliance issue government is focusing on is to ensure 100 per cent transparency in defence acquisition, she said. The minister added that the ministry is going to support start ups in the defence sector. The strategic partnership was unveiled nearly four months back under which domestic defence manufacturers can tie up with leading global defence majors to manufacture specific military platforms like fighter jets.

IAF closer to inducting Rafale jets, but still far from meeting desired strength

Experts say while inclusion of 36 Rafales will add to force's capability, more planes will be needed to replace the ageing fleet

New Delhi: Squadrons but there's nothing on the table yet.

"The induction of the 36 Rafales will significantly improve the IAF's capability but we have to get more fighters. Most definitely, we have to get the numbers," said former IAF vice chief Air Marshal KK Nohwar, who is now the additional director general of Centre for Air Power Studies.

Numbers Game

The count of the IAF's fighter squadrons has reduced to 33 compared to an optimum strength of 42-plus units required to fight a two-front war. Air Marshal PS Ahluwalia (ret'd), a former Western Air Command chief, listed a combined threat from China and Pakistan as a top concern.

"It's a serious issue that needs to be looked into," he said, making a strong case for ordering 36 more Rafale fighters.

In December 2016, then IAF chief Air Chief Marshal Arup Raha said the 36 Rafales on order were not enough and India needed around 200 such fighter jets for the expansion of its military capabilities.

The Chinese and Pakistani air forces operate 60 and 25 fighter squadrons respectively. Experts say a squadron-to-squadron comparison isn't fair and what is more crucial is how many warplanes are available for missions at any given time, in air force parlance serviceability of a fleet.

The IAF's fleet consists of 11 squadrons of ageing MiG-21 and MiG-27 fighters that will be retired in phases over the next five to six years. Su-30 fighters account for 13-plus squadrons but the fleet is plagued by engine troubles and is also battling poor serviceability. The remaining nine squadrons are a mix of Mirage 2000 fighters, Jaguars and MiG-29s.

Also, 32 more Sukhois are likely to be inducted by 2020. China Pakistan

n Smaller Rafale order for 36 warplanes falls short of the IAF's original requirement of 126 medium-weight fighters n India is yet to take a call on whether it should co-develop a stealth fighter with Russia, with IAF having strong reservations about the multi-billion dollar project n Plans to locally produce single-engine fighters in collaboration with a global defence contractor face uncertain future n IAF plans to deploy 123 light combat aircraft but slow rate of production a reason to worry

The IAF was pegging hopes on a mix of new planes to hit the pause on the sharp drawdown of its fighter fleet, and eventually strengthen it. But the fate of some of these projects looks iffy.

India is yet to take a call on whether it should co-develop a stealth fighter with Russia, with the IAF having strong reservations about going ahead with the multi-billion dollar fifth generation fighter aircraft (FGFA) project.

A plan to locally produce singleengine fighters in collaboration with a global defence contractor faces an uncertain future with the defence ministry treading cautiously as a single vendor situation might crop up, Hindustan Times has learnt. United States defence contractor Lockheed Martin and Swedish firm Saab are the only two companies exploring opportunities to build F-16s and Gripens in India.

Another plan to build twin-engine fighters in collaboration with a foreign player remains on the drawing board.

IAF sources said the slow rate of production of the homegrown light combat aircraft, christened Tejas, is a reason to worry too. The IAF's first Tejas squadron, raised in 2016, consists of only five planes. It eventually plans to deploy 123 such fighter jets.

The air force could take at least 15 years to deploy its authorised strength of 42 fighter squadrons.

“It’s the joke of the century that the Tejas squadron has only five fighters. At this rate, you can calculate when the IAF will get the 123 planes,” said Ahluwalia, who led the team that inducted French-origin Mirage 2000 fighters in 1984.

Hindustan Aeronautics Limited claims it is ready to produce eight Tejas aircraft per year and is ramping up the production rate to 16 planes by 2019-20 by investing ₹1,331 crore. The HAL even claims it can deliver 16 to 24 jets 2021 onwards. It doesn’t seem to be a realistic target, a source said.

“I don’t know where we will get the replacement for the MiG-21 and MiG-27 fighters. We need single-engine fighters swiftly. Also, there’s no use just having numbers, we need capability too in terms of precision weapons, cutting-edge avionics and superior situation awareness,” Ahluwalia said, arguing in favour of the single-engine procurement.

He said the twin-engine procurement should also be pursued to eventually replace Jaguars and MiG-29s.

It is crucial to strike a balance between pursuing Make in India projects and the compulsions of the Indian Air Force to address the desperate shortage of fighters, said strategic affairs expert Air Vice Marshal Kafil Kak (retired).

“It’s absolutely imperative to induct 150 single-engine fighters for a two-front war or even a full-blown conflagration with our major neighbour (China),” the strategic affairs expert added.

THE ASIAN AGE

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US army to send cyber warrior teams to battlefield

The Army has for the past three years conducted training for such operations at a huge centre in southern California.

Washington: The US Army will soon send teams of cyber warriors to the battlefield, officials said Wednesday, as the military increasingly looks to take the offensive against enemy computer networks.

While the Army’s mission is generally to “attack and destroy,” the cyber troops have a slightly different goal, said Colonel Robert Ryan, who commands a Hawaii-based combat team.

“Not everything is destroy. How can I influence by non-kinetic means? How can I reach up and create confusion and gain control?” he told reporters.

The cyber soldiers have been integrated for six months in infantry units, and will tailor operations according to commanders’ needs, said Colonel William Hartman of the Army’s Cyber Command.

The Army has for the past three years conducted training for such operations at a huge centre in southern California.

Hartman didn’t give details on what the cyber troops can achieve, except to say that they would be scooping up information or intercepting planned attacks.

According to the New York Times, CYBERCOM has previously placed “implants” in ISIS networks that let experts monitor the group’s behaviour and ultimately imitate or alter commanders’ messages so they unwittingly direct fighters to areas likely to be hit by drone or plane strikes.

Another technique likely being employed is a common type of cyber attack known as a denial of service.

Cyber Command had previously been a subordinate part of the US Strategic Command, but President Donald Trump in August ordered the Pentagon to elevate it to its own command, in a sign of its growing importance.

Cybercrimes have become a business issue: Expert

Traditional methods such as antivirus, firewalls no longer effective

Hyderabad: In wake of recent cyber attacks, the issue of cyber security has developed into a business problem from being just a technical one, a top Microsoft official said here on Thursday.

Speaking at a Microsoft event, Digital Crimes Unit regional director Keshav Dhakad said, “Cyber security is no longer just a technical issue but has evolved into a business one. Recent attacks gave us a glimpse of how cyber attacks can affect the operations of a business.”

The year, 2017, witnessed a variety of cybercrime spanning from malware attacks to data breaches — Equifax, Deloitte and Verizon being the most notable firms to face breaches while Maersk, Merck, and FedEx were victims of ransomware.

Data breaches can lead to loss of crucial data causing damage to its reputation and its business.

With cybercriminals continuously adopting newer methods, he urged businesses to also adopt modern tools such as analytics and big data to fight cybercrimes. “Cybercrimes have evolved over time and the traditional methods such as antivirus and firewall are no longer enough. Big data, which many are calling as the new oil, can provides us with a tonne of data, but without using analytics it would be equivalent to finding a needle in a haystack. Analytics can help fine tune the concerns,” said Mr Dhakad.

He added, “Microsoft has made a considerable amount of investment to set up its Digital Crimes Unit to help fight cyber criminals. Using both big data and analytics, this unit is taking the fight to the criminals.”

The race for technology between criminals and security officers is quite akin to a cat-and-mouse chase. Sometimes the criminals manage to pull one off over the company and vice versa.

In a Forbes article, a cyber security expert said, cyber events are inevitable and may be far more impactful than companies imagine. Technology isn't failsafe. Humans aren't infallible.

He added that discussions and retrospectives in the wake of a successful cyber attack shouldn't focus entirely on patching every vulnerability rather on awareness.

Superbacteria could soon be eating China's factory waste

The clean-up goes to the heart of an industry that leveraged decades of cheap labour and capital

Bloomberg

In a Hong Kong laboratory, researchers are working with one of the world's biggest cloth makers to improve its production process using a special ingredient: bacteria.

TAL Apparel, which has factories in mainland China and Southeast Asia, has teamed up with City University to identify bacteria that can clean up more efficiently the vast quantities of waste water the textile industry produces. It's one of hundreds of efforts by China's private and state-owned companies to fix a problem that could end up rewriting the playbook of the global fashion industry.

After decades of almost unbridled industrial growth that left China with a legacy of rampant pollution, shrinking aquifers and soaring water prices, the government is cracking down on big industrial users, and the textile industry is in the front line. Cloth-making ranks third in China for the amount of waste water it discharges — 3 billion tonnes a year — after chemicals and paper, according to a 2015 report by New York-based non-profit group Natural Resources Defense Council, which has an office in Beijing.

The price of ensuring a sustainable water supply in China is yet another expense for factories that are already being squeezed by higher land and labour costs. And while automation and overseas production offer some respite, China's companies are turning to other technologies to preserve operating margins that, even for major players such as Crystal International Group, can be less than 10 percent. In 2015, the government released its Water Ten Plan, ushering in stricter waste-water regulations.

It sets out 10 general measures to control pollution discharge, promote technology and strengthen water management, with a 2020 deadline to meet its goals. The stricter water rules are part of China's actions to increase enforcement in environmental measures. Penalties for environmental violations by the country's manufacturers rose 34 percent in 2015, from the previous year, according to China Water Risk, a Hong Kong-based non-profit organisation focusing on disclosing risks related to China's water resources.

The clean-up goes to the heart of an industry that leveraged decades of cheap labour and capital, and a unique close-knit supply chain of cloth, dyeing, sewing, fasteners, trimmings, labels and logistics, to deliver so-called fast fashion — rapidly shifting style from the catwalk to the mass market at prices that make garments almost a disposable commodity.

“Customers are happy because clothes are even cheaper than a decade ago, and retailers can benefit from low costs,” said Felix Chung, a Hong Kong legislator representing the textile industry. “But the result is massive waste — and the brands will need to pay for it in the future.”