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Key missile defence system manufacturing comes to Saudi

HOMEMADE THAAD

Two major localisation projects that epitomise the spirit of the Saudi Vision 2030 for the aerospace and defence industry were announced at the World Defense Show yesterday.

The agreements between GAMI with Lockheed Martin and Raytheon also play a major part in increasing defence against threats from high altitude attacks.

Gasem Al-Maimani, the Deputy Governor of the General Authority for Military Industries (GAMI) announced approval of the two projects relating to the Terminal High Altitude Area Defense (THAAD) missile system. Meanwhile His Excellency Khalid Al-Falih, Saudi Arabia's Minister of Investment made a near-simultaneous announcement that elements of the Raytheon PATRIOT missile system would also be manufactured in Kingdom.

Lockheed Martin will shift the manufacture of THAAD missile interceptor launchers, and missile interceptor canisters for the Saudi armed forces to Saudi Arabia.

Raytheon will build what were coyly referred to as 'key components' of its Patriot air and missile defence system in Saudi Arabia. Khalid Al-Falih noted that: "we will build more advanced sophisticated components of a leading global air defence system – the Patriot - which



Lockheed CEO Saudi Arabia & Africa Joseph Rank: securing safe future



THAAD missiles to be built in Saudi

we all know here, and which has kept the Kingdom safe for three decades."

These localization projects form part of the wider GAMI strategy that has the ultimate target of ensuring that more than 50% of expenditure on defence equipment and services will be made locally by

the year 2030.

"For over 50 years, Lockheed Martin has been a committed partner to Saudi Arabia, as the country continues its journey toward ensuring a safe, secure and sustainable future for its people," said Joseph Rank. ▲

رؤية 2030 تتجسد على أرض معرض الدفاع العالمي في الرياض

يوم حافل جديد مع مجموعة واسعة من العقود الاستراتيجية التي تتمحور جميعا حول تنفيذ رؤية 2030 واحدي ركائزها توطين الصناعات العسكرية.

فقد وقعت الهيئة العامة للصناعات العسكرية وعملاقي الدفاع لوكهيد مارتن وريثيون اتفاقيتين استراتيجيتين تعززان أمن المملكة من الهجمات الصاروخية العالية الارتفاع.

فقد أعلن سعادة المهندس قاسم بن عبدالغني الميمني، نائب محافظ الهيئة العامة للصناعات العسكرية الموافقة على مشروعين مرتبطين بنظام ثاد الدفاعي المضاد للصواريخ عالية الارتفاع بينما أعلن معالي

وزير الاستثمار المهندس خالد بن عبدالعزيز الفالح عن مشروع تصنيع أجزاء أساسية من نظام باتريوت للدفاع الجوي في المملكة والتي تنتجها أساسا شركة ريشيون الأميركية.



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Collins collaborates on communication

▼ Taqnia's Dr Abdulrahman Alkhlthlan, and Collins' Colin Mahoney at yesterday's signing

Collins Aerospace and Taqnia Cyber signed an MoU to collaborate on reliable, secure, and advanced communication solutions for military applications in Saudi Arabia.

Dr. Abdulrahman Alkhlthlan, the Acting CEO of Taqnia Cyber and Colin Mahoney, Collins Aerospace president of customer & account management, signed at the show yesterday

This should lead to development of sovereign, secure and advanced communications through collaboration in

the field of C4I, next generation data links and transmission security.

"Over the past decades, Collins Aerospace has had an active presence in the Kingdom in all our areas of expertise in both commercial and defense markets," Mahoney said. "This cooperation with Taqnia Cyber will strengthen our position as a technology partner of communication solutions for multi domain operations and serves as a contribution to the kingdom's "Vision 2030" program, promoting local business development initiatives."



Zamil's shipyard corvette boost

Saudi Arabia's Zamil Offshore Services Company yesterday stepped up its activities through signing a series of agreements at the show.

The company, which is part of the conglomerate owned by the Zamil Group, a 70-year-old enterprise, has four shipyards in the Kingdom, the largest in Dammam.

An MoU signed yesterday will see it providing in-country support for the Royal Saudi Naval Forces' five new Al Jubail-class corvettes being provided by Navantia of Spain.

"It's a wide-ranging agreement for the platform and its systems," said Zamil Offshore's COO Nasser Al Hazzani, including the vessels' MTU 16V 2000 M96 diesels and generator sets. Zamil is the sole representative for MTU in Saudi Arabia.

Zamil also signed yesterday an exclusive agreement for the Middle East with the rigid inflatables specialist Ribcraft of the UK to build their composite craft in Kingdom "There's a big demand for small



▲ CEO of CMN Pierre Balmer seals deal with Sufyan Al Zamil

platforms, not only for commercial use but also for the Border Guard, security forces and the RSNF," Hazzani said.

The fact that these will now be built in the Kingdom is a major

plus-point for Zamil: "That's a key discriminator for when it comes to GAMI. There's a significant demand not only from the navy and coastguard, but also for commercial and leisure markets."

The other agreements signed yesterday were with France's CMN, including an integrated logistics support package JV with

for the RSNF's high-speed interceptor craft; Zamil is building 27 of them and has already delivered nine. In a second JV with CMN the parties will start building a series of high-speed composite interceptors. ▲

الزامل للخدمات البحرية تعلن عن عقود جديدة

الشركة المتخصصة في بناء واصلاح السفن عززت افعالها مؤخرا حيث اعلنت عن اتفاقيات تدعم من خلالها محليا القوات البحرية الملكية السعودية وزوارقها الخمسة من تصنع شركة نافانتيا الاسبانية. تشمل الاتفاقية دعم محركات القوارب UTM ١٦٩٨ ٠٠٢ ٧٦٦ الديزل والمولدات.

كما أعلنت الزامل عن اتفاقية تصنيع زوارق مطاطية من شركة الفاربي البريطانية مع تزايد الطلب على هذه الفئة خصوصا لحرس الحدود وقوى الأمن والبحرية.

الاتفاقية الثالثة فكانت شراكة مع NMC الفرنسية لتوفير أنظمة دعم لوجيستي للقارب السريع والتي تبني الزامل ٧٢ منهم مع خاصية الرصد السريع.

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Dr Ricardo Bester with Condor's less-lethal products

Less lethal weapons

Brazilian company Condor (Stand N14 – Hall 1) adopted a philosophy of preserving lives at its founding in 1985 and is now focused on expanding its footprint in the Middle East region.

According to Dr Ricardo Bester, head of sales strategy, the company is dedicated to exclusively develop this type of technology: equipment designed to temporarily incapacitate. Non-lethal products are meant to prevent progressions of a violent situation by applying the necessary force for restraint without causing permanent injury or fatalities. In this manner, law enforcement officers can use force progressively, thus reducing situations in which the use

of firearms is necessary.

“In fact, the United Nations recommends to governments the need to restrict the use of force and firearms,” he said.

Having entered the MENA region in the early 2000s, Condor has achieved significant market penetration in the Middle East, with Saudi Arabia and several Gulf states acquiring non-lethal products. Part of Condor's philosophy is to train customers in the correct doctrine of using non-lethal products and to drive home the concept of preserving lives.

Condor makes 120 different non-lethal products that are used in more than 85 countries worldwide. ▲

كوندور البرازيلية تعرض أسلحة خفيفة فعالة لكن غير فتاكة
من خلال مشاركتها معرض الدفاع العالمي في الرياض، عرضت شركة كوندور السلاح الفريد من نوعه الذي يعمل على جعل جنود وأفراد العدو عاجزين بدنيا مؤقتا وبطريقة غير قاتلة وذلك عبر تكنولوجيا خاصة من أجل مكافحة العنف قبل أن يقوم أفراد قوات الأمن بتثبيتهم مما يؤدي إلى التقليل من الموق والضحايا. أكثر من 85 دولة اشترت هذا السلاح من الشركة التي لديها أكثر من 120 منتجا غير قاتل حيث تأمل ببيع منتجاتها في منطقة الشرق الأوسط.

NEWS IN BRIEF

Take them out

Jordan's Jadara Equipment and Defence company (Stand D9 – Hall 1) is showcasing its Terminator ATGM (anti-tank guided missile) system. The medium range ATGM system is intended to defeat heavily armoured tanks equipped with ERA (explosive reactive armour), soft-skinned vehicles, fortifications, and bunkers at distances up to 2.5 km. It uses anti-tank, high-explosive and fragmentation missiles.

Tiger tale

OCCAR (Organisation for Joint Armament Cooperation), on behalf of the French and Spanish Armament General Directorate, the DGA and the DGAM, has awarded a contract to Airbus Helicopters for the development, production, and initial in-service support of the Tiger MkIII attack helicopter upgrade programme.

InShield

Spanish company Indra is offering its InShield infra-red countermeasure systems that could protect rotary and fixed wing aircraft such as A400M. InShield is an autonomous system that can be easily installed as a stand-alone solution or integrated as part of a new or existing EW self protection suite against MANPADS (man portable air-defence systems) and IR guided missiles. This is achieved by means of a laser that deviates the missile.

Key players line up in hope of C-130J bid

There are indications that the Royal Saudi Air Force is inching towards a C-130J purchase, ten years after a DSCA notified Congress in November 2012 that Saudi Arabia had requested 20 C-130J-30s and five KC-130Js.

The requirement at a cost of \$6.7 billion has only partly born fruit with the two of the five KC-130Js deliv-

ered in 2018, but nothing has materialised regarding the outstanding Hercules despite Lockheed Martin optimism.

Alsalam Aerospace Industries which has been carrying out period depot maintenance (PDMs) for the RSAF C-130 legacy fleet, in one guise or other since the early-70s has aspirations to work on

the KC-130J PDM. Not only has it maintained and overhauled the 49-strong fleet of in-country military, civilian and VIP/medevac Hercules but has also upgraded three VIP C-130Hs. Up to six Hercules are being overhauled at once at their facilities in Riyadh and Jeddah.

The Riyadh-based company according to one source already has

a contract to carry out PDMs for 12 legacy C-130s up to December 2024, however, it is looking likely to face competition from both SAMI and newly formed Scopa Defence for the C-130J MRO work. Neither business has any C-130 maintenance experience so they could struggle to show the credentials to win the work. ▲



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Saudi Arabia to upgrade LAV II



LAV II meant for upgrade

General Dynamics (GDLS) is to upgrade about 400 units of the LAV II armored personnel carrier for the Saudi Arabian National Guard.

The armored vehicles will be upgraded with modern systems to increase mission readiness and combat capabilities. A decision to this effect is expected soon, as final negotiations are still on with the Ministry of National Guard, a company spokesperson said.

Of the 1200 vehicles, purchased in the late 1980s and 1990s, 400 units are being upgraded in the first phase. The entire upgrade process will be done locally with the support of local companies.

The wheeled military vehicles are armed with various armaments, including automatic canons, machine guns, mortars and anti-tank missiles. The vehicles are being produced by GDLS. ▲

جنرال داينامكس تطور 400 ناقلة جند LAV II للحرس الوطني السعودي

أعلنت الشركة عن ذلك في معرض الدفاع العالمي حيث ستقوم من خلال العقد مع وزارة الحرس الوطني والذي هو في قيد الاتمام على تطوير أنظمة الناقلات للجنود ورفع جهوريتها العملية والقتالية علما أن لدى الحرس الوطني ما مجموعه 1200 ناقلة من جنرال داينامكس. ستتم عملية التطوير في المملكة كليا وعبر شركات سعودية.

Mock-up attracts MoD interest

Intra's new Samoom UAV is on show at WDS in mock-up form. The aircraft is the result of the company's efforts to produce an indigenous Group 4 UAV, and the concept has already generated a great deal of interest from the Saudi Ministry of Defence, and other organisations, including the border guard.

The company began work on the Samoom prototype about six months ago, and hopes to roll it out within two years, though some hope for an even more rapid timescale.

"I'd like to do it in a year!" Asim A.Qureshi, Executive Director of Technology and Engineering Solutions at Intra, said.

The aircraft will carry the company's new AETOS 20-inch IR/EO turret, and Intra hope to provide a completely ITAR-free and indigenous solution, having already demonstrated indig-



▲ The Samoom UAV with AETOS IR/EO turret

enous missions using a Saudi developed SATCOM, a Saudi satellite and the Haboob UAV.

The company has clearly been watching the development of the Certifiable Predator-B or SkyGuardian with interest, and

though Saudi Arabia's GACA as yet has no licencing system for unmanned aircraft the company is building its UAVs to NATO STANAG standards, and to be able to meet US and European certification requirements. ▲

Smart move for safe ties

A new security system for 'smart cities' was unveiled at the show yesterday.

Switzerland-based Mircea Tudor Scan Tech and US company Qylur Intelligent Systems announced Eagle AI City-Wide Security, described as a suite of intelligent security screening solutions that will cover the entire range of checkpoints that smart cities and large development projects need.

Eagle AI will connect advanced screening solutions in five categories: car and truck, aircraft, water vessel, bags and people screening. This allows smart cities to cover and integrate all checkpoints, from the outermost ring of borders, sea-ports, and airports.

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Drone destroyer tried and tested

MSI-Defence Systems Ltd (Stand G15 – Hall 1), in conjunction with international partners, has completed proof of capability trials for its MSI-DS lightweight mount LW30M counter-UAS system, the company said at the show.

Firing programmable (PABM) or proximity ammunition, the weapon system delivers a demonstrated hard-kill capability against unmanned ground vehicles (UGV), deployable and fixed installations. According to David Codling, business development director, the trials have successfully downed a score of drones at a lower cost per kill than any other system.

The fire control system provides full target tracking and ballistic compensation, and is network enabled with options for increased target recognition intelligence. The MSI-DS EOSS electro-optic component of the C-UAS system handles final detection and



▲ Aiming high: David Codling with his Terrahawk LW30M

interception, directing precision gunnery for maximum effect.

The effectors include 30 x 173mm PABM, an explosive

round with programmable timed detonation. This ammunition is particularly useful when used in the C-UAS role. PROX 30 x 113mm and 173mm is an explosive round with proximity detection fusing and secondary point impact. ▲

شركة MSI-Defence Systems تختبر بنجاح نظام متطور مضاد للمسيرات

بالتعاون مع شركاء عالميين، تقدم الشركة نظام المضاد للمسيرات والذي أثبت فعالية فائقة في الاختبارات الجارية عبر إسقاط عدد من المسيرات وبتكلفة هي من الأقل عالمياً. يتميز النظام بالقدرة الدقيقة على الرصد مع نظام بيانات معلوماتي للتبع كل ذلك بشكل مدمج للسرعة والدقة لضرب الأهداف في المرحلة النهائية. أما الرأس التفجيري فيشمل 30 x 170mm PABM مع نظام توقيت للتفجير بالإضافة إلى نظام تفجير ثنائي لضمان التدمير الكامل علماً أن النظام ككل ممكن شبكه على العديد من أجهزة الرادار وأنظمة الرصد الإلكتروني والبصرية مما يمنح تغطية متكاملة بـ 360 درجة.

Egypt and Saudi Arabia in hunt for AMRAAM

Saudi Arabia and Egypt are hoping they could soon be purchasing AMRAAM C-7/8 missiles.

The Biden administration's decision to sell 280 AIM-120C-7/8 AMRAAM Advanced Medium Range Air-to-Air Missiles to Saudi Arabia has kindled hopes among other MENA air forces that the weapon could also be supplied to them.

The US State Department approved a sale of up to 280 AIM-120C-7/C-8 AMRAAM missiles to Saudi Arabia in November 2021, at an estimated cost of US \$650 million. The Pentagon said the missiles would support Saudi Arabia's

Eurofighter Typhoon fighter jets. Raytheon expects the deal to be signed soon.

If approved by Congress it would be the first major foreign military sale to Riyadh since US President Joe Biden took office.

Egypt has also been eyeing later block AMRAAMs to equip its fleet of F-16s. Industry sources say that Washington has given approval in principle for the sale of the AIM-120 to Cairo. Raytheon Missiles & Defence, the makers, are currently holding discussions with the Egyptian government.

Egypt's F-16 fleet has been

denied US air-to-air missiles with a range greater than 85 km, restricting their missile arsenal to the AIM-7 Sparrow and shorter ranged AIM-9 Sidewinders, though the air force has long-range R77 missiles on its MiG-29M/M2s and MBDA Meteor BVRAAMs on its Rafales.

Raytheon is also in advanced talks with Kuwait, which according to the company, will be the first country in the region to operate AIM-120C/D AMRAAM and AIM-9X Sidewinder AAMs, as well as the AMRAAM-ER (extended range) to defend against a full spectrum of threats. ▲

Amper wins images contract

Spanish exhibitor Amper Group has been awarded a six-month €3.2 million project for the commercial supply of high-resolution images for the Space System for Earth Observation. It will have a technological agreement with Maxar Technologies, a US provider of satellite imaging and intelligence services. Through this agreement, Amper will gain access to a technological infrastructure to provide and design geospatial intelligence, imaging and satellite communication services for several sectors and markets.

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Fast feedback from UAE on new combat vessel

شركة Babcock تشارك معرض الدفاع العالمي

جاء ذلك بعد حصول الشركة العالمية على عقد توريد ٣ فرقاطات Arrowhead 140 للبحرية البولندية بالاشتراك مع مجموعة PGZ-MIECZNIK والذي يأتي بعد عقد الشركة مع البحرية الملكية البريطانية لتوريد 31 فرقاطة مماثلة واندونيسيا التي طلبت فرقاطتين. أما من ناحية التسليح فقد تسليح بمدفعي 57 مم و 40 مم ونظام CAMM المضاد للطائرات بالإضافة الى نظام Tactics القتالي من شركة تاليس. تطمح الشركة الحصول على عقود من الشرق الأوسط خصوصا مع أسعارها المنافسة للغاية مقارنة بباقي الشركات العالمية.



Luca Pelosio, chief project engineer, Ferretti Security Division assesses feedback from UAE Navy to the FSD 320, seen here

Italian boatbuilder Ferretti Group is starting to receive feedback from the UAE Navy on the performance of its new FSD 320 high-speed combat boat.

The 32m vessel, which was handed over in mid-2021, is designed to transport troops and small vessels, which can be disembarked via the bow doors. Powered by MTU 2000-series diesels generating around 4,000hp and Kamewa waterjets, it can achieve almost 50kts, with a patrol speed of more than 40kts.

The vessel has 10 to 12 crew (although this number may be reduced as the service becomes more familiar with it) together with up to around 30 troops.

Builder Ferretti Security Division is working with the UAE to understand how the Gulf nation is using the vessel and its initial reactions to its performance in service. ▲



Babcock's double delight at second frigate export success

UK shipbuilders Babcock International are at the show in high spirits, having last Friday been named as the winning contenders to supply Poland with three frigates.

Babcock will become the platform design provider and technology partner for Poland's Miecznik (Swordfish) frigate programme, and has concluded a set of strategic cooperation agreements with the PGZ-MIECZNIK Consortium, which is responsible for delivery of the project from the Polish side.

Babcock will support the consortium for the three Arrowhead 140 (AH140) vessels, which will be built in Polish shipyards, drawing significantly from Polish suppliers and Babcock's global supply chain. Following completion of the design phase, Babcock will support the frigate build in Poland through a design licensing agreement, transferring knowledge and technologies to optimise Poland's shipbuilding

and industrial capabilities.

The Polish order is the second export deal for the AH140, which forms the basis for the UK Royal Navy's Type 31 frigates. Indonesia last year ordered two AH140s.

Many details of the equipment fit remain to be decided, said Babcock International Group's business development director, marine & technology, Geraint Lloyd, at the show. However, it was expected that the Polish vessels would retain the 57mm and 40mm cannon and CAMM anti-air system found in the UK vessels. Thales' Tacticsos combat system will also be part of Poland's equipment fit.

The AH140 was always intended as an exportable design and "We like to think we can take on people like Navantia and Naval Group on price," Lloyd said. "We can sell a 140m ship for the price of a corvette." ▲

NAVANTIA LOOKS TO AR FOR REMOTE MRO WORK

Among the new technologies that Spanish shipbuilder Navantia will be showcasing at WDS is an Augmented Reality (AR) system that will be used to help onboard personnel carry out essential maintenance while under way.

The crew member will be connected electronically to a technical expert at home base, with the latter wearing a pair of AR glasses. The electronic connection will allow the expert to see exactly what the crewmember is doing and prompt him to undertake the required actions, guiding him to open hatches and find the components that require attention.

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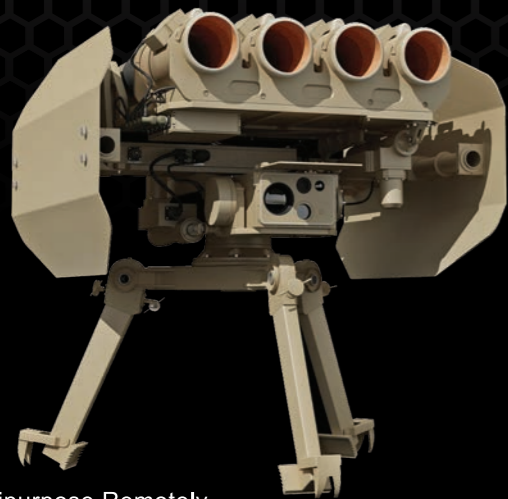
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QUAD-2
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Multipurpose Remotely
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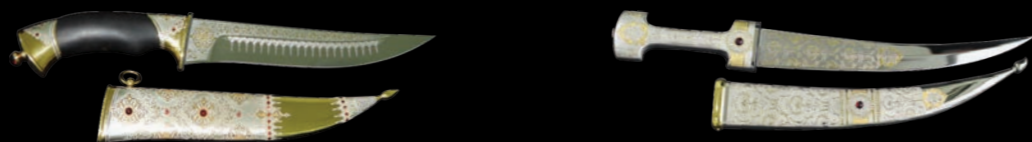
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Boeing sees prospects for T-7 Red Hawk

Boeing is in talks with countries in the Middle East and North Africa (MENA) region to sell its T-7 Red Hawk new advanced pilot training system, which can also be evolved for additional missions such as an aggressor, light attack variant.

“We are getting positive responses from countries in the region,” Rick Lemaster, Boeing’s Vice President, International Sales, said.

Lemaster said that executing the U.S. Air Force contract for the T-7A Red Hawk is Boeing’s top priority right



now, which “will strengthen our ability to ultimately serve the international market.”

“The T-7 can help train fighter pilots for generations to come. Designed

▲ Boeing’s Red Hawk using a digital thread, the T-7A aligns with the U.S. Air Force’s Digital Century Series strategy by enabling

the integration of new concepts and capabilities faster and more affordably through virtual testing,” Leaster said.

The all-new system includes an advanced trainer aircraft and leading edge ground based training simulators.

“T-7 will be a franchise program for much of this century, and beyond the current U.S. Air Force contract, we see global market opportunities for the aircraft plus ground-based trainers and advanced integrated simulation technologies,” he said.

Saudi Seahawk’s public showing

There are two different versions of the hugely successful Sikorsky H-60 on display at the show.

A MH-60R Seahawk of the Royal Saudi Navy can be found in the static display, making its first ever public appearance. Increased threats from the sea, saw the RSN turn to the helicopter in December 2015 to detect and destroy enemy vessels. Ten were ordered to fulfil anti-surface submarine warfare role, supported by the AN/AAS-44C(V) Multi-Spectral Targeting Systems FLIR radar in the nose. The RSN also acquired AN/SSQ-36/53/62 sonobuoys, AGM-114R Hellfire II missiles (which is seen fitted on the static example), BAE Systems Advanced Precision Kill Weapons System (APKWS) rockets and M-240D 7.62mm machine gun and GAU-21 single-barrel rapid fire machine gun.

The first MH-60R was handed over to the RSN during September 2018 and flown to Naval Air Station Mayport, Florida a month later for crew training, with the US Navy’s



▲ The Royal Saudi Navy is showing one of its brand new MH-60R Seahawks at WDS

HSM-40. They were eventually delivered to their base at Jubail. Meanwhile, a Saudi Army National Guard UH-60M Blackhawk appears in the exhibition

area equipped with a Spectrolab Nitesun and a small unidentified EO/IR turret, for several roles including search and rescue (SAR), Combat SAR, Medevac (medical evacuation), Casevac (casualty evacuation) and combat. It is fitted with a external stores support systems (ESSS) and two

200 gallon fuel tanks which can boost the range to eight hours. The Blackhawks can also be armed with 7.62mm and GAU21 cannon. The SANG operates their UH-60Ms from Kashm Al An in Riyadh and at Dirab. There are believed to be nearly fifty UH-60Ms with another batch on order. ▲

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Black Panther to prowl the desert ?

After unveiling a desert warfare variant of the K2 Black Panther fourth generation main battle tank (MBT), South Korea's Hyundai Rotem is looking at markets in the Middle East,

"The ongoing war between Russia and Ukraine is expected to create more demand for MBTs in this region as we are getting good responses for our K2 MBT-M (Middle East), especially from Oman, Qatar and Saudi Arabia," a company official said.

According to the developers, the K2 underwent successful trials in the Omani deserts with several modifications to suit the conditions.

The Sultanate of Oman could acquire this machine, as the K2 is a leading contender in Oman to sell 76 high end battle tanks to replace the ageing British Challenger 2 and American M60.

"To face the extreme hot conditions, we have built an additional air conditioning system in the turret, and we have fitted the tracks with heat resistant rubber. Additional remote-control weapon systems, and a 360-degree situational awareness power system have been fitted," the official said. "These tanks have the same transmission, but we have increased the pulling system," the official added.

The Black Panther features advanced weapons systems. It is armed with a 120mm/L55 smooth-bore gun indigenously developed by Hyundai Wia. It is also equipped with a state-of-the-art fire-control system capable of acquiring and tracking specific targets up to a range of 9.8 km using a thermographic camera.

The tank can attain up to 70 km/h on road surfaces and maintain speeds of up to 52 km/h in off-road conditions. It can also climb



60-degree slopes and vertical obstacles 1.8 meters in height. It weighs 55 tons and can carry 4 crew. ▲

▲ The Rotem K2 Black Panther taking aim at the Middle east markets

Taking protection to the extreme

With capabilities in the air and land systems spheres, UAE based Calidus (Stand N.A2 – Hall 1) is attracting attention at WDS with the Wahash 8x8 vehicle platform.

The WAHASH vehicle system is designed to operate under extreme weather, terrain and climatic conditions to enable mounted forces to complete their missions. This includes mobility and protection of land and amphibious operations. Boasting excellent payload capacity and protection, it can be used in various roles, including Infantry Fighting Vehicle (IFV), Armoured Personnel Carrier (APC) and mobile gun system (MGS) variants. Therefore, large weapon systems can be integrated, notably also the 105mm BMP-3 or remote control weapon stations.

Thanks to a modern, digital generic vehicle architecture (GVA), the addition of C4ISR systems is seamless.



▲ Calidus vehicles on display at the show

Relying on technology to innovate solutions, Calidus considers itself a pioneer in the region, using in-house

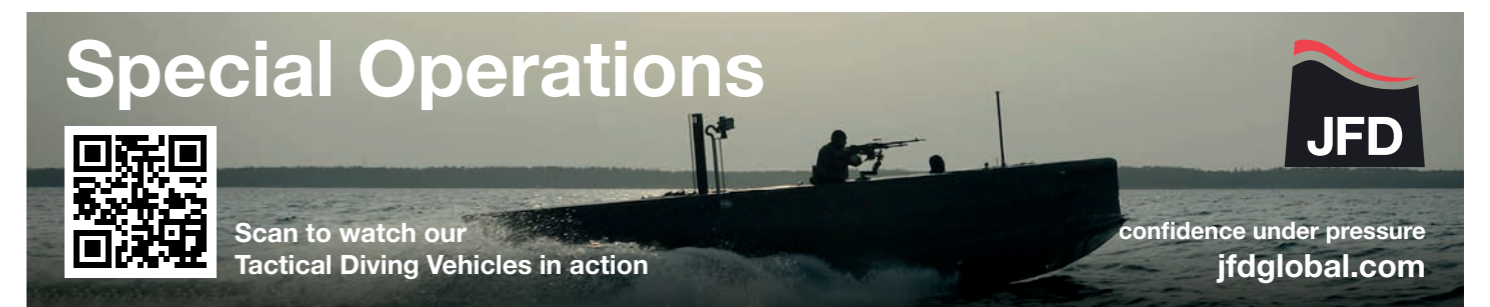
engineering capabilities, system design and integration.

Other land vehicle systems on display are the MCAV-20 and MCAV-005 multi-role armoured vehicles.

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Shipping news: Nam Hee Han, manager at Daewoo Shipbuilding & Marine shows off the new class of frigate

Korea moves to prepare way for new Saudi frigate

Korean shipbuilders Hyundai Heavy Industries (HHI) and Daewoo Shipbuilding & Marine Engineering (DSME) are gearing up for Saudi Arabia's next major surface combatant competition, requests for proposals for which are expected by the end of this year.

The competition, for a new class of frigate, saw both companies displaying their designs at the show.

HHI and DSME are proposing new variants of the Republic of Korea Navy's Daegu-class frigate, a 3,600-ton design. The two companies are each building four of the vessels for the ROKN.

HHI unveiled its new design at the show, while DSME has previously announced its entrant.

Both companies have slightly enlarged their original designs, to 3,900 tons in the case of DSME and 3,800 for HHI. One reason

for the growth is to give Saudi Arabia the ability to operate a Sikorsky MH-60R Seahawk helicopter. DSME, for example, has stretched the vessel by three metres, to 128m.

Other amendments to the Korean design include replacing the 127mm main gun on the Korean version for a 76mm weapon requested by Saudi Arabia. Sensor and communications fits also differ from the original

Korean vessels.

HHI signed at the show an agreement with Saudi shipbuilding partner IMI, which will build part of the vessel in-country if HHI wins the contract, meeting Saudi Arabia's localisation requirements.

HHI says that its Saudi variant will have greatly enhanced anti-air, anti-surface, anti-submarine and electronic warfare capabilities. ▲

Mission critical applications have local edge

Navistar Defense and Kratos Arabia have formed a partnership with Eraf Industrial Company (Stand K8 – Hall 1) to provide national security and defence solutions for the Kingdom of Saudi Arabia. This has already led to the establishment in Riyadh of a local engineering and production capability.

On display is the International 7000-MV vehicle with a modular container system for a variety of mission critical applications, such as command and control centre.

Given the Kingdom's national security requirements, Eraf Industrial is also proposing the Navistar Defense MaxxPro MRAP vehicle, which forms part of the proven MaxxPro family.

Thanks to its independent suspension and great manoeuvrability, tight turn radius and increased payload, this vehicle is highly suited to the extreme theatres encountered in the Middle East.

According to Robert Carnahan, senior country executive and

general manager of Navistar, the MaxxPro is highly adaptable and has been successfully upgraded to meet client needs. For deployed units, the Hendrickson independent suspension can be retrofitted quickly.

The MaxxPro is built to withstand mine and IED detonations, as well as ballistic arms fire and other emerging threats. Its V-shaped hull is designed to deflect blasts away from the crew.

Navistar Defense is focused on the Middle East market, having

just earlier this week received a five-year contract for the supply of militarised COTS (commercial-off-the-shelf) trucks to the Government of Iraq. Last year the company provided water tankers to the Jordanian Armed Forces, in addition to deliveries of MRAP and other vehicles to Gulf nations such as the UAE. ▲



Women's role in defence recognised

The show will host the first Women in Defence conference, today on International Women's Day, with speakers including Her Royal Highness Princess Reema Bandar Al-Saudi Saudi Ambassador to the USA.

Louise Donaghey, Services Programmes Director, Roll-Royce, is on one of the panels. She said: "It is important that this is happening, and in Saudi Arabia. It makes a strong statement to the rest of the world about the importance of diversity in defence."

The World Defense Show has gathered a truly international panel of senior female leaders across a spectrum of the defence industry, who will be addressing a range of topics around diversity.

◀ Louise Donaghey: important event

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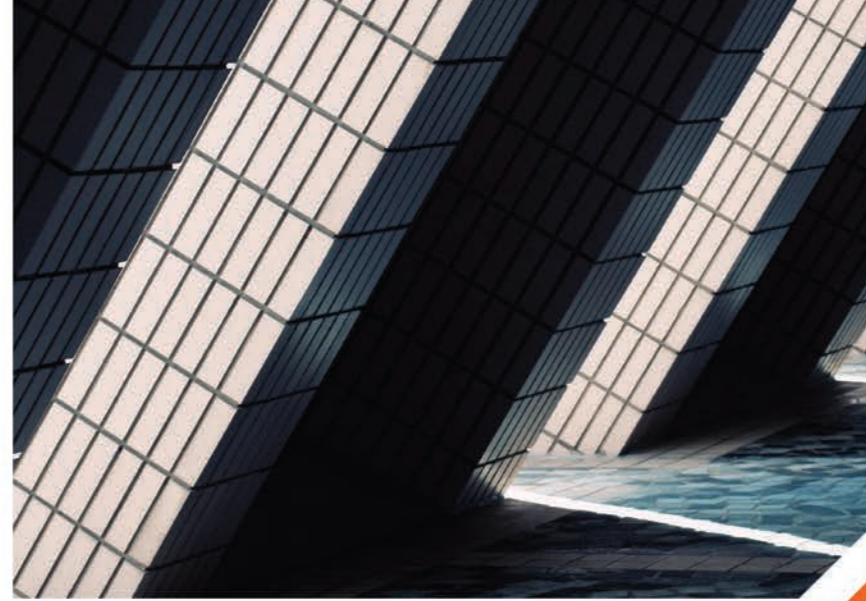


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L3Harris C-130 exports skills

L3Harris was recently awarded an up to \$668 million IDIQ contract to maintain the USAF's C-130 aircraft fleet. Here at WDS the company was keen to underline its expertise in bringing fully-integrated, agile and cost-effective modernisation, missionisation and MRO (M3) solutions to this and other military, government and civilian customers. Featuring modern glass cockpits, L3Harris can maximise the C-130s' utility and flexibility to meet unique customer mission needs, whether in direct action or during humanitarian operations.

L3Harris is the prime contractor for the US Air Force's C-130 Avionics Modernisation Program Increment 2 (AMP INC2), performing missionisation and aircraft services at its 1.1 million-square-foot aircraft modification center in Waco, Texas. The company is responsible for updating the avionics for the US Air Force, Air National Guard and Air Force Reserve fleet of C-130H aircraft. The service is also available



▲ L3Harris bidding to bring MRO expertise to the region

through the Foreign Military Sales programme.

The company recently reached the "power-on" milestone for the first of three prototype aircraft under AMP INC 2. The program team also completed the Systems Integration Lab (SIL), allowing flight software testing to begin. SIL allows the customer's mission system requirement to be validated before ground and flight testing.

Modification and testing are being carried out concurrently at L3Harris' aircraft modification facility in Texas. When the testing is complete, the aircraft will commence joint developmental testing at Eglin Air Force Base, with the delivery of the three aircraft for operational testing later this year. Low-Rate Initial Production is slated to begin in August 2022 with Full Rate Production following in 2023. ▲



▲ SAEI Captain Cynndy

SAEI makes push into defence MRO

Saudia Aerospace Engineering Industries (SAEI), the rapidly growing maintenance, repair and overhaul division of Saudia airlines, is now expanding into the military MRO sector, aiming to capture a share of expanding military spending.

Captain Fahd Hamzh Cynndy, the CEO of SAEI, believes that the company's civil experience will be crucially important, providing useful synergies for the business. C-checks on the RSAF's A330MRTT tankers are obviously similar to the C-checks that SAEI already carries out on commercial A330s, while civilian airliners use the same CFM56 turbofans as the RSAF's E-3A Sentries and KE-3A tankers.

Captain Cynndy has, he says, tried to harness the spirit of the Kingdom's Vision 2030 initiative by combining what he calls the "nimbleness and agility of a startup with the deeply-rooted governance of a 60-year-old organisation."

The results are already impressive. The company has installed new glass cockpits on six of an initial eight C-130 Hercules transports, has started C-checks on the A330MRTT, and has started work on engine overhauls for the RSAF's E-3As and their tanker and ISR derivatives.

Key partners in realising Vision

His Excellency Khalid Al-Falih, Minister of Investment of Saudi Arabia, signed an MOU with 12 major international companies yesterday. He spoke of his admiration for the WDS which had grown beyond his expectations, and hoped that this non-binding agreement would continue the spirit of the show.

The MOU represents a crucial step on the journey these key partners have embarked upon to expand their footprint in Saudi Arabia, with GAMI's invaluable guidance and support. Driven by both internal and external security needs, Saudi Arabia is shaking up its defence and security sector to reflect the Kingdom's desire for self reliance and to affirm defence and security spending, as a significant contributor to its GDP, with a goal of contributing \$4.5 billion to GDP by 2030.



The companies that signed up comprised Raytheon, USA; CPC, Brazil; Expel Systems, Spain; Glock International, Austria; Hanwa, Republic of Korea; L3Harris Technologies, USA; Leonardo, Italy; LiGNex1, South Korea; MacJee, Brazil; Milkor, South Africa; Naval Group, France; NORINCO, China. Senior representatives of the companies were presented with the MoU that they had signed up to.

▲ HE Khalid Al-Falih and with the dozen internationals at yesterday's ceremony



Saudia Aerospace Engineering Industries (SAEI)

Your partner for MRO in the Middle East

Over the past six decades, SAEI has established itself as one of the largest and most experienced in the MENA region. As part of the SAUDIA Group, we have been a cornerstone for the growth and development of the aviation industry in the Kingdom of Saudi Arabia.

Now, SAEI is expanding to our state-of-the-art MRO Village at the King Abdul-Aziz Airport, Saudi Arabia. The one million square meter facility incorporates 11 hangars, as well as 26 engine and component shops, a 43,000 square meter supply chain and warehouse, as well as the largest test-cell for engine testing in the region.



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