MORE PUNCH FOR THE INDIAN NAVY : A VIEWPOINT PAGE 10

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IAF's induction of C-17 Globemaster III

(Top to bottom) Defence Minister A.K. Antony, Minister of State for Defence Jitendra Singh, Chief of Air Staff Air Chief Marshal N.A.K. Browne with Air Warriors of the newly formed C-17 Squadron Skylords, during the induction ceremony at Hindon Airbase on September 2, 2013; Defence Minister Antony, Jitendra Singh and Air Chief Marshal Browne inside the Globemaster III; and Air Chief Marshal Browne presenting a memento to the Defence Minister.

PHOTOGRAPHS: IAF

Cover:
The Defence Minister A.K. Antony handing over the golden key to the Commanding Officer Group Captain B.S. Reddy, during the induction ceremony at the Hindon Airbase on September 2, 2013.

Cover images:
Anoop Kamath, IAF, DRDO

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Kudos to intelligence agencies for nabbing terrorists

Within a span of a fortnight, the Indian intelligence agencies nabbed two most wanted terrorists—Syed Abdul Karim Tunda and Yasin Bhatkal—on the Indo-Nepal border. The arrests show how terror groups have been operating in India, spawned by cross-border terrorism, besides indicating how porous the borders can be. The urgency to secure the borders and also the vast coastline cannot be just ignored.

These two terrorists have been involved in major attacks on the Indian soil. Seventy-year-old Tunda, an operative of Lashkar-e-Taiba, is accused of mastermind over 40 bomb blasts in New Delhi, Panipat, Sonepat, Ludhiana, Kanpur and Varanasi between December 1996 and January 1998 that left 21 dead and over 400 injured. Thirty-year-old Yasin Bhatkal is branded as the face of modern terror and he is accused of strikes in several instances including the German Bakery blast in Pune. These two arrests should lead to some more. However, some big fish remain out of the dragnet and the kingpin of all Dawood Ibrahim is at large, shuttling between Pakistan and the Middle East with impunity. Indian intelligence agencies should be unrelenting in their pursuit of terror groups.

In this issue, SP's Special Correspondent has analysed the landing of Lockheed Martin C-130J-30 Super Hercules at Daulat Beg Oldie, the highest airstrip in the world, in a significant capability demonstration, besides raising eyebrows across the border, as the strategic airlifter is kitted out as a Special Forces vehicle. In a candid conversation with *SP's M.A.I.,* Susan A. Maraghy, Vice President, South Asia, Corporate International Business Development, Lockheed Martin, gave out details of the company's focus in Asia-Pacific and beyond.

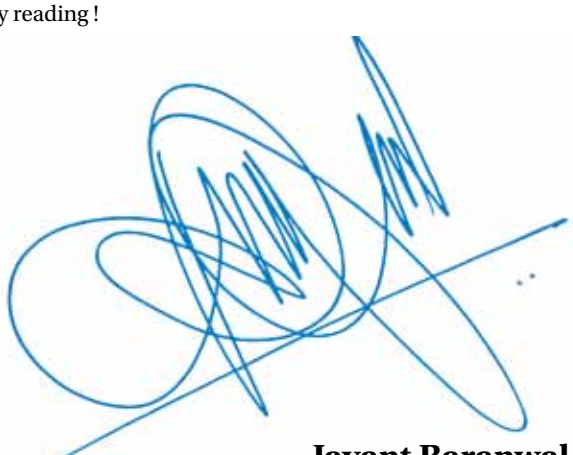
Moving to land forces, SP's Special Correspondent has written about the pros and cons of Project Arjun Mk.II which has commenced user trials in the deserts of Rajasthan, an exercise that hopefully would confirm its usefulness to the Indian Army. This brings us to one point – that Indian armed forces need to be equipped with the best of equipment, whether it is from overseas or indigenous, and these inductions have to happen in double quick time.

Continuing in the same vein, Lt General (Retd) P.C. Katoch in his fortnightly viewpoint has underscored the importance of giving teeth to the Indian Navy. He avers that India definitely requires two to three aircraft carriers, besides a larger number of submarines considering that Chinese submarines are already lurking in the Indian Ocean. As we talk about securing the coastline and strengthening the Indian Navy, we see a healthy partnership developing between original equipment manufacturers from overseas, one such being Spanish giant Navantia. In an exclusive interview with *SP's M.A.I.*, José Luis Montes Martinez of Navantia has spelt out how the Indian Navy's plans perfectly fit into the company's programmes.

Moving from the Indian Navy to Indian Air Force (IAF), there is good news. The IAF in its 81st year has got a new squadron, Squadron No.81, known as 'Skylords'. Sucheta Das Mohapatra who covered the induction of the C-17 Globemaster III strategic airlifter into the squadron at Hindon Airbase has a report wherein the Defence Minister A.K. Antony has outlined various initiatives to enhance capabilities of the armed forces.

We look forward to your feedback as it will help us sharpen our coverage of news and analysis.

Happy reading !



Jayant Baranwal
Publisher & Editor-in-Chief

IAF lands C-130J-30 Super Hercules at Daulat Beg Oldie

In a significant capability demonstration move by the Indian Air Force (IAF), a Lockheed Martin C-130J-30 Super Hercules aircraft landed at Daulat Beg Oldie (DBO), the highest airstrip in the world at 0654 hours on August 20. The Commanding Officer, Group Captain Tejbir Singh and the crew of the "Veiled Vipers" along with senior officers from Air Headquarters touched down on the DBO airstrip located at 16,614 feet (5,065 metres) in the Aksai Chin area after taking off from their home base at Hindon.

DBO is an important Army forward area post which links the ancient silk route to China. The base was built during the Indo-China conflict in 1962 and came into prominence when Packet aircraft of the IAF operated from DBO between 1962 and 1965. The strategic base in the Northern Himalayas had gained importance yet again when it was resurrected and reactivated by the IAF along with the Indian Army and made operational when a twin-engine An-32 aircraft from Chandigarh landed there after a gap of 43 years.

According to the IAF, considering the very limited load carrying capability of An-32 and helicopters, a decision was taken by it to land the C130J-30 aircraft which is capable of lifting up to 20 tonnes of load. "With this enhanced airlift capability, the IAF will now be in a better position to meet the requirements of our land forces who are heavily dependent on the air bridge for sustainence in these higher and inhospitable areas."

"The tactical airlift aircraft of the special operations squadron, the Veiled Vipers, which is capable of undertaking quick deployment of forces in all weather conditions, including airdrops and landings on unprepared or semi-prepared surfaces created history by landing at this altitude and hostile terrain conditions. This achievement qualifies for the world record for the highest landing by an aircraft of this class. Incidentally, this was the same aircraft and crew that operated at Dharasu during "Operation Rahat" for the Uttarakhand flood relief.

"Today's achievement will enable the forces to exploit the inherent advanced capabilities of the aircraft by increased capability to induct troops, improve communication network and also serve as a great morale booster for maintenance of troops positioned there. It is also a projection of the fact that the IAF is capable of operating in such inhospitable terrain in support of the Indian Army," said the IAF communiqué.

SP's Special Correspondent comments: "With an IAF C-130J Super Hercules from 77 Squadron 'Veiled Vipers' touching down at Daulat Beg Oldie advance landing ground, the scene is set for the next phase of modernisation of the vintage airfield, being used only at a fraction of what it can offer. Top sources now say the next step could be to land the IAF's new 'big boy', the C-17 Globemaster III at DBO. For that to happen, the airfield will need to be extended moderately. While the IAF has given up on plans to activate the Fukche landing ground in Ladakh, it intends to spruce both DBO and Nyoma for full-scale operations, including fighters and heavy transports. Since 2008, the DBO airfield has been a logistics node, receiving mostly helicopters from Leh on air maintenance duty for troops deployed on the line of actual control with China. Beijing had taken strong exception to the landing of an IAF An-32 at DBO in 2008, and is likely to show some consternation at the C-130J landing there as well. That being said, the IAF has not received the mandate to activate its landing grounds and develop them into full-fledged air force stations. The successful landing of a C-130J at DBO also bring in a measure of confidence and reassurance for troops deployed in the most hostile terrains on earth. The fact that C-130J is kitted out as a Special Forces vehicle is also likely to raise eyebrows across the border." SP

PHOTOGRAPH: Indian Air Force

Arjun Mk.II begins user trial-by-fire

It's the most crucial phase for Project Arjun. The new and improved Arjun Mk.II has begun user trials in the deserts of Rajasthan, an exercise that hopefully confirm its usefulness to the Indian Army. With over 90 improvements to the base Mk.I version, the Chennai-based Combat Vehicles R&D Establishment (CVRDE) has been steeped in fine-tuning the platform for the last 24 months, hoping to meet the stringent demands of the Army, a customer who was hard to please with the Mk.I as well. The results of the Mk.II user trials will be crucial to the future of a project that traces its origins to the aftermath of the 1971 war. The Army has placed an indent for 116 Mk.IIs, in addition to the 124 Mk.I tanks already in service with two tank regiments in the Rajasthan sector.

In June last year, the Arjun Mk.II Project Director G.K. Kumaravel was tragically killed near Jodhpur when he was being driven to Pokhran to witness a round of development trials. Still mourning the loss, Team Arjun now has fresh resolve to see the Mk.II put into service with no further delays or slip-ups. The Defence Research and Development Organisation's (DRDO) new Chief Avinash Chander has also placed emphasis on seeing the Arjun pushed into service as quickly as possible.

The Arjun Mk.II is a hugely improved weapons platform compared to the base Arjun Mk.I. This month, the Army will see final trials on many of those new capabilities, including the missile firing capability from the primary 120mm gun tube, the ability to fire additional types of ammunition (including penetration rounds, penetration and blast combined rounds) and explosive reactive armour covering the front portion of the tank akin to the T-90 and T-72 in service. Other improvements include a crucial night-fighting capability (absent on the Army's other tanks as well), thermal imaging, an air-defence secondary weapon, laser ranging, target tracking, larger wheels for greater stability and a more comfortable ride for the driver and tank commander.

While the scene seems set for some successes, the Arjun Mk.II, in reality, is stacked up against huge odds. On the one hand, the Indian Army has officially clarified that the T-90 will be its main battle tank, and that the Arjun will not. On the other, the Army has made no commitment to inducting the Arjun Mk.II in large numbers even if trials are successful, which means there is no guarantee that the Army will operate a fleet of 240 (124 + 116) Arjuns of both variants. The DRDO in 2008 had appealed to the government in 2008, and is doing so again now, that the Arjun programme as a whole is a dead loss if the platform isn't ordered in a certain minimum quantity. As time has passed, this number has increased. In 2008, the DRDO had calculated that the Army needed to order at least 500 Arjun tanks (in any combination of variants) to amortise costs infused into the programme over decades. Now, the DRDO is of the view that the Army will need to purchase at least 500 of just the Arjun Mk.II to make good on investments in the project. In effect, the DRDO is saying that unless the Army immediately adds 384 units of the Mk.II to its existing indent, the project is unviable, uneconomical and a loss to the public exchequer—a serious issue for a project that has taken so long to deliver results.

"The DRDO has been extremely professional about the Arjun Mk.II, and gone with the user at every stage, accepting the requirement and fulfilling them in a steady manner. It would be extremely disappointing if after so much hard work from all sides, the project is a loss for the country. The Army should feel proud to induct the country's very own tank," says a senior DRDO official, earlier with CVRDE. What the DRDO also has to account for is the fact that the Arjun Mk.II is still far from a fully indigenous machine—more than half the tank in value terms is still imported, including the German powerpack, Delft-SAGEM gun control system and Belgian gunner's main sight. The DRDO has argued in the past that while the percentage of import content is 60 per cent in the first lot of 124 tanks, it would reduce to under 45 per cent with the manufacture of first 200 tanks and under 30 per cent with the manufacture of about 500 tanks. For now, those remain hypothetical figures.

A former Director General of Mechanised Forces, who oversaw trials on the Arjun Mk.I, says, "The Arjun in any variant is a heavy machine. It is not suited for the terrains it is intended for. It is not a system conducive to strike corps operations. It is an impressive development in terms of the technologies we have been able to build in-house within our laboratories, but the DRDO must not accept that it cannot continue to harp on the Arjun. There are other more pressing solutions to think of, like the Tank-X and the future main battle tank (FMBT)."

While the Tank-X (an Arjun turret on a T-72 chassis) hasn't been accepted as a viable proposition by the Army yet, the FMBT is still only in the conceptual stage. The Army believes that the DRDO must invest all lessons from the Arjun MBT programme into the FMBT, and ensure that the similar pitfalls are never encountered. For instance, the Army needs light, nimble tanks that can be deployed in deserts, and are air-transportable (the Arjun wasn't even rain-transportable before BEML made special wagons that could carry it—the Mk.II is about 10 tonnes heavier than the Mk.I).

As with any long and arduous indigenous development effort, crossroads like the ones drawn in the sand at Pokhran throw up critical questions for both the DRDO as well as the Army. For the DRDO, the questions that arise are: (a) Can it reconcile itself with the very real possibility that the Army will induct no more than 240 Arjun tanks? (b) Will the DRDO raise the levels to force the government to intervene on its behalf and force the Army to induct more tanks, thus risking the goodwill of one of its largest customers? (c) Is the DRDO willing to conduct a realistic assessment of its achievements, devoid of rhetoric that the Army accuses it of, and make a clinical plan forward? For the Army, the questions are equally serious: (a) Is the Army really better off without more Arjun tanks? (b) If the Arjun has proven to be a more potent platform than the T-90, why does the Russian tank remain the Indian Army's MBT? (c) Will the Army commit itself to being a more reliable and reasonable partner in the FMBT programme, so the ghosts of Arjun are never raised again? SP

PHOTOGRAPH: DRDO

HAL for modernisation of IAF Avro fleet

While a request for proposal (RFP) on the replacement of 59 HS-748 Avro transports is currently under evaluation by potential vendors, the Hindustan Aeronautics Limited (HAL) has announced that it is looking to propose a life-extension of the current IAF fleet with an engine replacement, among other systems.

According to the August 15 request for information (RFI) released by HAL, "Currently there are 59 HS-748 aircraft in service with our operators. Due to low utilisation rate (average 350 hours/year) majority of aircraft have technical residual life around 80,000 hours. Owing to the good health of the airframe and considerable residual life, replacement of Rolls-Royce Dart engine with modern fuel-efficient engines on these 59 HS-784 aircraft is being planned." HAL has stipulated that it requires a response by September 30 this year, though it is likely that this deadline will be extended. In March this year, the Ministry of Defence released an RFP for the replacement of 56 Avros: 16 aircraft in flyaway condition by the selected global vendor, and the remaining 40 built in India under a partnership with an Indian company. SP

PHOTOGRAPHS: Dassault Aviation, PIB, SPSC

France cuts Rafale orders, pushes for MMRCA

While negotiations for the MMRCA trudge on in what France is hoping will be the final leg leading to a contract, the country has whittled down orders on the Dassault Rafale amidst pressure on public spending. Sources say that while contract negotiations are indeed in their final phase, there remain significant hurdles to cross before a draft contract agreement is drawn up. France is understood to have sought assurance from the Ministry of Defence (MoD) last month that the contract award would not slip into the next fiscal, but such an assurance was not extended, as there is no legal provision to do so.

All that Defence Minister A.K. Antony told his visiting French counterpart was that India was as keen as France about an early conclusion of the deal, since it was extremely important to the IAF. France's Dassault has had no choice now, however, but to increase its exposure to exports. Its other potential customers include Brazil, Qatar, UAE and Malaysia. SP

Defence Secretary leads team to Russia

A delegation representing all three armed services and led by Defence Secretary R.K. Mathur will be on an official visit to Moscow, to review bilateral defence projects and speed up decisions. The meeting comes a few days after the Indian Navy's worst ever disaster — the sinking of the INS Sindhurakshak, which claimed the lives of 18 personnel.

While Russia has offered to assist in the investigation, given that the platform recently returned from a three-year refit in the country, other issues on the table will include the fifth-generation fighter aircraft (FGFA), which has recently stirred controversy with HAL signalling that it will surrender 30 per cent workshare given to it as a result of capacity burdens, the Vikramaditya and the multi-role transport aircraft. SP

Big US deals to be cleared

The final days of the fiscal could have a marked American flavour, with a few of the US deals in the pipeline for conclusion. The Ministry of Defence (MoD) is understood to be in the final stage of negotiations for the heavy-lift helicopter and attack helicopter contracts, both to Boeing Defense, for the CH-47F Chinook and AH-64D Apache Block III respectively. The MoD is also in the process of finalising an order for six follow-on C-130J Super Hercules medium transports from Lockheed Martin, to the first six already in service.

The Indian Army will be breaking the Bofors jinx with an order for 145 M777 howitzers from BAE Systems, guns built in the United States, while the IAF will also begin the process to decide on a follow-on deal for 10 more C-17 Globemaster III heavy-lift transports from Boeing Defense. As the country gets closer to election season, signing of deals gets invariably passed over as a result of political sensitivities. However, this time around, things could be speeded up given the national security atmosphere. SP

Arihant to sail out by November

With its 83 MW pressure water reactor going critical, India's first SSBN, the Arihant is all set for sea acceptance trials that will see it stretch its legs at depths for the first time in the Bay of Bengal off the coast of Visakhapatnam. The vessel has been embroiled in harbour acceptance trials (HATs) for the last four years since its launch in July 2009.

The Arihant is likely to spend about 18 months in sea trials before it is commissioned into service. By that time, it's follow-on boat, tentatively titled Aridaman, will be launched as well at the Shipbuilding Centre in Vizag. Arihant's sea acceptance trials will also later include integration and testing of the K-15 missile, apart from other weapons. Once all tests are complete, the Arihant will be commissioned into service and commence deterrent patrol in the Indian Ocean. SP

PHOTOGRAPHS: Boeing, DPR

HAL seeks air ambulance modification for Dhruv

In a strong indication that HAL has fresh orders for the Dhruv in hand, it has called for a speedy outsources project to modify the civilian variant of the advanced light helicopter (ALH) for air ambulance operations. The helicopter is to be transformed for transportation of two patients on stretchers along with two medical personnel, including a doctor and allied life-saving equipment.

The Dhruv was recently involved greatly in humanitarian operations in Uttarakhand, and has been considered by at least two foreign nations (Peru and Turkey) for the air ambulance role. The HAL RFI is a confirmation that (a) the Peru and Turkey deals may have either fallen through or have been rekindled in some form, or (b) that there is a firm expression of interest from within the country from a civil operator for air ambulances, the requirement for which has gone up steeply in the country. SP

Fresh Nag ATGM trials successful

After major setbacks a year ago, the Nag anti-tank guided missile (ATGM) project has bounced back, with a series of successes at the Mahajan Field Firing Range in Rajasthan in recent trials, where the missile was tested with a new imaging infrared (IIR) seeker of much higher resolution than the earlier one. Sources confirm that the trials were more successful than the earlier one.

The NAMICA Mk.1 (seven have been ordered), tested by the Army between 2007 and 2010, had certain deficiencies while operating in high ambient temperatures. The Defence Research and Development Organisation (DRDO) is also working on improvement demanded by the Army on the improved NAMICA Mk.2 platform, 200 of which may be purchased if all parameters are met. These improvements include reduction of all-up weight to 15 tonnes, improved reliability of missile launcher platform drive mechanisms, higher-resolution target acquisition sight for the gunner, enhanced user-friendly process in acquisition of target through reduced offset between sight and missile seeker-acquired target scene image, improved amphibious performance, and provision of a target surveillance and acquisition sight for the crew commander. SP

PHOTOGRAPHS: DRDO / IAF, SPSC

One year of Akash SAM in service

The indigenous Akash surface-to-air missile (SAM) has completed a year in deployed service with the Indian Air Force. With two active squadrons now in Gwalior and Lohegaon and two more coming up in forward areas of the Northeast, the system is acquitting itself satisfactorily in terms of preparedness parameters. The Indian Air Force ordered eight squadrons (two in December 2008 and six more in December 2010), receiving its first battery in March last year. The first squadron was raised in Gwalior, the second in Pune and the next two are coming up in the Northeast.

"Akash is an extremely important system for the IAF. It has been a long development process, which has ended in success. The IAF is supporting the programme with its resources and commitment, and has been impressed with the capability it offers. We have ordered eight squadrons, which will replace the mission profile performed by our Pechora and OSA squadrons. In future, we may consider more," says a senior officer at Air HQ.

The IAF had an unfortunate series of failed customer tests in May-June last year, following the acceptance of units, though issues with the system were subsequently ironed out. The manufacture of the systems is being split between the Bharat Electronics Limited (BEL) and the Bharat Dynamics Limited (BDL) for the IAF and Army (the latter has on order two regiments, ordered in March 2011). Things started rough in 2012 with certain delivery hiccups from BEL slowing down inductions, though the public sector undertakings (PSU) has since speeded up deliveries to keep deadlines with the IAF. Sources indicate the IAF has received 32 launchers so far for four squadrons. The Army has received four launchers so far for part of its first regiment. The Army is incidentally, considering placing orders for additional regiments.

The IAF will be conducting user launches periodically this year from the Integrated Test Range is Odisha, and will test the Akash in various mission profiles including (a) far boundary interception, (b) near boundary interception, (c) high altitude interception, (d) crossing and receding target interception, (e) low-altitude and near boundary, (f) multiple target interception, (g) low altitude and far boundary interception, (h) mid-altitude and mid-range, (i) crossing and approaching, in addition to others. These profiles were demonstrated during user trials between 2007 and 2010.

The Akash programme team is now also working on the Mk.II version of the Akash, a programme formally sanctioned in May 2010. The Mk.II version envisages a 35-km range weapon with an expanded kill envelope and a higher degree of engagement and accuracy. SP

Northrop Grumman nose arrays on Indian Navy's MK54 torpedoes

The Indian Navy's brand new Raytheon MK54 light anti-submarine torpedoes—contracted last year, yet to be delivered—will sport Northrop Grumman nose arrays. The torpedoes will be deployed from the Navy's new P-8I aircraft, a platform from which the torpedo has already been tested by the US Navy. The weapon was tested for the first time in the US Navy's Atlantic Test Range in October 2011.

Speaking on the acoustic nose array assemblies his company will now be delivering to the US Navy for fitment on the torpedoes for India, Tom Jones, Vice President for undersea systems at Northrop Grumman, said, "We are pleased to support the US Navy's torpedo enterprise once again by providing this undersea warfare capability to the Navy and our international partners." SP

Raytheon continues Patriot push in India

A decade after Raytheon first began its big push of the Patriot PAC-3 integrated air and missile defence system to India, the company remains committed to India as a potential customer. Raytheon CEO William Swanson recently described the PAC-3 as a "never-ending opportunity" and listed India as one of the countries that remained interested in the system and technology.

The Defence Research and Development Organisation (DRDO), which describes the indigenous BMD project as equal to, if not better than the Patriot, has said the country doesn't need an imported system, but has indicated that it is willing to forge technological partnerships. Discussions have continued over the years at various levels in this regard. With the Indian system to be ready for deployment in the next 18 months, it remains to be seen what partnership DRDO will be looking for. SP

PHOTOGRAPHS: US Navy, SPSC, US DoD

First LCA Tejas Mk.II prototype next year?

The first prototype of the LCA Tejas Mk.2 could be rolled out in 2014, it has been revealed. In an exercise to locate and certify line-replaceable units for the evolved Mk.II jet, the Hindustan Aeronautics Limited (HAL) has revealed to prospective development partners and suppliers of a hydraulic pump, among other components and systems "HAL-ARDC is taking up for development and qualification of certain LRUs required for catering to LCA-Mark 2 version. The first prototype aircraft is slated for built during 2013-14, while series production(s) are planned for induction to fleet which is stated to be taken up in two phases commencing from 2016 onwards."

The timelines appear optimistic, especially since 2014 is when the LCA Mk.I will only be attaining final operational clearance towards squadron service. That being said, work has indeed begun in right earnest at the Aeronautical Development Agency (ADA) and HAL to build a mock-up of the new jet before getting started on metal cutting for the prototype. A whole raft of tenders and request for information have flown out from both agencies for several different kinds of metal, composites and systems to put the new jet together. SP

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More punch for the Indian Navy

India catapulted into a top elite club with the launch of the 37,500-tonne INS Vikrant, the indigenous aircraft carrier. With this, India is the fifth country in the world after the US, UK, Russia and France to have demonstrated the capability of designing and building a ship of this size.

Post-extensive sea trials, it is likely to be inducted into service by 2017-18. It has the capacity to carry 36 fighter aircraft; 19 on the deck and 17 in hangars and in all probability will house the MiG-29K, indigenous light combat aircraft (LCA) and Kamov-31 helicopters. Nearly 90 per cent of the aircraft carrier parts are reportedly indigenous.

A concurrent achievement has been the miniaturised nuclear reactor on board INS Arihant, India's first indigenous nuclear-powered submarine going critical, which the Prime Minister described as "a giant stride for the nation".

This development beefs up the country's capability for making the nuclear triad a reality. The Arihant class submarines are of 6,000-tonne submarines that can carry 12 x K5 SLBMs (750 to 1,900 kilometres range) or 4 x K4 SLBM (under development with range of 1,890 to 3,500 kilometres. The torpedo tubes on the submarine can launch torpedoes, missiles or mines. Four such submarines vessels are being built and are expected to be commissioned by 2023.

In addition to the above, the Russian aircraft carrier Gorshkov too is likely to be inducted into the Indian Navy in 2014 as INS Vikramaditya. This will boost the blue water capability of the Navy.

However, reports emanating after the tragic explosion and loss of life on board INS Sindhurakshak indicate that we need to accelerate replacement of our existing submarines most of which have outlived 75 per cent of their service life. There is also a case for boosting up the overall number of our submarines considering India has a coastline extending 7,863 kilometres, exclusive economic zone (EEZ) of 1.02 million square kilometres, island territories, and offshore assets extended over 17,000 square kilometres (including 30 processing wells, 125 well platforms and 3,000 kilometres of seabed pipelines) and 97 per cent of our trade is by sea.

In fact, China has given priority to submarine development over aircraft carriers for obvious operational advantage. China, India and Pakistan today have 65, 15 and 8 submarines respectively. India definitely requires two to three aircraft carriers operational at all times but it should also have a larger number of submarines considering that Chinese submarines are already lurking in the Indian Ocean, enlarging China and China-Pakistan collusive threat and Chinese attempts to rig up a possible China-led alliance in the Indian Ocean region including efforts to establish bases/refuelling and rest and recoup for Chinese Navy under pretext of developing commercial ports.

Chinese have invested heavily in submarines and guided missile destroyers to counter probable American Carrier Battle Groups (CBGs) in possible stand-offs, making sea capability the answer to a superior US forces sea control capability. Not that they do not consider CBGs important but that perhaps is the reason that China is yet to launch an indigenous aircraft carrier though they have acquired a refurbished one from Ukraine in year 2012.

Of course the Chinese also have advanced ICBMs, nuke delivery systems, undeclared chemical weapons capability, advanced satellite and anti-satellite capabilities, extensive third dimension capability, a formidable air force, potent cyber warfare capability and advanced subconventional/asymmetric warfare capabilities.

We could draw lessons from what the Chinese are up to including undertaking a review that considering the threats that we face at sea and the security of our sea lanes of communications (SLOCs) on which our economy is heavily dependent, whether our submarine development plan is on course in the overall mosaic of acquiring true blue-water capability. SP

The views expressed herein are the personal views of the author.

India definitely requires two to three aircraft carries operational at all times but it should also have a larger number of submarines considering that Chinese submarines are already lurking in the Indian Ocean

PHOTOGRAPH: Indian Navy

Navantia's know-how 'fits perfectly' with the needs of the Indian Navy

Navantia, a Spanish public company that belongs to the SEPI (a state-owned enterprise subordinate to the Spanish Ministry of Economy and Treasury), is a world leader in the products it offers. The company is involved in design and construction of high-tech military vessels and civil vessels; design and manufacturing of control and combat systems; technology transfer; overhauls and alterations of military and civil vessels; support to the service life of its vessels and systems; diesel engine manufacturing and turbine manufacturing.

Navantia has been expanding globally. In October 2005, Navantia, as part of a consortium with the French company DCNS, and the French company Armaris entered into a technology transfer agreement on three Scorpene submarines in India. Here in an interview with ***SP's M.A.I****,* ***José Luis Montes Martínez****, General Manager, India Liaison Office talks about Navantia in India.*

SP's M.A.I. **(SP's): Can you indicate on your relationship with the Indian Navy and the Indian armed forces in general?**
José Luis Montes Martínez (Martínez): We mainly deal with the Indian Navy. Personally I have been involved with India only for the last five months, so my relationships are not yet very extended.

SP's: Which specific projects are currently on and how are they progressing?
Martínez: With the Indian Navy we only have future projects.

SP's: What are Navantia's upcoming offerings to the Indian Navy and also the Indian Coast Guard?
Martínez: We will involve at least in the following tenders: LPD, Project P-75(I) – AIP submarines and Fleet Support Ships (FSS).

SP's: Can you indicate on any industrial partnerships, if finalised, with any shipyards? Can you also indicate on some basic features of these partnerships?
Martínez: Larsen & Toubro, Chennai in the LPD and FSS projects. If awarded, on both projects we will do engineering work and additionally in the FSS programme we would build two or three vessels while L&T would build the rest

SP's: What makes you most excited in the context of India as a market?
Martínez:: Indian Navy programmes already known to fit perfectly with our capacities. On the other hand, we have extended our good experience in working in partnership with local shipyards in other contracts with foreign navies, so our know-how perfectly fits the needs of the Indian Navy in terms of product and indigenous construction.

SP's: I believe Navantia also has a series of land-based solutions. Does Navantia intend to work with the Indian Army and allied organisations?
Martínez: Yes. We do not pretend to be limited to the Navy.

SP's: How do you view Navantia's future in next 5 and next 15 years?
Martínez: We have a clear idea: to expand internationally. Our designs are very attractive for most of the navies. SP

India's first military satellite GSAT-7 launched

India's first defence satellite, GSAT-7, was successfully launched by European space consortium Arianespace's Ariane 5 rocket from Kourou spaceport in French Guiana recently, giving a major push to the country's maritime security.

Indian Navy will be the user of the multi-band home-built communication satellite, expected to be operational by September end. The ₹185-crore GSAT-7 is the country's maiden dedicated spacecraft for defence applications.

After a flight of almost 34 minutes, the satellite was injected into a geosynchronous transfer orbit (GTO) of 249 km perigee (nearest point to earth), 35,929 km apogee (farthest point to earth) and an inclination of 3.5 degree with respect to the equator. During August 31-September 4, three orbit-raising operations will be performed by the Indian Space Research Organisation (ISRO) to place the satellite into geostationary orbit of 36,000 km above the equator. By September 14, GSAT-7 is planned to be positioned in its orbital slot of 74 degree East longitude and subsequently the satellite's communication transponders will be switched on.

The frequency bands of GSAT-7 will help space-based marine communications. It has coverage over India landmass as well as surrounding seas. "It's important from security and surveillance points of view", an ISRO official said.

GSAT-7 is an advanced communication satellite to provide wide range of service spectrum from low bit rate voice to high bit rate data communication. Its payload is designed to provide communication capabilities to users over a wide oceanic region including the Indian land mass. The launch cost for ISRO is around ₹470 crore, including insurance. SP

PHOTOGRAPHS: Navantia, Arianespace

1964

Our Journey Starts as Guide Publications was founded by its Founder Publisher & Founder Editor Shri S P Baranwal...

Apart from many publications written, edited and published by the Founder, Military Yearbook is introduced in 1965...

1974

Military Yearbook continues relentlessly with collective support from dignitaries including the Prime Ministers and Presidents of India...

1984

50

JUST 1 STEP SHORT OF

2014

WE SHALL BE 50 THIS YEAR

Guide Publications is rechristened as SP Guide Publications offering tribute and gratitude to its Founder...Also envisioned is the path of introduction of a few magazines...

2013

SP's Airbuz, SP's M.A.I. follows the intensity of magazines introduction...

2004

SP's Aviation, SP's Land Forces, SP's Naval Forces are launched starting from '98 and within a span of a few years...

1994

Military Yearbook is rechristened as SP's Military Yearbook conveying gratitude to Founder Publisher...

50 YEARS

1964 - 2014 50 YEARS

SP GUIDE PUBLICATIONS

Cassidian showcases defence and security solutions at Moscow show

SferiSense helicopter laser radar system

SPEXER 1500 security radar

[By **Lt General (Retd) Naresh Chand**]

Cassidian, the defence division of EADS, is a world leader in defence and security solutions. The company displayed its defence and security solutions at the MAKS 2013 International Aviation and Space Salon in Moscow which took place from August 27 to September 1. At MAKS 2013, the defence division of EADS mainly focused on:

- Optronics solutions for self-defence and countermeasures of airborne military platforms.
- Security radar for border and infrastructure surveillance.

Optronics solutions for airborne platforms

Missile Warning System (MILDS) AN/AAR-60. It especially meets the requirements for self-defence of helicopters and wide-body aircraft in order to counter the increasing threat by IR-guided missiles. MILDS is an advanced, passive imaging sensor which detects and tracks the ultra-violet (UV) emissions of approaching missiles including the prevalent use of heat-seeking shoulder-launched man-portable air-defence systems. The MILDS system tracks and identifies UV sources through its imaging sensor, which determines the angle of attack and priority. The system then accurately initiates proper countermeasures and warns the pilot to begin necessary evasive manoeuvres. More than 7,000 sensors have been sold for platforms such as the UH-60/SH-60, CH-47, CH-53, S-70, SH-3, Mi-8, Mi-17, Mi-171, NH-90 and many others.

ALTAS. The advanced laser threat alerting system (ALTAS) detects laser range finders, laser target designators and, with the additional beam rider channel of ALTAS-2QB, is also able to detect solid state beam rider sources. The system delivers all parameters required to initiate relevant countermeasures. ALTAS can be easily integrated into higher level electronic warfare suites using standard interfaces. It permits easy installation and integration on all airborne military platforms.

ARGOS-II. The ARGOS-II (airborne observation system) enables helicopters to pinpoint and observe troop movements. Moving targets can be tracked reliably for fire control systems and precise target coordinates can be sent to other units. The robust observation equipment is all-weather which can operate in inclement weather, extreme temperature fluctuations, sandstorms and extreme cold conditions.

SferiSense helicopter laser radar system. The SferiSense helicopter laser radar system is designed for use in helicopters. The system scans the area ahead of the helicopter using a laser beam that poses no danger to the human eye. It can detect even thin wires with a high level of precision at a distance of over one kilometre. MilOWS classifies potential obstacles in the categories wires, masts or individual standing objects as obstacle symbols that are superimposed onto a video or forward looking infrared video. The pilot sees this information on the visor of his helmet or on a multifunctional display in the cockpit. Alarms also sound when an obstacle or the ground is dangerously close.

Border Surveillance Systems

SPEXER 1500 Security Radar. SPEXER 1500 security radar has been designed for the surveillance of border areas and critical infrastructures such as oil fields and military camps. It is able to detect, track and classify a large variety of objects. It is using the latest radar technology of active electronically scanning array (AESA) providing a multi-tasking and multi-mode capability that increases the detection and target assessment capability substantially. Its detection capability is very good e.g. it can detect a pedestrian at 15 km with a 0.5 m^2 radar cross section (RCS) and a light vehicle at 18 km with 2.0 RCS. SPEXER 1500 is part of Cassidian's SPEXER security radar family which consists of several sensors, each optimised for specific applications in the fields of border, infrastructure, perimeter and coastal surveillance. The SPEXER radars are the first operational land-based surveillance radars worldwide using AESA technology as well as innovative digital beam forming technology benefiting from the company's experience gained in the military sector. SP

PHOTOGRAPHS: Cassidian

Indian Air Force inducts Boeing C-17 Globemaster III

[By **Sucheta Das Mohapatra**]

On the 81st year of the Indian Air Force (IAF), it has got a new squadron, Sqaudron No.81, which will be known as 'Skylords' and will house the 10 C-17 Globemaster III strategic airlifter fleet of the IAF. In a ceremony held at the Hindon Airbase, Defence Minister A.K. Antony inducted the first three of the ten C-17s ordered from the US defence major Boeing. Two more C-17s will be inducted this year and the remaining five will be delivered by November 2014.

The US Ambassador to India Nancy Jo Powell, Minister of State for Defence Jitendra Singh; Chief of the Air Staff Air Chief Marshal N.A.K. Browne, Vice Chief of the Air Staff Air Marshal Arup Raha, Air Officer Commanding-in-Chief Western Air Command Air Marshal S.S. Soman and senior officials from the United States Air Force (USAF), IAF and Boeing, were a part of the induction ceremony. Group Captain B.S. Reddy, the Commanding Officer of the Squadron 81 which will be based in Hindon was handed over the golden key.

Antony declared the induction of C-17 as a 'defining moment.' "With this, the IAF has taken a giant stride towards its goal of acquiring multi-spectrum strategic capabilities, essential to safeguard India's growing areas of interest. Today's induction of C-17 will further boost IAF's capability for humanitarian assistance and disaster relief."

"Traditional challenges to our national security have evolved into complex multi-dimensional threats. A long-term comprehensive capability enhancement approach by and for our armed forces is the need of the hour. The government remains fully committed to this responsibility," said the Minister. He further added that the induction of C-17 adds another important milestone in the Indo-US strategic partnership.

Air Chief Marshal N.A.K. Browne stated that the C-17 will be a game changer, an enabler. "The induction of 10 C-17 aircraft promises to be a game changer on how we conduct air transport operations. The C-17 fleet will provide tremendous flexibility in terms of operational response options in any future campaign. The long-range, heavy-lift capability will allow the commanders to induct troops, squadrons, relocate forces as well as shift forces between theatres rapidly. The C-17 would form an extremely important component of the strategic airlift capability and reach of the IAF."

"The Skylords join a very unique group of officers and me of our transport squadrons who bring with them a legacy of honour, dedication and sacrifice with a mandate to uphold the highest professional standards of IAF." The Air Chief later informed that the C-17s will be used in border areas as well as in hinterland. Like the C-130J, which recently made a historic landing at Daulat Beg Oldie (DBO), the C-17 can also land at the world's highest airstrip. The first C-17 has already flown the Infantry Battalion to Port Blair, Andaman and Nicobar Islands. A picture of the C-130J landing at DBO was handed over by the Air Chief to the Defence Minister.

Antony said that as there was a need for a capable strategic airlift platform, the government had expedited the process of procuring 10 C-17 Globemaster III from the US as a part of the foreign military sales (FMS) programme. The first and the second Boeing C-17 airlifters had arrived in India in June and July respectively, and the third Globemaster had departed from the company's Long Beach facility on August 20 this year.

In operation since 1991, the C-17 is a large, versatile military transport aircraft able to carry heavy, oversize loads to long distances and land on rough and unprepared surfaces. It has been used in humanitarian and military missions around the world and recently surpassed 2.6 million flight hours. As of date, Boeing has delivered 256 C-17s,

PHOTOGRAPH: Anoop Kamath




(Top left) Defence Minister A.K. Antony handing over the golden key to the Commanding Officer of Squadron 81, B.S. Reddy at the Hindon Airbase. Also seen are Minister of State for Defence Jitendra Singh, Air Chief Marshal N.A.K. Browne, Vice Chief Arup Raha; (top right) The US Ambassador to India Nancy Powell receives a memento from Air Chief Marshal Browne; (above left) A.K. Antony and Jitendra Singh in the cockpit of C-17 Globemaster III; (above right) Air Chief Marshal Browne handing over a photograph of C-130J-30 landing at DBO to the Defence Minister. The Commanding Officer Group Captain Tejbir Singh (extreme left) and the crew of the 'Veiled Vipers' were present on the occasion.

including 222 to the US Air Force and a total of 34 to Australia, Canada, India, Qatar, the United Arab Emirates, the United Kingdom and the 12-member Strategic Airlift Capability initiative of the North Atlantic Treaty Organisation (NATO) and Partnership for Peace nations.

According to Boeing, the C-17's ability to fly long distances and land in remote airfields in rough, landlocked regions make it a premier transporter for military, humanitarian and peacekeeping missions. It can take off from a 7,600-ft. airfield, carry a payload of 1,60,000 pounds, fly 2,400 nautical miles, and refuel while in flight and land in 3,000 ft or less on a small unpaved or paved airfield in day or night. The C-17 can drop a single 60,000-lb payload, with sequential load drops of 1,10,000 lb; and seat 54 on the sidewall and 48 in the centreline.

Addressing the press after the induction ceremony, the Defence Minister said that there is no possibility of sabotage in the Sindhurakshak submarine accident. However, he said that nothing can be ruled out till the Board of Inquiry submits its report. On China's intrusion into India, the Minister clarified that such incidents would happen as long as the border agreement between India and China is not finalised. Soldiers on both sides of the border are often confused and move into each other's territory. "Besides diplomatic endeavours, we are trying to have better understanding between militaries and some steps have already been taken. We are looking at more practical and effective mechanisms, strengthening capability and finding ways to build relationship. Our border forces are handling those capabilities effectively." The Indo-China joint military exercise is likely to be held in a few months.

To a question whether India will allow the US to use the Thiruvananthapuram Airbase, the Defence Minister said that we are procuring state-of-the-art modern capabilities from the US, but we are not tilting towards any country. "We are also buying from other countries like Russia, UK, France, and we will not be a party to any country's military growth. There is no proposal to give the airbase to the US," he said.

Contract negotiations on the Dassault Rafale, the medium multi-role combat aircraft (MMRCA) selected for the IAF is on, and there will be many more processes after the contract negotiation gets over and he said that he will not be able to tell when the MMRCA will be signed as everything depends on the completion of the procedure. Antony avoided commenting on the Cabinet Committee on Security (CCS) to engage in talks with Pakistan and said that it is a decision which the Prime Minister will be taking and he has no authority to say anything. On being asked about the government's decision to reject the Air Chief's proposed visit to China, the Defence Minister said that the Air Chief goes to friendly countries, if he accepts their invitation. SP

PHOTOGRAPHS: Anoop Kamath

'Our main focus in Asia is India': Lockheed Martin

*SP's M.A.I. caught up with **Susan A. Maraghy**, Vice President, South Asia, Corporate International Business Development, Lockheed Martin, who was in India recently to attend the "Invest North—A Conclave to Showcase Investment Opportunities in Northern States", organised by the Confederation of Indian Industry (CII) and supported by the US-India Business Council (USIBC). In a candid conversation, Maraghy gave out details of the company's focus in Asia-Pacific and beyond. Excerpts:*

***SP's M.A.I.* (SP's): Which are the countries you are focusing in South Asia?**
Susan A. Maraghy (Maraghy): The US Department of Defense is now focusing on India, the ten Association of South East Asian (ASEAN) countries, Australia and New Zealand. In Asia, however, our main focus at present is India. We have been here for more than 20 years already, and I believe we will be in India for times to come. We have a new Chief Executive for India. We are thrilled that he will be the steward of our strategy here.

SP's: The unmanned aerial system (UAS) market is growing and the US has an edge along with Israel. How is the money to be shared between the F-35 and the UAS?
Maraghy: We are continuing to make progress on the F-35 along with the US Government and our partners. The programme is going well; creating milestones to the satisfaction of our government customers. We are proud of the joint strike fighter and like most of our platforms, it too has a long life span, 40 plus years. With respect to UAS, that's a mission. We are continuing with the research and development of unmanned autonomous vehicles, whether they are for air, land or subsea.

SP's What is your next stake for the Indian Air Force (IAF)?
Maraghy: We want to take on our C-130J programme further, selling the aircraft for different missions. By that I mean more aircraft for the IAF and also for the Indian Coast Guard as well. We have success with multi-mission capabilities on F-35s—maritime and airborne early warning and control (AEW&C) system. We have to explore these features with the IAF. We are very pleased that the US Secretary of Defence Chuck Hagel and Deputy Secretary of Defence Ashton B. Carter are developing relationships with Government of India through the Defence Trade Initiative (DTI). During his visit to India in mid-September, Dr Carter will hold discussions with the Indian Ministry of Defence (MoD) on different offers, from precision attack to maritime solutions. Lockheed Martin is interested in co-production, co-manufacture and co-development in India. We are here to understand the industries we can collaborate, including civil and homeland security. Four areas that we are predominantly looking at are border security, critical infrastructure protection, emergency preparedness and response, information sharing and learning.

SP's: Are you talking to anyone in India regarding development of precision weapons, subsystems, avionics, etc?
Maraghy: We are exploring opportunities of joint venture (JV) with small and medium enterprises as well. We already have a joint venture with Tata and Fly Wings International Private Limited, Mumbai. In our JV company with Tata, we are manufacturing parts for C-130s which would be supplied worldwide and if India continues to buy, we will be supporting the aircraft here as well. We need our partners to be competitive and have the capability to scale to serve the global market.

SP's: Which are the sectors you are looking at in the South Asian region other than defence?
Maraghy: We are looking at offering technologies to countries that are looking to bolster their cyber defence. The other area that is very consistent but has been driven apart because of budget constraints is governmental operational efficiency—IT outsourcing and business management. The consistent region of growth is cyber and IT. With respect to defence, it differs from one country to another. It could be maritime patrol or other capabilities which are a part of their modernisation plans.

SP's: There has been a belief that the technology India is getting from the US is old and not first hand. What is your view?
Maraghy: India is getting first-hand technology with the C-130. Dr Carter's Defence Trade Initiative is the first great positive step to breakdown the perspective that India does not get the first technology. Indian private sector companies and the DPSUs do have the capability to co-develop and co-manufacture.

SP's: How do you view India's decision to allow foreign direct investment (FDI) above 26 per cent in defence production on a case-to-case basis?
Maraghy: We are very encouraged with the decision. This would benefit business in defence as in other sectors.

SP's: Lockheed Martin has made its presence felt in corporate social responsibility (CSR), is this global practice of 'winning friends'?
Maraghy: CSR is very important for us and for the last six years, we are involved in the Department of Science and technology (DST)-Lockheed Martin India Innovation Growth Programme, wherein our core engineering and development team has developed a relationship with the Indian Institute of Technology (IIT), Federation of Indian Chambers of Commerce and Industry (FICCI) and the University of Texas. Stanford University is also now a part of it.

SP's: What would be your suggestions to the Indian private sector?
Maraghy: Be focused, have a vision, invest in people and provide the best technology. In every partnership, you need to communicate and have patience. SP

India signs $55 million deals with Russia's MiG fighter jet maker

Russia's MiG fighter jet maker has signed two additional contracts with India worth a total $55 million. They are part of a general contract with India's air force. Under the first, $43 million contract, a servicing centre will be established in India for maintenance and repair of Zhuk-ME on-board radars, MiG representatives said.

The second, $12 million contract provides for the creation in India of a servicing centre for modernised MiG-29UPG fighter jets. Russia will deliver six MiG-29K Fulcrum "generation 4++" fighters to India this year as part of a 2010 contract for 29 planes worth $1.5 billion, MiG CEO Sergei Korotkov said at the MAKS 2013 international air and space show.

India currently has 21 aircraft. Under the contract, MiG is to deliver 29 planes before 2015, Korotkov said. Last year four aircraft were delivered and one has been delivered so far this year, he added. SP

Turkey's first domestic basic trainer aircraft starts flying

Hürkus, the first domestic basic trainer and ground attack aircraft developed for the Turkish Armed Forces (TSK), has made its first flight, in Ankara's Kazan district. A variety of tests have been performed on the Hürkus, including those covering the engine, take-off, night flight and the fuel system, and the Hürkus was deemed ready to operate.

Manufactured by TUSAS, the Hürkus can fly up to a speed of 574 kilometres an hour. It has a maximum stall speed of 143 kilometres an hour in landing configuration. The maximum service ceiling of the jet is 10,577 kilometres. The Hürkus jet can fly at 15,000 feet for a stretch of four hours 15 minutes and has a 1,600-horsepower engine. The aircraft also has a system for producing oxygen for pilots while flying.

The jet takes its name from Vecihi Hürkus, one of the first civil aviators of the Turkish republican era. SP

PHOTOGRAPHS: IAF, TAI, L-3

Russia, Cameroon ink Mi-17 helicopter deal

In a groundbreaking deal, Russia is to deliver Mi-17 military transport helicopters to Cameroon. The deal was signed by Russia's state-run arms exporter Rosoboronexport, which is part of Russian Technologies, and Cameroon's Defense ministry at the MAKS 2013 international air space show.

"This is the first contract as part of military technology collaboration between Russia and Cameroon," Rosoboronexport CEO Anatoly Isaikin said in a statement.

Rosoboronexport's CEO explicitly identified expanding exports to countries in Africa as a priority, and said it is seeking to renew ties with Botswana, Ghana, and Equatorial Guinea. In February a Russian delegation headed by Foreign Minister Sergei Lavrov and including the deputy director of the Russian Federal Service for Military and Technical Cooperation under Russia's Defence Ministry travelled to Cameroon and held a series of meetings about bilateral cooperation. SP

L-3 WESCAM selected to provide RDAF with MX™-15 imaging turrets

L-3 WESCAM has announced that it has received an acquisition and sustainment contract from the Danish Defence Acquisition and Logistics Organization (DALO)to provide a minimum of eightMX™-15 electro-optical and infrared (EO/IR) imaging systems for the Royal Danish Air Force's (RDAF) EH101® aircraft. System deliveries are expected to becomplete by 2014.

Installation of the turrets will bedone by DALO, while certification and configuration management will be provided by AgustaWestland. The newly equipped EH101s will then be deployed to the RDAF's 722 Squadron in support of RDAF tactical troop transport (TTT) operations, training exercises within Denmark and possible future usein mission theatres globally.Maintenance of the MX-15 systems will be performed by DALO at its existing maintenance facility in Frederikshavn, Denmark.

"This order pairs the most modernTTT-helicopter with an advanced EO/IR sensor suite that providescrucialday/nightimaging capabilities for a broad range of missions," said Paul Jennison, vice president of government sales and business development for L-3 WESCAM. "We are proud to be selected as a contributor to this important fleet enhancement programme and are looking forward to a long and successful partnership with the RDAF, DALO and AgustaWestland."

The MX-15 system has been engineered as a singleline replacement unit solution, which reduces installationweight by 25 per cent and increases much-needed cabin space for transporting equipment, evacuees and personnel. SP

GA-ASI demonstrates electronic attack in USMC exercise

General Atomics Aeronautical Systems Inc. (GA-ASI) announced its successful demonstration of Predator B's electronic attack capability at the US Marine Corp's (USMC's) Weapons and Tactics Instructor (WTI) course held at Marine Corp Air Station (MCAS) Yuma in Arizona.

"With this highly effective display of Predator B as a viable and capable EW platform, we are poised to provide even greater value as a multimission RPA solution for the Marines to address their EW requirements," said Frank W. Pace, President, Aircraft Systems Group, GA-ASI.

The purpose of the demonstration was to evaluate the viability of a RPA to conduct electronic warfare missions against enemy air defences in support of tactical strike aircraft. GA-ASI participated with a company-owned Predator B RPA equipped with a jamming pod containing a Northrop Grumman digital receiver/exciter and controlled by a GA-ASI ground control station (GCS). Predator B was fully integrated into the advanced command and control (C2) networks and electronic warfare (EW) architecture of the exercise, with over 20 aircraft participating. The Northrop Grumman payload proved to be effective and seamlessly integrated with the Predator B avionics, command and control architecture.

Future demonstrations will expand on the success and lessons learned from the use of Predator B to execute a multi-node approach against a more capable integrated air defence system (IADS) in concert with other unmanned aircraft systems and EA-6B Prowlers in future training exercises. The focus of future demonstrations will be on a more integrated and networked EW capability, expanding the C2 network to direct the aircraft's EW payload and other assets from the Cyber/Electronic Warfare Coordination Cell (C/EWCC) located at MCAS Yuma. "We are using multiple platforms in a networked approach to prosecute the IADS to protect our strikers as they hit their targets," stated Major Charles Dudik, HQMC Aviation EW Requirements Officer. "It is a non-traditional approach to this problem set, but we believe this is where the future is headed for EW."

A technologically advanced derivative of the combat-proven Predator, the multi-mission Predator B provides essential situational awareness for warfighters, excelling in combat missions focusing on intelligence, surveillance, and reconnaissance (ISR), precision strike on time-sensitive targets, close-air support (CAS), signals intelligence (SIGINT), forward air control (FAC), improvised explosive device (IED) detection, bomb damage assessment (BDA), and now airborne electronic attack. SP

Northrop Grumman's MQ-8B Fire Scout completes 5,000 flight hours in Afghanistan

The Northrop Grumman Corporation-built MQ-8B Fire Scout unmanned helicopter surpassed 5,000 flight hours while providing critical surveillance capabilities to field commanders in Afghanistan. Since deploying to Afghanistan in 2011, the MQ-8 Fire Scout system has provided real-time airborne surveillance and targeting supporting counter improvised explosive devices (IEDs), provided targeting support and delivered real-time video to military forces on the ground.

"Fire Scout's versatility makes it an ideal intelligence-gathering asset for military units on the front line, both on land and at sea," said Captain Patrick Smith, Program Manager, Naval Air Systems Command.

Combined with testing and Fire Scout's six at-sea deployments aboard Navy frigates, the system has eclipsed 10,000 flight hours supporting naval and ground commanders with critical intelligence-gathering capabilities to respond to threats. SP

Russia developing unmanned next-gen fighter

Russian designers are proceeding with development of an unmanned "sixth-generation" fighter jet, former Air Force chief Pyotr Deinekin has said. "The sixth-generation of aircraft will most likely be pilotless. Naturally, we are actively working on this," Deinekin said in an interview with RIA Novosti.

Russia is currently testing its prototype fifth-generation Sukhoi T-50 fighter, a manned aircraft that made its first public appearance two years ago. The US is introducing its F-35, and European powers such as the UK and France have their Typhoon and Rafale fighters in service. SP

PHOTOGRAPHS: GA-ASI, Northrop Grumman

Lashkar-e-Taiba's 'bomb expert' Syed Abdul Karim 'Tunda' arrested

In a major catch on the Indo-Nepal border, the Delhi Police recently arrested Syed Abdul Karim alias 'Tunda', a Lashkar-e-Taiba's (LeT) commander who masterminded a series of bombing in North India in 1996-98.

The Special Commissioner of Delhi Police Special Cell, S.N. Srivastava, informed that the 70-year-old LeT terrorist had planned to carry out a blast in Delhi ahead of Commonwealth Games in 2010. He could not succeed in his nefarious designs though, as his aides were arrested.

Tunda, an aide of fugitive don Dawood Ibrahim, is involved in around 40 bomb blast cases in Mumbai, Delhi, Uttar Pradesh, Haryana, Punjab, Hyderabad and Surat, added Srivastava. Tunda, who is wanted in 21 cases in Delhi alone, has been closely associated with Jamaat-ud-Dawa chief Hafiz Mohammad Saeed, who is wanted in India for the 26/11 Mumbai terror attack, Zaki-ur-Rehman Lakhvi, a top LeT commander and another accused in the 26/11 attacks, Adam Cheema, wanted in connection with the Mumbai blasts, Wadhawa Singh Babbar, who leads the Babbar Khalsa International, Ratandeep Singh, Karachi-based Indian Mujahideen absconders Abdul Aziz alias Bada Sajid and others, told the police.

The Special Cell of Delhi Police arrested Tunda on August 16 at around 3 p.m. in Uttarakhand's Banbasa area close to the Nepal border on the basis of an information received by central intelligence agencies, said Srivastava, adding a Pakistani passport issued on January 23, 2013, was found in the possession of the man, who is one of the India's most wanted.

Born in Chatta Lal Mian area behind Delite Cinema in Delhi's Daryaganj area in 1943, Tunda's family later shifted to Pilkhuwa (Ghaziabad, Uttar Pradesh).

Tunda, whose father worked as a metal worker, later worked as a carpenter, scrap dealer and merchant. Tunda lived in Pilkhuwa with his wife till 1992. He became a jihadi when he was 40-year-old. Tunda was allegedly indoctrinated by Pakistan's Inter-Services Intelligence in the 1980s. He had a role in ghastly communal riots in Bhiwandi (Maharashtra) in 1985.

An accused in 1993 Mumbai serial blasts, and 1997 and 1998 Delhi blasts besides others, Tunda escaped to Pakistan in 1998 to act as mentor for a younger generation of Lashkar operatives, financing and organising operations across India.

He was arrested in January 1994. But he escaped to Dhaka, Bangladesh, and taught making bombs to jihadi elements. He further travelled to Pakistan to train youth in LeT-organised camps. SP

Yasin Bhatkal arrested

In yet another major breakthrough for security agencies in India, Yasin Bhatkal, a key conspirator in several bomb blasts and co-founder of the banned Indian Mujahideen (IM), and another IM operative Asadullah Akhtar alias Haddi, were arrested from the India-Nepal border in Bihar's Raxaul town.

Yasin, originally named Mohammad Ahmed Zarar Siddibappa, is on India's list of 12 most wanted terror suspects. He is involved in Pune's German Bakery blast and blasts in Delhi, Hyderabad, Bengaluru and Mumbai.

He and Asadullah were arrested near Nahar Chowk in Raxaul, East Champaran district, about one km from the international border of Nepal. The Bihar Police detained him in Raxaul and the National Investigation Agency made the formal arrest.

Yasin was planning to carry out blasts during the upcoming festival season of Diwali and Dussehra and had come to India to scout for local support to execute his plan.

During his interrogation, Yasin is learnt to have "revealed a lot about Pakistan's role in several serial blasts in India. He has also provided information about the hideouts of other operatives in India and Kathmandu," an officer said. SP

India tightens security along Nepal border

In an attempt to secure its porous border with Nepal, India has created five new border posts and deployed additional troops along the frontier notorious for illegal crossing over of terrorists, criminals and smuggling of arms.

The proposal to increase border posts along the 1,751-km border with Nepal had been in the pipeline for some time. The Sashastra Seema Bal (SSB) has been mandated as the lead border guarding and intelligence gathering agency for this area.

With the creation of these posts, India now has a total of 455 border posts along the Nepal border.

The border posts have been equipped with surveillance gadgets and other equipment. SP

Technology to boost security

The Indian Government, in association with the private sector, is setting up a centre of excellence on internal security that will function as a "resource centre", do high-end research and develop cost-effective, state-of-the-art technology which can be integrated into the security apparatus to tackle problems like naxalism, urban terrorism and cyber attacks.

The centre, being set up at the Indian Institute of Technology-Bombay (IIT-B), would develop electronic equipment, which can be indigenously manufactured for use by security agencies like the police and paramilitary forces.

The idea for the centre is born out of the perspective and realisation that technology is an enabler. The current technology penetration level across different segments of internal security is very low when compared to developed economies. The lack of appropriate technology for surveillance and secure communications continues to plague the system. SP

Director General of ITBP

The Ministry of Home Affairs has announced that Dr Mahboob Alam, IPS, presently Additional DG, Indo-Tibetan Border Police (ITBP) will look after the duties of Director General, Indo-Tibetan Border Police (ITBP) with effect from September 1, 2013 and till an officer is appointed to the post of Director General, ITBP on regular basis, or until further orders. SP

Kamov and Sagem team up on Ka-52 Alligator attack helicopter

Sagem and Kamov (Russian Helicopters) have combined their complementary areas of technological and industrial expertise to develop an enhanced version of the Kamov-52 Alligator attack helicopter, which will address a requirement expressed by several countries.

Sagem and Kamov started working together in 2011, with the aim of offering upgrade solutions, including integration, for Kamov helicopters, in particular Sagem optronic equipment and LINS 100 inertial navigation systems. The two companies plan to start integration of a new optronic system in early 2014.

The companies' joint offering for helicopters will support Sagem's strategic objective of establishing long-term industrial partnerships with leading Russian companies.

In this cooperation Sagem will bring its experience gained from the Strix optronic sight system, which is already in production for the French-German Tiger combat helicopter. Providing full day/night capability, it has already contributed to the success of military operations by French armed forces in several theatres, including Operation Serval in Mali earlier this year.

LINS-100 is a laser gyro inertial navigation system, produced in Russia within the scope of the RS Alliance joint venture, created in Ramenskoye by ZAO-ITT of Russia and Sagem. SP

Raymond Duquette named President of CAE, USA

CAE has named Raymond Duquette as President and General Manager of CAE USA. In this position, Duquette will report to General Michael E. Ryan, United States Air Force (Retd) and Chairman of the Board of CAE USA. Duquette will be responsible for the general management and operation of CAE USA, which is part of CAE's military business segment and based in Tampa, Florida. Duquette succeeds John Lenyo, who served as President and General Manager of CAE USA for the past 12 years.

"Ray has an in-depth knowledge and understanding of the simulation and training market, as well as CAE's products, services and capabilities," said Gene Colabatistto, Group President, Military Products, Training and Services, CAE. "As a former US military officer and long-time veteran of the US defence industry, his strong customer relationships and deep understanding of the critically important US defence market will help CAE USA continue to grow."

Prior to being appointed President and General Manager of CAE USA, Duquette served as Vice President of Global Business Development and Sales for CAE Inc. and previously held the position of Vice President of Sales, Marketing and Business Development for CAE USA. His career in the simulation and training market segment began with Boeing Training Systems and Services, where he held positions of increasing responsibility prior to joining CAE in 2004. Duquette served as an active duty US Marine Corps officer and fighter pilot for ten years and remained active in the Marine Corps Reserves for an additional 19 years, retiring in 2008 at the rank of Colonel. SP

PHOTOGRAPHS: Russian Helicopters, CAE

Northrop Grumman Australia to acquire Qantas Group's defence services business

Northrop Grumman Australia Pty Limited, a subsidiary of Northrop Grumman Corporation, announced that it has signed a definitive agreement with Qantas Airways Limited to acquire Australia-based Qantas Defence Services Pty Limited. QDS provides integrated logistics, sustainment and modernisation support to the Australian Government and military customers. The acquisition is subject to various conditions and is expected to close in 2014. Terms of the transactions were not disclosed.

"QDS complements our current integrated logistics and modernization efforts and advances our international strategy. We expect QDS will provide an important platform for international growth in our key focus areas of unmanned, C4ISR, cyber, and logistics and modernisation," said Wes Bush, Northrop Grumman Chairman, Chief Executive Officer and President.

"Northrop Grumman's in-country revenue and footprint are significantly enhanced by the QDS acquisition, underscoring our commitment to the Australian and regional defence markets," said Ian Irving, Northrop Grumman Chief Executive for Australia. SP

Did Air India pilots allow actor Nitya Menon into cockpit?

Two Air India pilots have been suspended because they reportedly allowed an actor to join them in the cockpit for a part of the flight from Bengaluru to Hyderabad recently. An inquiry is going on, according to media reports. The pilots have been identified as Jagan M. Reddy and S. Kiran.

A passenger reportedly complained about the incident. However, a representative for the actor Nitya Menon, who has starred in Kannada and Telugu films said the report is untrue. The Directorate General of Civil Aviation (DGCA) is investigating the complaint which alleges that the actor was allowed to use a seat in the cockpit usually reserved for an observer or examiner. SP

Secret intelligence budget cited 4,000 NSA leaks: Report

US secret intelligence budget files provided by National Security Agency (NSA) whistleblower Edward Snowden show that NSA had warned in 2012 that it planned to investigate up to 4,000 reports of possible internal security breaches.

NSA's concerns about insider threats were aimed at "anomalous behavior" of agency employees with access to top secret data. The account cited NSA concerns about "trusted insiders who seek to exploit their authorised access to sensitive information to harm US interests."

The NSA concerns were outlined in top secret documents provided to the Senate and House intelligence committees in February 2012, well before Snowden emerged this summer as the sole source of massive new disclosures about the agency's surveillance operations. SP

13-year-old boy hitches ride in the wheel well of Arik Air flight

A 13-year-old Nigerian who is said to be crazy about American movies stowed away and hitched a free ride from the Benin Airport to the Murtala Mohammed International Airport, Lagos. Identified as Daniel Oikhena, he stowed in the wheel well of an Arik Air flight.

According to spokesperson of the airline, Banji Ola, who blamed the ugly development on the lapses at the airport, "The pilot of Arik Air flight W3 544, departing Benin Airport for Lagos at 9:00 a.m. on August 24, 2013, reported to the control tower the presence of a strange boy in the bush about 200-300 metres at the end of Runway 23. The control tower told the captain that they were sending security men to the place to arrest the boy. As the captain was making his final turn, preparatory for take-off, a cabin crew called his attention to the information by some of the passengers that they saw a boy running towards the airplane. The captain again reported to the control tower and was informed that the situation was under control and that he had been cleared for take-off."

Unknown to the passengers, the cabin and cockpit crew as well as airport security, the boy had made himself "comfortable" in the wheel well of the craft before it finally took to the sky. FAAN's spokesman, Yakubu Dati has said Arik Air was responsible for the breach by not conducting a check on the aircraft after the attention of the crew and ground staff was drawn to an abnormality on the tarmac. He added that the crew should have aborted the flight and return to the apron for check up. The regulatory body, the Nigeria Civil Aviation Authority (NCAA), has commenced full investigation into the matter. SP

Teenager hacks and goes around the world

Reece Scobie, a 19-year-old former employee at Thomson-affiliated travel agency Cambridge Business Travel, logged on to the company's system remotely for six months even after he had quit the company. A password security lapse made it simple for him to book flights around the world and live a jet-set lifestyle free of charge. Scobie booked business class fights to a number of locations including Dubai, Singapore, Auckland, Los Angeles, Vancouver and New York, with top-end hotels added to the bill as well.

He booked the packages under his own name using his own corporate passwords that hadn't been revoked even though he'd left the company. Scobie was also able to use the account of another person who worked for Cambridge Business Travel to book flights and this was in addition to various aliases he utilised.

The fraudulent activity was only uncovered at the end of the frenetic six month period when Scobie was on one of his freebie jaunts, this time to Los Angeles. He was eventually arrested earlier this year. SP

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