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Defence Industry

Rheinmetall and BAE Systems Launch UK Based Military Vehicle Joint Venture - Rheinmetall BAE Systems Land

RBSL intends to play a major role in manufacturing the Boxer 8x8 for the British Army's Mechanised Infantry Vehicle (MIV) programme and other strategic combat vehicle programmes, while also providing support to the British Army's in-service bridging and armoured vehicle fleets.

Defence Secretary Penny Mordaunt said:

"This announcement is a clear vote of confidence in the UK's defence industry as a world-leader in designing, supplying and supporting military vehicles.

"This exciting venture clearly demonstrates how Defence sits at the heart of the prosperity agenda. Its benefits will be felt in the West Midlands and across the UK defence supply chain, creating jobs, boosting exports and guaranteeing our technical skills base into the future."

RBSL will draw on Rheinmetall's broader military vehicle technologies combined with the additional capabilities and systems brought to the Joint Venture by BAE Systems' Land UK business, such as Trojan, Terrier, Warrior, military bridging and the AS90 self-propelled artillery system. RBSL will have the potential to create hundreds of additional UK jobs, both in Telford and the wider supply chain.

Peter Hardisty, formerly of Rheinmetall UK, has been appointed as Managing Director of the new company. He said:

"RBSL is a new business drawing on the significant strengths and expertise of both BAE Systems Land UK and Rheinmetall. Our employees in Telford, Bristol, and Washington (UK) have a valuable skill set and extensive experience in combat vehicle engineering. With new orders, we shall be able to sustain these capabilities and expand over the coming years, seeking new opportunities in the UK and overseas."

The new management team that will lead RBSL into the future also includes Carrie White as Finance Director and Phil Simon as Operations Director, both of whom join from BAE Systems.

Regulatory approval for the joint venture was granted on 13 June 2019.

Defence Industry

SMEs collaborate to develop thermal signature defence solution

A partnership between three Australian SMEs is helping deliver training targets equipped with controlled thermal signatures to the Australian Defence Force.A world-first in commercial viability and agility, and a new capability for the Australian Government, the product enables army personnel to successfully engage practice targets using remote SMArt155 Precision Guided Munitions.

The new REDARC Thermal Signature Enhancement Kit (RTSEK) ensures weapon sensors can distinguish target vehicles as being operational without the need for complex or hazardous infrastructure. The solution also minimises risk to the environment and those using the equipment.

It is the result of a collaboration between two Adelaide companies – REDARC and Form Cut – and New South Wales-based Intelli Particle.

The partnership last week won the Teaming Award at the 2019 Defence Teaming Centre Awards.

Establishing realistic thermal vehicle signatures to guide the SMArt155 to its practice target would have typically required a generous time frame to both acquire and set-up an expensive system of high-voltage heat mats and large generators.

But the RTSEK delivers an innovative solution without all the complex infrastructure and additional costs.

South Australian automotive electronics company REDARC has established itself as a key SME in the Australian Defence sector over the past five years.

REDARC identified a potential solution and partnered with New South Wales start-up Intelli Particle, which manufactures carbon and graphite formulations that produce heat under electrical charge.

Through local in-house testing, the combined REDARC and Intelli Particle team discovered that a new controlled thermal signature identifiable to weapon sensors could be created.

REDARC approached manufacturer Form Cut with the solution, having previously collaborated with them commercially.

REDARC Managing Director Anthony Kittel said the Lonsdale company was well positioned to support unique Defence requirements now and into the future.

"The award is a great acknowledgment of what can be achieved when successfully combining the technologies of multiple SMEs," he said.

South Australian industrial design and manufacturing company Form Cut has scheduled more production of the controlled thermal signature solutions for the ADF in the coming months.

Also based at Lonsdale in Adelaide's southern suburbs, FORM CUT was established in 1999 and specialises in the design and production of gasket, sealing, shielding and packaging solutions in industries including defence, mining, space and medical.

"When REDARC identified a new product opportunity, they sought to team with us to develop a product that exceeded the expectations of the defence customer in terms of cost, timeframe and innovation," said Form Cut CEO and senior industrial designer Karl Falzon.

"The project provided the perfect opportunity for Form Cut to demonstrate the full scope of its capabilities, problem-solving approach and commercial acumen."

Form Cut contributed to the design, specification and production of thermal insulation components and the development and application of conductive polymers, as well as assembling the final product.

The company has confirmed ongoing production and further development of the technology, with plans to export internationally.

Defence Industry

U.S. Army awards BAE Systems $45 Million contract for Extended Range Cannon Artillery prototype

The U.S. Army has awarded BAE Systems a $45 million contract for the Extended Range Cannon Artillery (ERCA) Increment 1 prototype with the purpose of increasing the range and rate of fire on current and future M109A7 self-propelled howitzers.

The development of ERCA is in collaboration with the Army's Combat Capabilities Development Command (CCDC) Armaments Center.

This prototype phase will address capability gaps in the Army's indirect fire systems and improve the rate and range of fire with the development of power distribution software and hardware integration solutions. ERCA will be integrated onto the M109A7 and will require the M109A7's current 39-caliber turret to be replaced with a 58-caliber, 30-foot long gun barrel with the objective of creating firepower double the current range.

"ERCA is a significant technological step forward for the Army's artillery portfolio," said Scott Davis, vice president or programs, BAE Systems' Combat Vehicles business. "We were selected based on our years of experience in the development of self-propelled howitzer systems. Long-range precision fire is a top priority for the Army, and we are pleased to be a partner in efforts to equip soldiers with the latest technology."

The development program aims to provide the warfighter with extended range while maintaining the weight found in current systems to minimize performance impacts on the chassis. Under separate contracts, BAE Systems is also developing precision guidance kits with anti-jamming capabilities (PGK-AJ) that can operate in the challenging ERCA firing environment. PGK-AJ is compatible with existing and new long-range rounds for multiple firing platforms, including the M109 self-propelled howitzer.

BAE Systems is currently producing the M109A7 configuration for the Army in the low-rate initial production phase.

Development work on ERCA Self Propelled Howitzer will take place at the Army's Picatinny Arsenal and BAE Systems' facilities in York, Pennsylvania; Sterling Heights, Michigan and Minneapolis, Minnesota.

Defence Industry

Rheinmetall modernizing Puma infantry fighting vehicle and other equipment for NATO spearhead VJTF 2023

Rheinmetall is taking on a key role in equipping the NATO spearhead Very High Joint Readiness Task Force 2023 (VJTF 2023), which will be furnished by the German Bundeswehr. Contracts have now been awarded to a consortium for the "System Panzergrenadier VJTF 2023" project, in which Rheinmetall's share comes to over €470 million, including value added tax. Work has already begun and is set to continue through to the end of the VJTF readiness phase in 2024.

On 11 July 2019, the Federal Office for Bundeswehr Equipment, Information Technology and In-service Support awarded a corresponding contract to ARGE Puma, a consortium consisting of Puma manufacturer PSM Projekt System Management GmbH – a joint venture in which Rheinmetall holds a 50% stake – and Rheinmetall Electronics GmbH. Subcontracting within ARGE will take place shortly.

"System Panzergrenadier" links the Puma infantry fighting vehicle – the mainstay of the German Army's mechanized infantry – with the modular Future Soldier – Expanded System (IdZ-ES) soldier system, in an advanced, network-enabled warfare environment.

Included in the "System Panzergrenadier VJTF 2023" package is a comprehensive combat performance upgrade of forty-one Puma infantry fighting vehicles, coupled with additional measures for improving communication between the infantry fighting vehicles and dismounted infantrymen. For Rheinmetall, the total value of this order comes to €258.3 million, including value added tax. The systems will be delivered at the end of 2020/beginning of 2021.

Among other things, the package also encompasses complete logistic support of the VJTF Pumas for a period of five years, i.e. spare parts, special tools and spare parts logistics. Also included is a new generation of digital radios for the infantry fighting vehicles as well as integration of the MELLS multirole light guided missile system, significantly expanding the capabilities spectrum of Puma. New daylight and thermal imaging cameras and a colour display feature in the upgrade too. Optimized day and night vision will increase the range of reconnaissance, while simultaneously widening the crew's field of view. Furthermore, new training resources will enable the unit to train in a highly realistic

manner.

Closely linked to the hardware of the new optronic systems and monitors for the infantry fighting vehicles is the contract for development of the "Vision Enhancement, Chassis", which is already underway. Including value added tax, it represents sales of €67.2 million, including value added tax.

Furthermore, Rheinmetall is equipping the mechanized infantry companies of the VJTF 2023 with "TacNet", its battle management system (BMS). In addition, an initial lot of ten platoon versions of the "Future Soldier – Expanded System" soldier system will be brought up to modern VJTF 2023 standard. Improved communication between the Puma crew and the dismounted infantry section will result in a continuously updated, uniform common operational picture. This way, Rheinmetall gives mechanized infantry a command-and-control capability that extends from the company commander to the individual rifleman on the ground. These modernization moves will mean incoming orders for Rheinmetall worth €146.5 million, including value added tax.

"System Panzergrenadier VJTF 2023" substantially enhances the fighting strength of the VJTF 2023. At the same time, Rheinmetall views these measures as a template for further modernization and digitization of the Bundeswehr.

Modernizing the command and control capabilities of complete mechanized infantry companies and bringing the IdZ-ES up to VJTF 2023 standard involves modifying the hardware and software. Dispensing with the "electronic backbone" is one key innovation. Others include advanced new radio systems for dismounted troops and infantry fighting vehicles, which result in improved command capabilities as well as enabling secure transmission of large amounts of data.

During development of the new vision systems and their integration into the Puma, an initial lot of five sets of prototype assemblies will be fabricated and integrated into five standard vehicles. These tasks are to be complete by 2021. Verification will then take place at the Bundeswehr's technical centres by 2023.

Furthermore, digitization of the vision technology will proceed in tandem with implementation of NATO Generic Vehicle Architecture (NGVA) in the Puma. It forms the foundation for the future sensor-to-shooter nexus. Already underway, the networking of sensors and effectors in individual vehicles will soon enable the networking of sensors and effectors in entire units and formations. As a result, the Puma will be one of the world's first digitized combat vehicles.

Robots

Kapitan UGV has passed the tests in Russia

Russian engineering troops will soon begin to get into service the newest Kapitan Small-sized Unmanned Ground Vehicle (UGV), which has already passed the full cycle of field tests. Ministry of Defense of the Russian Federation reports about it.

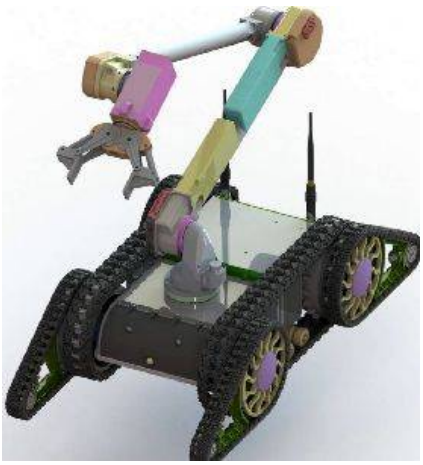
The newest engineering robot Kapitan has a modular layout and, depending on the tasks performed, can use various special equipment, which, thanks to a special docking station, can be installed within a few minutes. Among the tasks that can be performed using this platform are mine clearance, visual reconnaissance, in the future it is planned to deploy electronic warfare equipment on it.

UGV is a miniature tracked vehicle with a height of not more than 50 cm. The case contains control units and batteries. A special docking station allows operators to place a hand manipulator or reconnaissance equipment on the body, including removable systems that allows to conduct audio and visual reconnaissance of the terrain, including both in normal and infrared modes. Cameras can be additionally equipped with 40x optical zoom.

The ability to "see" in any weather and in any light or without it, will allow the use of Kapitan UGV in the survey of premises, basements, caves and various shelters.

To perform demining work, a robotic arm is installed on the robot, which has five degrees of freedom. With this device, Kapitan is able to lift and move cargo up to 7 kg.

In autonomous mode, the robot can move away from the remote control in an open area up to one kilometer away, and in urban areas it can reach up to 500 m. A single battery charge lasts six hours of full-time work. The maximum speed of movement on the middle terrain is 5.5 km/h. The control is wireless, but there is a function to connect an optical fiber cable up to 200 meters long.



Defence Industry

CZECH REPUBLIC SIGNED THE ACQUISITION CONTRACT FOR 62 TITUS

Nexter, a KNDS company, European leader in land defense, partook today to the signature ceremony of the acquisition of 62 TITUS® armored vehicles at the Czech Ministry of Defense (MoD).

TITUS® is the latest generation of 6x6 armored vehicles, conceived by Nexter to answer the support and transport vehicles needs of modern armies offering high level of protection, mobility and versatility, as well as controlled ownership cost. TITUS®' mobility chain was developed in cooperation with Czech supplier Tatra Trucks. A "Homeland Security" kit is available, answering more specifically to the needs of police and security forces.

Czech MoD's order is about 3 variants of TITUS®: Commanding Post (CP), Transmissions, and Artillery Fire Coordination Post.

ELDIS (CSG Group), Nexter's partner for this Czech Republic project, carries the main contract with the MoD and will organize the licensed local production. This order consecrates a successful European industrial cooperation, combining in a balanced manner the know-how of all involved partners.

Nexter's teams are proud to participate in the armed forces' modernization of a partner of growing importance to France within NATO, and express their gratitude towards the Czech Republic for their trust.