

Monday, November 6, 2017

The Official Show Daily

Military Deployed for Flood Relief Operations, Prime Minister

By MG Mahmud

BANGKOK: As Thailand's force modernisation plan is being implemented with its latest defence budget, the government has deployed its military for disaster relief duties with the onset of floods.

Prime Minister Gen Prayut Chan-o-cha has ordered the authorities to speed up relief operations at a dozen flooded areas in the central region, and to prepare for rainstorms in the southern region during Oct

31-Nov 3, 2017. At the same time, deputy prime minister for security affairs and defence minister Gen Prawit Wongsuwon has directed military commanders to help citizens affected by flooding as the rehabilitation effort takes place once waters subside.

Defence ministry spokesman Lt Gen Kongcheep Tantrawanich said Gen Prawit Wongsuwon has instructed the commanders of the nation's armed forces to work together in reaching out to citizens impacted by flooding, especially as the north, north-



PM Gen Prayut Chan-o-cha

east and central regions continue to contend with downpours and flooding deluges.

The deputy prime minister told military commanders to monitor and assess flood-

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The Bangkok Show Returns in Full Force

by ADJ Team

BANGKOK: Thailand's defence show, already recognised as one of Asia's largest key tri-service military and security event, is now regarded by the industry as a huge success. The latest iteration of the Defense & Security exhibition opens here today as major industry players return to the kingdom's capital city to woo Thailand and countries in the region with their latest wares. Dubbed as the Bangkok defence

show, the defence and security fair for land, sea and air will be held over from Nov 6-9 at the IMPACT exhibition and convention centre, with manufacturers showcasing their state-of-the art equipment, systems and weaponry to meet the requirements of the military and law enforcement agencies.

The show is now recognised as one of the world's most important tri-service and security exhibitions. The 2017 iteration of the exposition is some 30% bigger than the previous edition.

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NIMR Targets ASEAN, First International Deal Bagged

By Mohamed Ghazemy

BANGKOK: NIMR Automotive is bullish on winning and supporting Southeast Asian armoured vehicle programmes right on the heels of its first sale of combat proven vehicles outside the Middle East and North African (MENA) region.

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FORCE BEHIND THE FORCES



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Latest Equipment from Industry's Finest

The latest cutting-edge technology from more than 400 world-leading military and security manufacturers from 50 countries are on display. Top names include Lockheed Martin, Nexter, Leonardo, Beretta, Thales, Aselsan, ST Kinetics, Rafael, IMI, Ukspecexport, FN Herstal, Arsenal 2000, Norinco, MBDA, Diehl, Trijicon, FNSS, Yugoimport, Saab, Rheinmetall and many others. The show features 25 national pavilions from a record breaking number of countries including Belarus, China, Czech Republic, France, Germany, India, Indonesia, Israel, Italy, Japan, Malaysia, Pakistan, Russia, Singapore, South Africa, South Korea, Serbia, Sweden, Switzerland, Turkey, Ukraine, UK, US and Thailand.

Weapons systems, missiles, tanks, guided weapons, vehicles, marine vessels, satellites, telecom and electronic defence equipment are the highlights of the show. Fire control systems and launchers covering all tri-services are also on display. Internal security technology and related hardware are also making an impactful presence, with security installers and manufacturers of security products showcasing guns, bulletproof vests, body armour, jammers, CCTV, intruder alarms, access control, electronic security devices and more.

Visitors will also get the chance to get immersed in simulated scenarios through live demonstrations that will be taking place throughout the event. Among the highlights include the cyber defence virtual reality experience, showcasing the full range of existing cybersecurity systems and solutions taking place at the centre of the Israeli pavilion.

Networking Platform, Technical Seminars and Presentations

The Bangkok show this year is set to convene more than 30 groups of official delegations led by Ministers of Defence, Chiefs of Armed Forces, Chiefs of Army, Chiefs of Navy, and Chiefs of Air Force from around the world including the ASEAN nations. The list includes high-ranking government officials who will be attending via VIP tours of the exhibition. This will provide trade visitors the opportunity to talk with industry stakeholders through Government-to-Government (G2G) network meetings between senior government officials, delegations, and high-ranking military officers.

There will also be a variety of interesting technical presentations that include topics such as Next Generation Armour Technology, Cyber Security, System of Systems for Increased Operational Effect and Cost

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Published daily at **Defense & Security 2017** by **SHP Media Sdn Bhd** which is solely responsible for its editorial contents. Copyright by **SHP Media Sdn Bhd**, publisher of **Asian Defence Journal**, 1203, 12th Floor, Block E, Phileo Damansara 1, No 9, Jalan 16/11, Petaling Jaya, MALAYSIA.

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REMOTE CONTROLLED WEAPON SYSTEMS



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ASELSAN is a Turkish Armed Forces Foundation company.

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Efficiency, Ground-Based Air Defence with IRIS-T, Defence Industry Cooperation and Networking between Korea and Thailand, among others. Visitors will also have an insight on doing business in Czech Republic, as there will be a Czech Defence Industrial Day organised during the show.

A seminar on "Military Readiness for HADR Operations" will be delivered by global experts in the field. In addition, there will also be a special keynote speech on "The Improvement of Humanitarian Assistance and Disaster Relief Mechanisms in Asia and the Pacific" which will be delivered by a representative from UN Office of the Coordination of Humanitarian Affairs.

Flourishing Regional Economy

Currently, ASEAN member countries are fully embarked on military modernisation, making it one of the fastest growing regions for military spending in the world. Thailand is fast following the footsteps of its regional brethren, with its economy growing at a fast pace in more than four years. In fact, the kingdom has made a remarkable progress in social and economic development, moving forward to become an upper-income country in less than a generation. Citing the World Bank's report at their website in recent September, Thailand has been one of the widely cited development success stories, with sustained strong growth. Economic growth is projected to reach 3.5% in 2017 and expand further to 3.6% in 2018.

With the economy going towards an upward trajectory, the Royal Thai Armed Forces will, without doubt, benefit. Earlier this year, the government has announced an initiative called Thailand's Armed Forces Modernisation Plan: Vision 2026. This initiative has a three-pronged approach: to improve the preparation of the Thai military; to enhance capabilities, and to modernise related structures. On September 8 last year, the government approved a nearly \$124 million budget hike for defence spending. The army, navy and air force will receive a 2% raise taking the 2017 defence spending to nearly \$6.1 billion, according to

Thai Defence Modernisation

The Royal Thai Air Force won the Cabinet's approval to go ahead with its THB3.2 billion (\$96 million) upgrade and modernisation of its fleet of 14 F-5 Tiger fighter aircraft. Under the programme, four out of the 14 aircraft will receive full upgrades, while 10 will undergo modernisation work focused on replacing the aircraft's radar system.

The government has also given the nod for the procurement of Korean Aerospace Industries T-50 trainers. Eight aircraft are planned to be purchased under the \$258 million deal. The Thai government is diversifying the origins of the assets to be purchased, and not only concentrating to buy from any particular country. Hence, Defense & Security provides just the perfect platform for global defence companies to showcase the capabilities of their equipment, not just to the Thai military, but to the ASEAN defence forces as well. More assets are on the way as the Thai government said that the US planned to sell four Black Hawk helicopters to Thailand.

In April, the government approved the first of three planned submarine purchase from China worth \$393 million. The budget for the Yuan-class S26T submarine has been earmarked over a six-year period. The purchase of the submarines shows Thailand's commitment in safeguarding maritime security in the region, although the country is not a claimant to any sea disputes. As for land defence, the Thai military also gets the nod for the purchase of 10 military tanks from China to replace ageing US-made M41 tanks. The purchase is estimated to worth \$58 million. The new vehicles will add to the 28 VT-4 tanks bought from China last year, with an aim to acquire up to 49 tanks in total.

the budget endorsed by the National Legislative Assembly. The extra money will be used to increase overall defence spending which is required for Thailand's military to increase competitiveness and enhance modernisation of the country's Royal Thai Armed Forces. This is in line with the Modernisation Plan that will see more procurement of military assets across all the three services.

Power of Partnership

This year's iteration of Defense & Security focuses on international cooperation between nations. The show provides a credible networking platform for the stakeholders to establish contacts and professional business networks. Under the theme of the Power of Partnership, the Bangkok show provides an excellent opportunity for the stakeholders to build relationships, to increase their footprint in the region and beyond. With full support from the Thai Ministry of Defence, the Royal Thai Armed Forces and the police, the Bangkok Show is set to become another record breaker, with regional armed forces actively looking



M. Gandhi

to enhance their capabilities. Held at the well planned IMPACT exhibition and convention centre, Defense & Security 2017 is organised by GML Exhibition, under the able leadership of its Managing Director, M. Gandhi, who had seen through the growth of the specialised trade fair since its inception in the early 2000s. ●





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continued from page 1...Military Deployed for Flood..

ing and to work with local administrative offices to coordinate personnel and equipment support, asking that they take an active role in alleviating the situation. Military units are to strengthen flood barriers and enhance drainage where possible and to hand out food and relief items to remote communities. Medical as well as rehabilitative services are also to be provided to the public.

Where floods have begun to subside, Gen Prawit asked that the armed forces conduct damage assessments and offer assistance to residents.

Royal Thai Army Units Deployed

Thailand's National Council for Peace and Order (NCPO) Spokesman, Col Winthai Suvaree, Oct 29 said Thailand has been affected by many tropical storms and depressions this year. The total accumulated rainfall to date is 1,798 millimetres, which is close to 2011 when the country was hit by severe flooding.

The spokesman added that the government has effectively managed the flooding before and during the rainy season with consideration to the effects on the public. While there is still flooding in some areas, the government has a plan to rehabilitate them, Col Winthai said. According to the spokesman, Prime Minis-



Gen Prawit Wongsuwon

ter Prayut, has instructed relevant units to assist the flood-affected people efficiently. The disaster prevention and mitigation centre of the Royal Thai Army has sent 31 companies to help people in the flood-affected areas in 22 provinces in the central, northern and northeastern regions, according to the National News Bureau of Thailand.

Ten Year Modernisation Plan Gets Green Light

The Defence Council early this year had approved a 10-year modernisation plan for the armed forces, designed to boost their ability to deal with

any potential threats facing the country. The "Modernisation Plan: Vision 2026" was given the nod at council meeting in late February that was chaired by DPM Prawit, according to defence ministry spokesman Lt Gen Kongcheep. The blueprint, produced along with the military reform policy, he said, looks to improve the armed forces' readiness and armament capability to fend off threats to the country over the next 10 years.

Lt Gen Kongcheep said the plan took into consideration security factors and weapons needed by the armed forces to match risk assessments.

It has been drawn up in conjunction with other major master plans, including the national strategic defence plan spanning the next 20 years. It was reported that this plan looks at revamping the Defence Ministry's management and organisational structure as well as industries related to national defence.

Lt Gen Kongcheep said the modernisation policy over the next 10 years prescribes how the forces can manage to operate during two scenarios—in case military spending increases in tandem with the country's growing gross domestic product, or in case of a tight budget. The military has a clear idea on how it can operate to the highest ability with a limited amount of funding, he said.

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Jadara Showcases Nashshab RPG

Jordanian Company Jadara Equipment & Defence Systems, one of the leading manufacturers of portable, short-range weapon system introduced the RPG-32 Nashshab with unique specification and high precision. The weapon has the ability to defeat modern heavy-armoured tanks and soft-skinned vehicles, as well as fortifications and bunkers. The RPG-32 Nashshab is already in service of the Jordanian Armed Forces and several other international armed forces.

On May 30, 2013, His Majesty King Abdullah II inaugurated the production facility of RPG-32 Nashshab alongside CEO of State Corporation Rostec Sergey Chemezov.

Production facilities of the plant are meant for the release of 60,000 rounds for

grenade launchers RPG-32 Nashshab per year. Component parts for the assembly of rounds are delivered from Russia.

Jadara has also designed, and now manufactures a multipurpose remote-controlled system, QUAD based on the RPG-32 Nashshab. This product is available in two

versions—on ground and on vehicle.

An RPG-32 day/night sight factory was established to provide customers with full package and maximum technical support. Recently, a research and development centre was established to modernise current products and develop new products. ●



THE SKIES AND BEYOND



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DSM Dyneema: Safe Guarding You

For Ballistic Protection

Since its introduction, Dyneema Force Multiplier Technology has garnered many achievements, including being used in many prestigious, high-profile soft and hard armour systems and winning multiple awards for innovation.

An increasing number of top armour manufacturers globally including those in the Asia-Pacific region are using Dyneema Force Multiplier Technology in vests, inserts, helmets and extremity protection, and in hard armour for helicopters, patrol boats and land vehicles.

Some of the high profile programmes include the Generation II Soldier Plate Carrier System by the US Army, as well as for law enforcement agencies such as the New York Police Dept and Los Angeles Police Dept, plus various elite European law enforcement units.

In body armour, Dyneema Force Multiplier Technology can reduce the weight by up to 30% without sacrificing ballistic protection, while enhancing comfort and agility with fewer layers of material and increased flexibility. A ballistic protection insert panel made with Dyneema Force Multiplier Technology meets the NIJ 0101.04 Level 3+ standard at a weight of less than 1kg. It is the lightest and thinnest product in the market today that can stop multi-hit shots from an AK47 (7.62x39mm MSC ammunition) without the need for a strike face which increases weight.

In helmets, Dyneema Force Multiplier Technology enables designs protecting against 9mm FMJ handgun ammunition and fragments to weigh as light as about 1kg.

For Multi-threat Protection

Dyneema Anti Stab Technology is the latest patented anti-stab material for soft armour applications that answers the industry's need for innovative advancement in stab protection.

A vest manufactured with Dyneema Anti Stab Technology provides outstanding protection against knives, blades and other sharp weapons in accordance to international standards like the UK HOSDB Body Armour Standard and NIJ Standard 0115.00. It is up to 25% lighter and thinner than current market solutions made with aramid without sacrificing protection, and its flexibility provides greater comfort and mobility to the wearer.

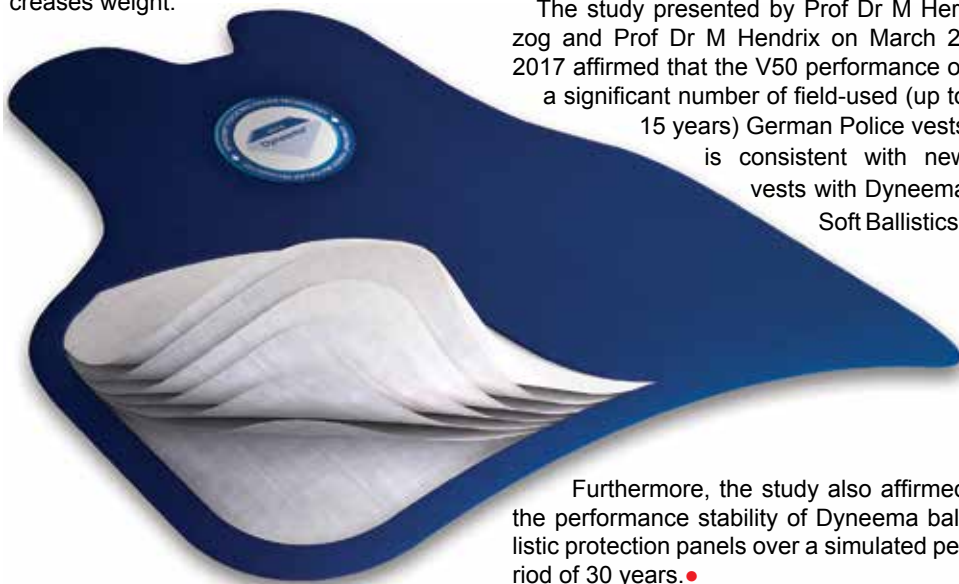
In addition, Dyneema Anti Stab Technology can be combined with Dyneema Soft Ballistic products to develop the next generation of high performance, light weight multi-threat protective gear that meets the specific needs of law enforcement officers who face hostile confrontations, as well as military personnel engaged in urban operations.

Stability and Reliability of Dyneema's Body Armour

A recent study on the long-term ballistic protection performance of Dyneema Soft Ballistic products being used in bullet-resistant vests was conducted by the German Wildau Technical University.

The study presented by Prof Dr M Herzog and Prof Dr M Hendrix on March 2, 2017 affirmed that the V50 performance of a significant number of field-used (up to 15 years) German Police vests is consistent with new vests with Dyneema Soft Ballistics.

Furthermore, the study also affirmed the performance stability of Dyneema ballistic protection panels over a simulated period of 30 years. ●



The Asia-Pacific region has seen an upward and progressive pace in defence spending over the years, with many countries focusing on upgrading to newer technologies, defence modernisation and equipping their armed forces. As a result, domestic and regional defence industries are also seeing a growth in size and sophistication.

In line with increasing global armouring trends and soldier modernisation programmes, specific requirements for body armour are also increasing in the Asia-Pacific region. These include higher protection performance and additional body area protection at a lighter weight, as well as protecting against a wider range of threats. In addition, quality, reliability and durability are also key requirements for qualification.

Hence, DSM Dyneema continues to be at the forefront of ballistic protection materials innovation with their ever-expanding portfolio of innovative Dyneema next-generation armour technologies and solutions. DSM Dyneema remains highly committed to bringing new technological dimensions aimed at enabling defence and law enforcement personnel to be better protected while enhancing operational capabilities for any situation on the front line.

According to the company, materials innovation is the first and crucial step in enabling the industry to develop next-generation armour that addresses the evolving industry trends and increasing needs in a changing world.

A tan-colored M113 FoV tank is shown from a side profile, parked on a grassy field. The tank features a turret with a main gun and various sensors. The background consists of tall, thin trees under a clear blue sky.

FNSS

M113 FoV
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ANKA UAS—A Multi-Role ISTAR System

ANKA is a multi-role ISTAR (intelligence, surveillance, target acquisition, and reconnaissance) unmanned aerial system that is capable of operating day and night and in adverse weather conditions. The system has 200kg payload capacity and 24-hour endurance and can fly at altitudes up to 30,000ft. The aircraft is a fully autonomous system and has 80-85 IAS Cruise Speed. It has an ATOL (Automatic Takeoff and Landing System) with GPS and radar based on fully independent sensors.

Features

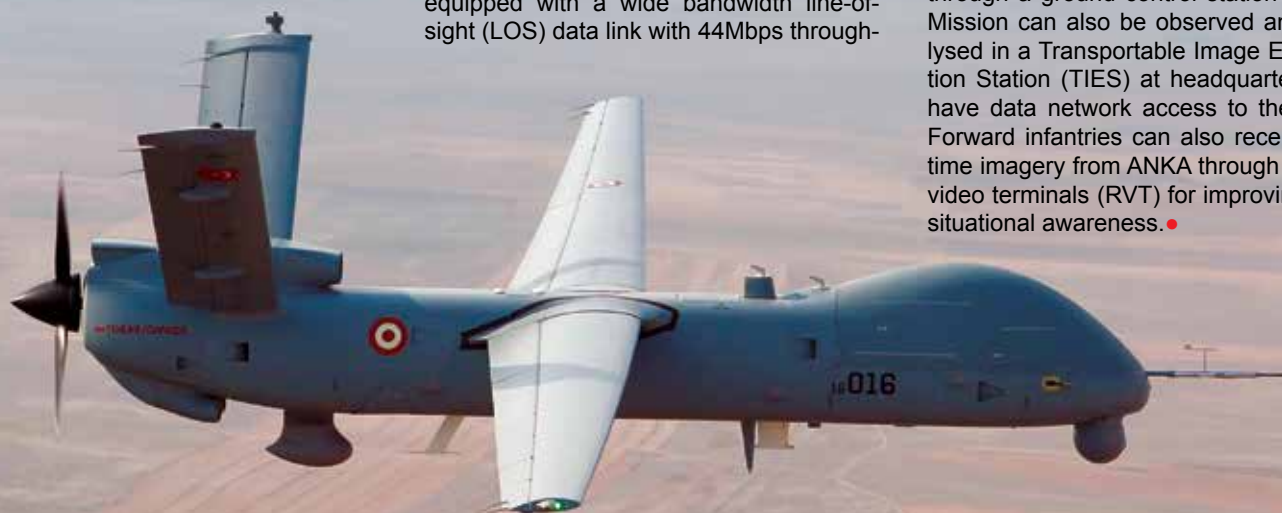
The air vehicle takes-off and lands on runway on its conventional tricycle retractable gear. The whole composite airframe is composed of a mono-block fuselage, detachable wing, V-Tail, retractable landing gear, dual redundant flight con-

trol sensors and surfaces, qualified avionic equipment, and service doors. The system is powered by a pusher type heavy fuel diesel engine. It can carry EO/IR HD optical/thermal/laser multi-sensor system and synthetic aperture radar (SAR) payloads simultaneously. The EO/IR payload is capable of detecting, identifying, tracking and laser pointing the targets at long distances. The SAR payload provides high-resolution imagery even through clouds at standoff range up to 37km, and supports both maritime and land surveillance.

Telecommunication Capabilities

ANKA UAS has radio relay capability and optional payloads such as ESM/ELINT and COMINT systems for SIGINT missions and wide-area surveillance system (WASS) for improved larger area surveillance and reconnaissance missions. The aircraft is equipped with a wide bandwidth line-of-sight (LOS) data link with 44Mbps through-

put. This link capacity can accommodate payload, pilot cameras and telemetry/telecommand throughput needs up to 200km away from ground data terminal (GDT). Through hand-over feature operations can be conducted over areas outside of LOS range. The data link system is fully redundant and works within different frequencies. It has encrypted communication capability. The system has beyond LOS (SATCOM capability) option as well. It is possible to download HD video via satellite. ANKA has also ATC transponder and UHF/VHF radio on board for Air Traffic Communication. All airborne and ground-based flight control software are developed by the TAI (Turkish Aerospace Industries) design team while payload hardware and their software items are aimed to be developed by national partners. ANKA Air Vehicle is controlled through a ground control station (GCS). Mission can also be observed and analysed in a Transportable Image Exploitation Station (TIES) at headquarters that have data network access to the GCS. Forward infantry can also receive real time imagery from ANKA through remote video terminals (RVT) for improving their situational awareness. ●



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The 2017 defence budget, which comes into effect in October and runs up till September 2017, amounted to 210.7 billion Thai baht (\$6.1 billion). The figure is a modest increase of 220 million Thai baht (\$6.6 million) over the 2016 defence budget, or about 2%.

Analysts said this amount is about 7% of the total government expenditure and around 1.5% of the country's GDP. What is more notable about the 2017 defence budget is the fact that it constitutes the lowest level of increase since the coup in May 2014. The 2% increase in the 2017 defence budget constitutes a decline rela-

tive to the numbers seen in 2015 (5%) and 2016 (7%). It is also slightly lower than the 214 billion Thai baht (\$6.45 billion) figure that the defence ministry had requested earlier this year. Thailand, Southeast Asia's second-largest economy, recorded a second-quarter growth figure of 3.5% which is better than estimated. ●

PBS Velka Bites– A Leader in Aerospace Know-How



PBS Turboprop Engine TP100.

PBS Velka Bites (PBS) has been a leading manufacturer of aerospace technology for 50 years. The unique ability of PBS to carry out in-house design and development, manufacturing and testing of small jet engines, APUs and environmental control systems in accordance with global aerospace standards has greatly contributed to its enduring success in the global market. Certification is a key competitive advantage of PBS. The company is approved by the European Aviation Safety Agency (EASA) and has received the DOA, POA and MOA status. A quality and environmental management system that complies with ISO 9001, AS 9100 and ISO 14 001 manages its modern manufacturing processes.

Turbojet Engines

PBS turbojet engines are designed mainly for missiles, target drones, UAVs, powered gliders and micro jets. They offer an excellent power-to-weight ratio, compact design, reliable operation, low fuel consumption, and starting at high altitudes and at high speeds.

Turboprop and Turboshaft Engines

PBS TP100 turboprop and TS100 turboshaft engines are designed for small aircraft, UAVs and small helicopters. They develop

180kW of output and weigh 62kg. They are able to achieve flight levels of 9,000m with a maximum starting height of 6,000m.

Auxiliary Power Units

PBS Auxiliary Power Units (APU) are used all around the world in both defence and civil aircraft and helicopters. The APUs have an output of up to 100kW. They work as air generators for starting systems and as emergency power and hydraulic sources.

Environmental Control Systems

The systems are designed to maintain a comfortable thermal environment in the cockpit, passenger cabin and cargo holds of aircraft and helicopters during ground operations and all flight modes. ●



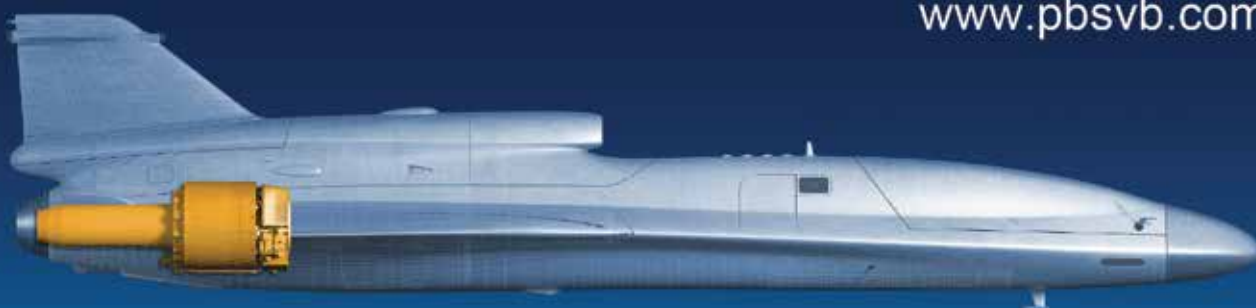
PBS Turbojet Engine TJ100.

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TJ100

1,300 N
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Ø 272 mm



TJ80

900 N
10.5 kg
Ø 235 mm



TJ40

395 N
3.3 kg
Ø 147 mm



FNSS Accelerates M113 Modernisation



As an OEM-licensed company responsible for upgrading the M113 Family of Vehicles (FoV) throughout their life cycle, FNSS is carrying out an integrated modernisation solution for M113 for current and future requirements.

FNSS' sustainability solution meets the needs of all the M113 FoV for mobility upgrades, together with specific mission modules required by any variant to meet its mission. The M113A4 by FNSS includes a range of improved survivability levels against a range of threats from mines and

ballistic threats, based on recent lessons learned from, and evolving conventional and unconventional threats. Therefore, M113 variants will be based on a common mobility platform providing significant savings in logistics such as spare parts inventories and a common maintenance policy. The M113A4 & ACV configuration is based on common subsystems which are in service with the land forces of Turkey, Middle East and South-East Asia regions.

Improving the M113

The M113A4 is NATO-certified, which is qualified by the original manufacturer. This configuration significantly improves ease of operation, safety, reliability, performance and durability over the M113A1, A2, ACV, YPR and AIFV vehicles.

M113A4 delivers significant improvements on mobility and survivability compared to older M113 FoV, consisting of modern diesel engine and automatic transmission. Reliability and durability have been greatly improved with the installation of the FNSS-developed ACV power pack providing 350hp engine coupled to a X200 automatic transmission.

The solution closely matches the ACV vehicles that have been tested several times



between -20 to +60°C weather conditions and all terrains. In addition, the M113A4 has undergone a full desert mobility testing and which was successfully completed, covering over 2,000 miles.

This improvement in reliability and durability ensures that during operational deployment, there is a minimum of downtime for the vehicles, thus, releasing valuable maintenance personnel for other tasks. This also guarantees maximum time for operational deployment by the user.

This next-generation modernised M113A4 FoV provides the user a reliable simple-to-operate vehicle with an operational service life more of more than 20 years.

There are nearly 80,000 M113 and ACV worldwide. These vehicles are continuously used in various operations, and FNSS' survivability upgrade offers the most advanced protection solution with a range of options for improved firepower.

The main features of the modernisation solution offered by FNSS are as follows:

► **Survivability:** Priority is given to the enhancement of mine and ballistic protection levels, mine resistant seats, protection lining (spall liner) applications, dual-stage automatic fire extinguishing and suppression systems, an NBC System with new indigenously produced filters, air conditioning for the crew, and the RPG protection net.

► **Situational Awareness:** Close range situational awareness system, acoustic gunshot detection system and laser warning system.

► **Firepower:** Remote-Controlled Weapon System (RCWS) with integrated acoustic gunshot detection system. FNSS also offers solutions for a range of medium calibre weapon system from 25mm to 30mm with manned or unmanned turrets. The Saber 25mm manned turret is in service in both Southeast Asia and Gulf countries. The

platform has proven itself to be the most cost-effective IFV support weapon.

► **Mobility:** Improvement of drive systems and power pack ensuring high power-to-weight, delivering mobility performance in all terrains and environments.

FNSS CEO, K Nail Kurt, highlights the company's modernisation capabilities as follows: "FNSS is one the world's most experienced companies in the modernisation of M113 and ACV class vehicles. For a long time, we have been operating a state-owned facility in a Gulf country, upgrading and moderating M113A1/A2 to M113A4. The M113A4 closely matches the US Army's latest M113-A3. Among the M113s around the world, these FNSS vehicles stand out as the most modern and highest performing light-tracked combat vehicles."

The FNSS M113A4 solution fully meets the requirements for a modern reliable M113 FoV into the 21st century. ●



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 6 Nov 2017, 14:00hrs
 Topic: Dyneema®/ Next Generation Armor Technology
 Amber Room 3 at IMPACT Exhibition Center

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ASELSAN Remote Controlled Weapon Systems

As of today, ASELSAN products and systems have been exported to almost 50 countries throughout the world including EU and NATO member countries. ASELSAN Remote Controlled Weapon Systems (RCWS) are currently in the inventory of 13 countries worldwide including Malaysia and Philippines.

ASELSAN's weapon system is a remotely controlled and stabilised pedestal with independent electro optic suite consisting of thermal camera, day TV camera and laser range finder. The system has automatic target detection/tracking capabilities as well as night operation under harsh weather and terrain conditions. The main function of the system is better locating and tracking (automatic when desired) the target as well as maximising the hit accuracy while providing maximum security for the gunner.

The system has tracking and firing ability with a very high hit accuracy. It can be fed via two separate ammunition lines selected by the operator, using the remote operating panel. As opposed to fixed sight systems, High Accuracy Stabilised Gimbal (HASG), which can rotate in elevation and azimuth axes relative to turret, is integrated to the system. HASG ensures effective firing at long distances by enabling electro-optic units stay on the target at all times, even during the firing where ballistic correction is applied to the gun. Furthermore, surveillance without aiming gun to the target and video tracking are possible with HASG integration. Dual feed automatic cannon installed on the system is capable of firing 200 rounds per minute.



30mm stabilised naval gun system (SMASH).



Stabilised advanced remote weapon platform-7.62mm/12.7mm/40mm AGL interchangeable (SARP and SARP-DUAL).



30mm Stabilised Naval Gun System (SMASH)

Due to the stabilisation feature, the system can perform precise firings against stationary or moving targets while the platform is on-the-move. This shoot-on-the-move capability is very important for crew survivability, especially when faced with multiple armed adversaries shooting from different directions.

In order to ensure security of the home platform, the profile of the system is specifically designed for minimising radar cross-section for naval applications while firing zone restrictions both in azimuth and elevation can be introduced according to the platform structure in concern.

The system can be automatically slewed onto targets assigned by a command control system. Its advanced fire control computer incorporating sophisticated algorithms maximises the hit probability of the system.

Proven capability of the system demonstrates that, with the help of stabilisation feature, remote control ability and integrated electro-optic sensors, the firing accuracy is dramatically improved, compared to the manual use of the same weapons, against stationary or moving targets while the platform is on the move even in adverse environmental conditions.

The RCWS Family

ASELSAN Remote Controlled Weapon Systems family vary from 7.6mm machine gun to 40mm Grenade Launcher and can be integrated on any type of naval or land platform according to the usage concept.



STAMP (12.7mm Stabilised Machine Gun Platform), STAMP-G (Stabilised Machine Gun Platform-12.7mm Gatling Gun), STOP (25mm Remote Controlled Stabilised Naval Gun System), SMASH (30mm Stabilised Naval Gun System), SARP (Stabilised Advanced Remote Weapon Platform-7.62mm/12.7mm/40mm AGL interchangeable), SARP-M134 and NEFER (25/30mm Unmanned Turret) are other indigenous products designed and developed by ASELSAN.●

12,7mm stabilised machine gun platform (STAMP).

POF: The Force Behind the Forces

Pakistan Ordnance Factories (POF), Pakistan's largest and flagship defence industrial complex, is situated at Wah Cantonment, about 40km from Islamabad, near the historical city of Taxila. During World War II, Britain established 16 arms manufacturing factories in the subcontinent to fulfil its needs for eastern war front. All those factories were situated in areas, that became part of India after independence, and there was no defence industry in Pakistan at that time.

The government of Pakistan realised the importance of security needs and Khawaja Nazimuddin, the second Prime Minister of Pakistan laid the foundation of Pakistan Ordnance Factories on Dec 28, 1951.

Arms for Pakistan's Defence

By the end of the 50's, POF was producing arms and ammunition on very limited scale. It however, progressed very well and in the present day, has become a gigantic defence organisation running 26 industries and employing as many as 26,000 employees. Fourteen of these units are solely for the purpose of focusing on hardcore defence products while 12 units are working as subsidiaries.

The vision that runs through the creation of POF is provision of arms and ammunition to Pakistan's defence forces in war and peace times. Running the organisation on commercial lines is also part of its vision.

Products of Exceptional Quality

POF boasts a wide range of products, which includes automatic rifle, light, medium and heavy machine gun, anti-aircraft weapons, aircraft bombs, shoulder fire rocket, multi-barrel rockets and hand grenades, various types of fuses, packing material and plastic products. In addition, different types

of commercial explosives, dynamites and detonators, among others, are also included in its product range. POF upholds stringent quality benchmarks, which is the hallmark of all its products. All POF production units and their subsidiaries hold ISO 9001 and 2000, ISO 14001 Health and Environmental Standards, ISO 17025 Standards and OHSAS-18001 Lab Safety Standards certifications.

Exports

POF is utilising its additional production capability to export its products to over 40 countries around the globe. This not only yields precious foreign exchange but also makes significant contribution to national economy. In addition to this, POF is a regular participant in defence exhibitions all over the world, which is being instrumental in increasing the exports of its products.

Future Targets

Today as the global defence industry becomes more and more competitive, POF is also modernising its products by employing skilled workforce and the latest technology. The current management of POF is not only aware of the changing global trends, but it is also taking practical steps to ensure the organisation remains up to date at the same. In this respect, POF is following a policy of self-reliance to be able to embrace the modern trends of the 21st century to continue the production of quality arms and ammunitions. •



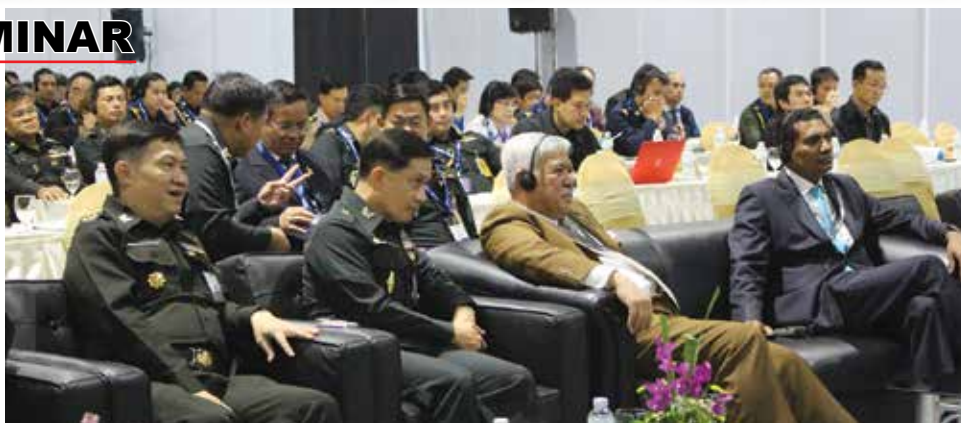
INTERNATIONAL SEMINAR

Date: **November 7, 2017**

Time: **13.00-16.45hrs**

Location: **AMBER Room 2**

The highlighted international seminar on 'Military Readiness for HADR Operations' will be featured in the form of panel discussion delivered by global experienced experts in the field. In addition, there is also special keynote speech on "The Improvement of Humanitarian Assistance and Disaster Relief Mechanisms in Asia and the Pacific" which will be delivered by representative from UNOCHA ROAP. The seminar primarily aims to share experiences and challenges arising HADR Operations in disaster Asia Pacific regions, outline the logistics support and sustain communication during emer-



gency response phase and critical time and initiate and stimulate the industry to develop and manufacture equipment needed for HADR operations especially on self-sufficient of any national assisting HADR team.

Remarks: Free admission

Pre-registration is required at www.asiandefense.com.

The official language is English and Thai with simultaneous Interpretation.

continued from page 1...NIRM Wins....

"2018 will see NIRM focus heavily on the Southeast Asian market with partnerships and collaborations signed with leading companies," CEO of NIRM Dr Fahad Saif Harhara Al Yafei said. The company plans to build on the already strong reputation and further expand its reach as the region overhaul and modernise its armoured vehicle fleets, he added.

The subsidiary of the UAE's Emirates Defence Industries Company (EDIC), announced its first international contract to export its vehicles outside of the MENA region through an agreement with the Ministry of Defence and Armed Forces of Turkmenistan. The announcement was made just ahead of Defense & Security 2017 exhibition which begins here today.

NIRM is exhibiting a range of its leading vehicles, developed to address the threat landscape of central and Southeast Asia, a company statement said.

The agreement, which covers an initial order of NIRM's leading Special Forces platform, the AJBAN Long-range Special Operations Vehicles (LRSOV), is testament to the company's growing international footprint.

Strengthening Partnership

Speaking on the importance of the announcement, NIRM's CEO Dr Fahad Saif Harhara Al Yafei said, "Our contract with Turkmenistan represents an important milestone for our company as it validates the quality and competitiveness of our vehicles in the global marketplace. Furthermore, it illustrates the close and enduring relationship between the UAE and Turkmenistan."

The agreement follows the steady growth of NIRM's relationship with the Ministry of Defense and Armed Forces of Turkmenistan. Previously, eight NIRM Ajban 440A vehicles, provided to Turkmenistan through a government-to-government arrangement, underwent extensive trials before being operationally deployed in a border security role.

More Ajban to Follow

Receiving high marks for quality, durability and mobility against the rough terrain of Turkmenistan's border region, the Ministry of Defence decided to advance its relationship with NIRM to a formal status, requesting an undisclosed number of AJBAN LRSOVs in bespoke configurations. The vehicles are designed for long-range reconnaissance missions, and are helicopter transportable, capable of accessing all terrains and customisable to accommodate a range of specific equipment.

The vehicles were formally delivered in October where they were featured at the Turkmenistan Independence Day Parade. NIRM is the leading manufacturer of light and medium-weight wheeled military vehicles in the Middle East and North Africa region, based in Abu Dhabi, the United Arab Emirates. ●



DSME Naval Ships for Asia

Daewoo Shipbuilding & Marine Engineering (DSME) has made a remarkable impact in the global market since its foundation in 1973. Since its entry into the naval ship market, DSME has designed and built a wide range of advanced naval ships such as submarines, destroyers and frigates for the Republic of Korea Navy. DSME is successfully expanding its business area over the world with the services ranging from design, construction, ILS, crew training and local construction with technology transfer.

DSME's excellence in naval shipbuilding lies in its superior technology and excellent quality stemming from its pool of highly skilled workforce. Besides its over 3,000 qualified design engineers, DSME also operates a separate research institute with 1,000 top-level researchers. This has been DSME's main driving force behind its recent winnings of many highly competitive international contracts.



Royal Thai Navy Frigate Project

The Royal Thai Navy (RTN) signed a contract with DSME to procure the first 3,650-tonne *DW3000F* multi-purpose frigate. *DW3000F* was highly praised by the RTN for proposing customised high-end specifications that were exactly in line with the navy's demand. *DW3000F* design provides a platform for securing the best performance of armament and combat system. Its hull form gives enhanced seaworthiness, efficient powering performance and RCS reduction feature. The design of the ship's propulsion, steering and electrical systems takes into account high reliability, redundancy and maintainability. DSME held the successful launching ceremony of the vessel on Jan 23, 2017 at the company's shipyard in Geoje Island, South Korea.

Fiocchi for Defence & Security

Fiocchi was established in Lecco by Giulio Fiocchi in 1876, and counts over 650

employees today. It is renowned worldwide for its responsibility, reliability, high performance and commitment.

The wide range of small calibre armaments is appreciated for hunting, clay targets, law enforcement and defence, as well as in particular sectors of industry, such as nail guns and animal slaughter. Fiocchi's distinctive feature is that all product components are manufactured in its facility. The company also ensures ongoing research and flexible production; this combination makes Fiocchi a winner in the world market.

The wide product range and the specific characteristics of the items manufactured rank Fiocchi as a unique company among other market leaders. Fiocchi's sister companies are based in the US, the United Kingdom, Argentina and New Zealand, besides partnerships and strategic agreements all over the world.

Fiocchi products are NATO-qualified,

which means that they have passed strict qualifying tests to allow their use by NATO forces. This is only one example of the brand's international success. Fiocchi is still a leader in both the Italian and international markets.

The passion and creativity that has driven this family of entrepreneurs since 1876 is still vibrant today in the fourth generation that now runs the company. The launch of new product lines and investments in innovation, research, and technologies always keep Fiocchi one-step ahead.

Hanwha Systems Synergising Armed Forces

Since 1978, Hanwha Systems has accumulated outstanding expertise, and has developed the best technologies in defence electronics, becoming a leading company in defence sector.

As a comprehensive solution provider of defence electronic systems for command and control, communication, and surveillance and reconnaissance, Hanwha Systems has the latest technologies in a range of areas: mainly radar, optronics, tactical communication systems, combat command systems and fire control systems that work like the brain and nerve of military weapon systems. With successful development of core technologies for weapon systems in a host of areas ranging from KM-SAM multi-function radar (MFR), thermal observation device (TOD), tactical information communication network (TICN), military combat system, the company has made significant contribution to force improvement of the military in Korea. What's more, driven by the company's consolidation in the year 2015, they have become well-suited to create synergies with other defence affiliates of the Group and undoubtedly emerging as one of the best defence companies in the local market.

The success of Hanwha Systems in becoming a credible company lies in the high-tech defence solutions designed by professional engineers, and active and future-oriented R&D investment, which occupies a significant percentage of annual revenue. Hanwha Systems, sustained by its growth and drive to provide the best technology in the world, will continuously develop technology and skills of the highest quality for innovation and maintaining global competitiveness.





Meta Networks Equipping Republic of Korea Navy

Meta Networks, based in Korea, is a leading company that provides solutions in the area of smart security, network equipment, military defence, and medical industry. Defence division of Meta Networks has initiated research and development of military products since 2006 and has supplied most products to the Republic of Korea Navy. Recently, the company has completed the development and evaluation of DIFAR passive sonobuoy in collaboration with the Republic of Korea Navy (RoKN) and is about to launch the platform. A DIFAR passive sonobuoy is a sensor device dropped into the ocean from an ASW aircraft, such as the P-3, and used to gather acoustic data to detect submarines.

North Korea is the most notable submarine force in the world. In 2010, an RoKN patrol ship, *Cheon-An*, was destroyed by a torpedo attack from a North Korean submarine. South Korea executes constant patrol, carrying out anti-submarine warfare by deploying surface patrol ship, submarine, and maritime patrol aircraft. By utilising the DIFAR passive sonobuoy, the RoKN would be able to cope with the threats of North Korea's submarines. Meta Networks' sonobuoy has received the endorsement from its excellent performance from RoKN P-3 crews and will be in operation soon. The company will continue to improve sonobuoy performance with RoKN cooperation, and upgrade the ability in detecting submarines.

Rohde & Schwarz's NESTOR-Cellular Network Analysis and Forensic Investigation

The R&S NESTOR combines cutting-edge touchscreen software architecture with top-of-the-line mobile radio monitoring and measuring equipment from Rohde & Schwarz. In addition to direct acquisition,

visualisation and real-time analysis of all measurement data (online), the software enables users to carry out in-depth post processing and long-term analysis (offline).

Due to the predominant importance of wireless communications, law enforcement officials, security agencies, defence organisations and political users must be able to retrieve detailed and up-to-date information about cellular networks.



R&S NESTOR offers capable and flexible support for government authorities with the following applications:

- Identification of occupied mobile radio channels.
- Detection of active network intruders.
- Position estimation of all mobile radio cells.



- Coverage and interference analysis.
- Forensic analysis.

The solution is optimised for operation in urban and rural environments using road vehicles, airplanes, helicopters or backpacks. It requires equipment that is compact, light, smart and easy to use. Rohde & Schwarz provides solutions featuring a variety of network scanners, smartphones and advanced software based on Windows 10 computers, tablets and mobile phones. They support fixed installations for 24/7 site protection as well as mobile and camouflaged set-ups for pursuing intruders. The company's powerful portfolio also includes quick and easy live analysis and highly sophisticated post processing.

Rotinor Diver Propulsion Devices

Rotinor GmbH, located in Stuttgart, Germany is well-recognised as the leading manufacturer of diver propulsion devices (DPD) for military applications.

Furthermore, Rotinor is the only manufacturer that employs jet propulsion within their innovative DPD design. Through this exemplary innovation and technology, Rotinor is now establishing itself as the preferred choice for global navies and Special Operation Forces. Rotinor is also the official supplier to NATO, where all vessels have designated NATO stock numbers (NSN).

Rotinor DPD, is a compact hand carried submersible which will enable the combat-diver the ability to transport himself, additional team members and equipment over long distances with less time exposed to open water, resulting in reduced level of fatigue, provide extra endurance and an increased time available in the mission area.

Rotinor DPD has been designed so that it is capable to be launched from a number of platforms, including OTB, RIB, submarine, helocasting and para-drop, ensuring precise delivery into the designated mission area. ●

Rheinmetall's Modern Training Facility for Royal Thai Navy

The Royal Thai Navy awarded Rheinmetall's Simulation and Training unit a contract to supply Thailand with a turnkey system known as the Naval Warfare Training Simulator (NWTs). Worth several million euros, the order includes construction of a new building, including infrastructure. The facility is scheduled to go into operation in the third quarter of 2019.

Based on Rheinmetall's Action Speed Tactical Trainer (ASTT), the Royal Thai Navy's NWTs will be used to prepare personnel for a variety of combat scenarios, for example, engaging mines as well as surface, aerial and underwater targets. In executing the order, Rheinmetall can draw on its comprehensive expertise in the domain of maritime simulation, in which naval forces around the world already place their trust. Here too, Rheinmetall's tried-and-tested Advanced Naval Synthetic Environment (ANSE) software will come into play, enabling rapid generation of synthetic scenarios.

In addition, the new training facility can be connected to the Royal Thai Navy's ex-



isting Submarine Command Team Trainer (SCTT) and Anti-Submarine Warfare Simulator (ASWS) systems, both of which were also supplied by Rheinmetall. This networking capability offers great potential for gen-

erating new, even more sophisticated and realistic scenarios in all three of the training systems. The new order underscores once again Rheinmetall's leading role in the field of training and simulation. ●

Second River-class OPV Named in Glasgow

HMS Medway, the second of five new *River*-class offshore patrol vessels (OPV), was officially named on Oct 20, 2017 during a ceremony at BAE Systems' site at Scotstoun, Glasgow.

Guests watched as Lady Wendy Fallon, HMS *Medway*'s sponsor and wife of Defence Secretary Sir Michael Fallon named the 2,000-tonne, 90-metre-long vessel. In keeping with Royal Navy tradition, Lady Fallon pressed the button that released a bottle of Dockyard Gin from the Copper Rivet Distillery in Chatham, Kent, against the ship's hull.

Iain Stevenson, Managing Director of BAE Systems Naval Ships, said:

"Today's naming ceremony is another proud moment in an exceptionally busy year for our business and the Royal Navy. Following the naming of the first *River*-class offshore patrol vessel in March this year, our employees had the opportunity to celebrate seeing the first aircraft carrier, HMS *Queen Elizabeth*, set sail for the first time; the first plate of steel cut for the first Type 26 Global Combat Ship; and the naming of the second aircraft carrier, HMS *Prince of Wales*. We look forward to delivering HMS *Medway* to the Royal Navy next year."

Keeping Britain Safe

Defence Secretary Sir Michael Fallon said: "This year we have already named our second aircraft carrier,

two Type 26 frigates and the first in the offshore patrol vessel class. It is a privilege to see yet another ship named for the growing Royal Navy. Named after Kent's main river, my family has taken a particular interest in HMS *Medway* over the course of its construction and this is a proud day for all involved.

"From counter-terrorism and anti-smuggling to securing the UK's borders, HMS *Medway* will help keep Britain safe."

HMS *Medway* will shortly embark on sea trials where she will be put through her paces in the open waters off the coast of Scotland. With a crew of 58, HMS *Medway* is expected to enter service with the Royal Navy in 2019.

Earlier in June 2017, the Royal Thai Navy has laid down the keel for its second 90m OPV, which it is building in collaboration with BAE Systems. The Royal Thai Navy has a requirement for six 90-metre of the type. The RTN's first OPV, HTMS *Krabi*, was commissioned in August 2013 and built at the Mahidol Adulyadej dockyard through co-operation with BAE Systems. The OPV was procured in 2009, and the contract for second OPV, worth \$170 million was signed in February 2016 between the RTN and BAE Systems. It is due to be launched in 2018. Both OPV is based on BAE Systems' *River*-class platform. ●



Thales Systems Equip Thai Military

Thales has held a leading position in the naval domain for the past 30 years. A significant number of Thales radars, fire control and command & control systems have been delivered to the Royal Thai Navy (RTN).

In recent years, Thales has recorded a number of successes to address the RTN's blue and littoral water requirements. This has included the delivery of the following combat management and communication systems:

TACTICOS Combat Management System (CMS), VARIANT surveillance and tracking radar and LIROD fire control radars on HTMS *Krabi*, built locally by Bangkok Dock Shipyard. TACTICOS CMS and MIRADOR observation and tracking system for the *Khamronsin*-class corvette. TACTICOS CMS and MIRADOR FCS for the first of class patrol gun boat.

Full-Fledged Solution for RTN

In April 2016, Thales was awarded two significant contracts for the supply of a full spectrum of above-water and underwater solutions for the RTN, according to the company's website. In one contract, Thales was awarded the role of prime contractor for an extensive upgrade of two *Bang Rachan*-class minehunters built in the late 1980's (HTMS *Bang Rachan* and HTMS



TACTICOS system console.

Nong Sarai), marking Thales' first success in the underwater systems and sonars market in Thailand. As prime contractor, Thales will be responsible for the revised vessel design, repairs and modernisation, the procurement of equipment and the platform integration.

In a second contract, the RTN's second *Krabi*-class vessel will be equipped with a Thales integrated solution that includes the TACTICOS combat management system and an integrated bridge and naviga-

tion suite. Thales will supply the Tactical Data Links Link RTN and LINK-Y Mk2 and all internal and external communication systems as well as be responsible for all integration activities, including the 76mm gun, 2x 30mm gun and Harpoon SSM. By working together with its naval key industrial partner, and establishing expert teams in Thales Thailand, Thales is building an indigenous capability with its partners in the kingdom, in shipbuilding, integration and providing training and Integrated Logistic Support to the RTN. In addition, Thales is serving the Royal Thai Marine Corps with digital tactical radios, as well as other key capabilities, enabling optimal operation in challenging environments.

First Batch of Norinco Tanks for Royal Thai Army

China's renowned defence manufacturer, Norinco Group hit the Asian jackpot with the award of the Royal Thai Army (RTA) armoured vehicle replacement programme. In recent October, *Bangkok Post* reported, quoting source from the army that the first batch of 28 VT4 tanks bought for 4.9 billion baht (\$147.5 million) from China has arrived in Thailand. The tanks will be commissioned at the 3rd Cavalry Division at the Prem Tinsulanonda Military Camp in Khon Kaen's Nam Phong district.

The procurement of the 28 Chinese-made tanks was approved early last year.

In early April this year, the Thai government announced the procurement of more VT-4 main battle tanks. Thailand will buy 10 additional tanks on top of the 28 units ordered from Norinco. The contract for the extra tanks was reportedly cost around \$58 million. The armoured vehicle will replace US-made ageing M41 tanks, which have been operated by the RTA since World War II. The VT4 was originally built for sale to Pakistan, but Thailand has become its first customer. ●

Conquering the Land—with Thales

In the land domain, Thales has a wide portfolio of systems and products for soldier and military vehicle applications. The Group has been modernising tactical communication capabilities since 2008, and is continuously working with the Royal Thai Army (RTA) to offer world-class modern digital communications. Furthermore, the group is a major supplier of electronic warfare equipment, dedicated to intelligence and counter-measure applications, as well as thermal imagers and radars for surveillance operations. In air defence, the RTA selected Thales' STARStreak air defence system in 2012. The system comprises the world's fastest very-short-range air defence missile and lightweight multiple launchers. Following up on this initial purchase, in 2015, Thales signed a new contract to supply the RTA with the second and third batches of the STARStreak.

In 2017, Thales works with DTI to support establishing local expertise in the area of vehicle-based digital communications and command systems as well as integrated air defence systems. ●



TECHNICAL PRESENTATION

Date/Time	Topic/Theme	Location
November 6, 2017		
13.00 - 14.45hrs	Czech Defence Industry Day By Czech Embassy	Amber Room 2
13.00 - 14.45hrs	Dyneema Next Generation Armour Technology By DSM Dyneema	Amber Room 3
November 7, 2017		
10.00 - 12.30hrs	Cyber Security By SIBAT (Ministry of Defence of Israel)	Amber Room 3
13.00 - 13.45hrs	System of System for Increased Operational Effect and Cost Efficiency By SAAB	Amber Room 3
14.00 - 14.45hrs	Ground Based Air Defence with IRIS-T By DIEHL	Amber Room 3
November 8, 2017		
10.00 - 11.45hrs	Defence Industry Cooperation and Networking between Korea and Thailand By KDIA	Amber Room 3
13.00 - 13.45hrs	Tactical LTE First Responders By MER Group	Amber Room 3

AW139 Supports Queensland's Helicopter Fleet Modernisation



Leonardo announced on Oct 24 that the government of Queensland in Australia has placed an order for two additional AgustaWestland AW139 intermediate twin-engine helicopters. The aircraft are expected to enter into service by December 2018

performing emergency medical services and search and rescue missions over land and sea. The AW139s will replace two older helicopter models as part of a fleet modernisation programme and reduce maintenance costs.

With world-leading capability, performance, ride quality and cabin space, the AW139 has been chosen for its ability to meet the Queensland government's operational requirements. These helicopters will add to three AW139s already in service with the Queensland government, further strengthening the state's air rescue capabilities and leveraging efficiencies in support, maintenance and training. The new aircraft will be operated by Queensland Government Air (QGAir), a division of the Queensland government's Public Safety Business Agency and will be based in Townsville. The aircraft will also serve across all of North Queensland and will be subject to fleet rotation between North and South when needed, in order to ensure the optimum coverage for the state's community.

This latest order further reinforces the presence of Leonardo in the Australian market with more than 120 helicopters of various models ordered to date for both commercial, public utility and military roles. In the last few years, the AW139 has proven to be the most successful EMS helicopter in Australia with 30 already in service with various customers. ●

Visit **ADJ** at Booth R17

SHOW DATES & Nov 6, 2017 11.00hrs-17.00hrs
OPENING HOURS: Nov 7-9, 2017 10.00hrs-17.00hrs



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