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Contracts

Jenoptik Participating in the Modernization of the Leopard 2 Tank for the Bundeswehr

The Jenoptik Defense & Civil Systems segment will provide digital electric gun turret drive systems to a total value of more than 12 million euros.

Deliveries will start in mid-2018 and continue until 2022. Jenoptikrs Electric Gun Turret Drive Systems GTdrive® are for the most part maintenance-free and generate less waste heat in the tank interior. They generally align the turret and weapon of the tank stably while driving.

The refitting of the Leopard 2 tanks is being carried out by a large German systems provider for the Bundeswehr. With state-of-the-art electrical gun turret drives, Jenoptik is the global partner for the upgrade of the Leopard 2, having also received orders in recent years for the modernization and new production programs of the tank. Jenoptik is working closely with national and international system providers on the basis of long-term partnerships.

Stabilization systems for sensors and weapon systems on vehicle-based platforms

Stabilization systems compensate for vehicle movements, allowing you to continuously keep your target in sight at all time.

The electromechanical stabilization systems align and move sensors or weapon systems mounted on vehicle-based platforms. These platforms could be on military ground vehicles, but also on ships or helicopters. Ground vehicles are often deployed on uneven terrain, while helicopters have to cope with turbulence. The stabilization technology from Jenoptik responds with precision, speed and accuracy, compensating for vehicle movements and thus allowing a target to be aimed at continuously, providing optimum support for your defense.

Jenoptik develops and produces compact, stabilized carrier platforms, drive systems for turrets and weapons, and mirror head units to stabilize the line of sight on vehicles. This technologically sophisticated products has proven quality in military and civilian applications over many years.

Jenoptik design completely new systems or upgrade existing stabilization systems to meet your exact specifications. In doing so, it supply customer with an optimized system of electric drive technology (motors and gears) and sensors (gyros and acceleration sensors), as well as control technology (power electronics) – all from a single source.

Jenoptik products are characterized by fast and precise position control, excellent reliability and high level of durability. It consume minimal energy, as well as being exceptionally low maintenance.

Jenoptiks stabilization systems have been used in various platforms for a number of years, including the Leopard 2, the Puma and the NATO NH90 transport helicopter.

Army

The new Typhoon-VDV 4x4 protected vehicle is being tested in Russia

The Department of Information and Communications of the Ministry of Defense of Russia reported that the new Typhoon-VDV 4x4 protected vehicle is being tested at special sites and test ranges.

The main advantage of the new vehicle in addition to increased security of personnel and equipment with a modern weapons complex, will be its ability to parachute airborne.

Serial production of such vehicles for the airborne troops is planned to begin in 2019 after the ending of tests and inspections.

K-4386 Typhoon-VDV 4x4 is a part of the family KAMAZ Typhoon for airborne troops, which has a mine protection.

The development of the project for a new armored vehicle began in late 2015, and five months later the first prototype was produced.

Among the requirements for the vehicle - the possibility of parachute landing, as well as protection against small arms and mines.

The vehicle is driven by a KAMAZ 610.10-350 350hp diesel engine - produced under Cummins license in Russia. The power allows the vehicle to move at top speed of 105 km/h with a range of up to 1200 km.

As an armament on the Typhoon-VDV can be installed Epoch remotely-controlled veapon station with 2A42 30-mm gun, develped by the Central Research Institute BUREVESTNIK.

Defence Industry

BAE Systems is working on the ACV 1.1 program

BAE Systems has submitted its bid for the Amphibious Combat Vehicle (ACV) 1.1 down-select with an offering that has superior mobility, survivability and increased carry and payload.

BAE Systems, originally selected for the engineering and manufacturing development phase of the ACV 1.1 program in November 2015, delivered 16 prototypes to the U.S. Marine Corps on schedule, and has gone through several months of extensive government testing of the vehicles. The Marine Corps is scheduled to make a low-rate initial production award to a single contractor in June 2018.

BAE Systems was teamed with IVECO Defence Vehicles, which brings additional proven experience having designed and built more than 30,000 multi-purpose, protected, and armored military vehicles in service today. With seven years of ACV investment behind this two companies, it developed a solution, built from the ground up as an amphibious vehicle that offers superior mobility and survivability to enable Marines to complete their missions safely and effectively.

BAE Systems's offering has been validated through thousands of miles of U.S. Government testing. The testing provided proof that the vehicle can launch from and recover to an amphibious ship followed by a 12 nautical mile open ocean swim.

"We are honored to continue our legacy of providing the Marine Corps with superior amphibious capabilities," said John Swift, program director for amphibious combat vehicles at BAE Systems. "Our ACV team has worked diligently to achieve superior U.S. Government test results that meet objective requirements for land and sea mobility, and protection. I'm proud of all the team's hard work that was needed to achieve this."

Robots

HDT Global Hunter WOLF Awarded Phase II SMET Contract

SOLON, Ohio -- HDT Global (HDT), a leading provider of highly engineered solutions for extreme environments across military, public and private sectors, announced today its Wheeled Offload Logistics Follower (WOLF) robotic system has been awarded a Phase II Squad Multipurpose Equipment Transport Program contract. The HDT Hunter WOLF system closely matches infantry mobility and can traverse narrow trails, steep slopes and dense jungles, while carrying up to 1000 lbs. of cargo for more than 72 hours without resupply.

Under development since 2012 to meet the requirements for the Army SMET Program, the HDT Hunter WOLF has undergone extensive evaluations and trials, including the most recent SMET Phase I evaluation. The HDT Hunter WOLF system completed the required 60-mile endurance trial in 23 hours, nearly six hours faster than the closest competitor! The system's successful performance demonstrates that the HDT Hunter WOLF is a force multiplier that not only supports the infantry mission, but actually provides soldiers with enhanced capability to travel further and arrive less fatigued.

"HDT Global is excited that our HDT Hunter WOLF robotic system, the ultimate SMET solution, is advancing to Phase II of the SMET Program. For years, HDT has been a leader in innovative robotic solutions. The HDT Hunter WOLF is an example of our continued research and development dedicated to creating solutions that solve the challenges our warfighters face and to providing proven solutions for extreme environments," said Sean Bond, HDT Global President and CEO.

"We are extremely proud of the tireless commitment and dedication our technical team has shown throughout HDT Hunter WOLF development. The system's unparalleled performance during Phase I trials were a testament to their work. The benefit, should we continue to succeed through the SMET selection process, will be to the warfighters who desperately need these systems in the field as soon as possible," added Dr. Tom Van Doren, Vice President of HDT Global Blade Works. HDT's Blade Works organization is comprised of more than 60 engineers, scientists, and technicians focused on expeditionary capability (reduced cube, weight, deployment time and increased power, durability and ruggedness), designing and developing new ways to solve the challenges warfighters face in remote, austere locations.

The HDT Hunter WOLF features a JP-8/electric hybrid powertrain enabling the vehicle's "silent drive" and "silent watch" capability. The system's modular architecture and full compliance with the Army's interoperability protocols makes the vehicle easy to adapt to mission requirements with a wide variety of mission specific kits while reducing life cycle costs.
The incredibly capable Hunter WOLF key features:

- Carries 1,000 lbs for more than 100 miles with

internal fuel
- 6 electrically driven wheels, skid steer
- 130 peak horsepower
- Climbs 70% grades
- 14 mph top speed
- Can be towed at 50 mph
- 20 kW onboard generator means never stopping to recharge drive batteries
- 3 kW power offload

Training And Simulators

SAAB Receives Order For Upgrade Of German Army Vehicle Simulators

Defence and security company Saab has received an order from the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support, BAAINBw, for upgrade of the German Army's vehicle simulators. The total order value is SEK 107 million. The upgrade programme will commence in 2018.

For this upgrade Saab will provide new software and hardware to German Army vehicles and tanks operating the laser simulator BT 46, such as Leopard, Fennek, Marder and Wiesel. The new standard for laser codes, SISO, will be implemented in the upgrade, meaning that the German Army will be interoperable with most of the European countries. The number of multinational exercises is increasing and that's why more and more countries choose the SISO standard. In the near future, there will be 12 countries in Europe using the new standard.

"An effect of the security situation in Europe is that more and more of our customers emphasize that interoperability is extremely important in order to carry out multinational exercises of high quality. We have a long and very good cooperation with the German customer and this order strengthens our relationship and Saab's presence in Germany", says Esa Thegstrцm, head of business unit Training & Simulation at Saabrs business area Dynamics.

"The German Army has been a customer on the laser simulator BT 46 since 1985, and during the years we have delivered the system for almost all weapons on German fighting vehicles and main battle tanks. It is a proven simulator system for gunnery training with different weapons and for realistic and tactical combat exercises in field", says Gцrgen Johansson, head of Saab business area Dynamics.

The BT 46 system has been delivered to more than 20 countries supporting both combat training with vehicles and their weapons. More than 7000 vehicle simulators have been delivered for more than 100 applications worldwide.

Defence Industry

Protection of BTR-87 8x8 will increase due to the use of ceramics and titanium

The Russian BTR-87 Armored Personnel Carrier will receive addon protective panels with special ceramics and titanium, the Vyksa's "Plant of Corps" reports.

This development of the "Military-Industrial Company" was first presented at the international "Army 2017" military-technical forum.

The armored car is considered "a radical modernization of the well-known family of BTR-80 and BTR-82 with qualitatively new characteristics". The vehicles also significantly strengthened mine protection.

"The mounted weapon station with a 30-mm gun and a coaxial 7.62-mm machine gun looks like the one that is installed on the vehicles that is being new manufactured. However, as you can see, the main armament is reinforced with 4 Kornet Anti-Tank Guided Missiles. The sighting complex includes a thermal imager and a laser range finder", the author of the article Lev Romanov writes.

BTR-87 APC also has increased mobility: "thanks to the engine with 312 hp, the Armored Personnel Carrier has a maximum speed of 90 km/h; water speed is one of the highest for vehicles of this class - up to 14 km/h, road range - 800 km", the publication said.

It is also important that the design of the BTR-87 is unified by the applied units and assemblies and can be produced in all company's factories.

Defence Industry

Supacat Special Operations Vehicles Accepted in New Zealand

Supacat has announced that the fleet of Special Operations Vehicles – Mobility Heavy (SOV-MH) has been accepted by the New Zealand Ministry of Defence. The fleet goes into service with the New Zealand Defence Force early this year.

The new SOV-MH vehicles are based on the latest MkII version of Supacat's HMT Extenda and provide a high level of commonality with the equivalent vehicles with other Special Forces. New Zealand is a new customer for Supacat and the latest defence force to join the HMT family.

Designed for, and used by, the world's elite Special Forces, the HMT Extenda is unique in being convertible to either a 4Ч4 or 6Ч6 configuration to meet different operational requirements. Its open architecture provides for various levels of protection and great variety in the roles and missions for which it can be configured.

Michael Halloran, Managing Director Asia Pacific said, "We are very pleased to have achieved our first product export from the Australian office. It is a great credit to the Supacat Team Australia members that we have delivered this fleet on time and to budget."

The SOV-MH vehicles were manufactured at Supacat's existing assembly facilities in Australia using Supacat Team Australia members to manufacture and assemble the vehicle. This represents the first time that Supacat Team Australia members have exported completed vehicles and complements the opportunities already emerging for Australian suppliers to enter Supacat's global supply chains.

Defence Industry

Belarus received a new batch of Chinese CS/VN3 armored vehicles

As reported by the VoentTV television channel of the Ministry of Defense of Belarus, on Jan. 18, 2018, a second shipment of Chinese CS/VN3 Dajiang light armored vehicles was delivered to Minsk by a Chinese transport aircraft, which was transferred to the Belarusian armed forces through military assistance from the Ministry of Defense of the China.

The first consignment of five CS/VN3 armored vehicles, delivered by the Chinese, was delivered to Belarus on June 20, 2017. These five vehicles then were tested in the battalion of the 361st Security and Maintenance Base of the Ministry of Defense of Belarus, including participation in the exercises "West-2017". According to unofficial sources, the China plans to transfer 30 of these vehicles to Byelorussia, which received the name "Dragon" in Belarus.

CS/VN3 armored vehicles have been developed and serially produced approximately from 2013 by Chongqing Tiema Industries Group Co. (Plant No. 256) in Chongqing, which is part of the Chinese corporation China North Industries Group Corporation (NORINCO). CS/VN3 vrhicles in different versions are in service with the PLA and the People's Armed Police of the China in relatively small quantities, but Belarus is the first known to their foreign recipient.

Robots

Soratnik UCGV was tested in Syria

It became known that the Soratnik Unmanned Combat Ground Vehicle (UCGV) was tested in conditions that were as close as possible to combat. It is reported that the tests took place in Syria. The air temperature was extremely hot.

"Soratnik UCGV was tested in conditions as close as possible to combat. These tests confirmed the characteristics of the complex and proved the possibility of using this robotic system at an air temperature above 30 degrees Celsius," the press service of the Kalashnikov concern reported.

They clarified that the scientific and technical experience that was obtained in the development and creation of Soratnik, as well as the results of its tests, will form the basis of advanced combat robotic complexes.

The armored tracked vehicle Soratnik is designed for reconnaissance, retransmission, patrolling and guarding of territories and important facilities and demining. Soratnik operates in three modes of control, the weight of the UCGV does not exceed 7 tons, it can reach speeds of up to 40 km/h. With remote control and line of sight, the range of the vehicle is up to 10 km.

On the tracked platform can be integrated guns of caliber of 7.62 mm and 12.7 mm, as well as an AG-17A automatic grenade launcher of the caliber of 30 mm. The weapon station is equipped with gyroscopic stabilization of weapons and is able to independently detect, track and destroy targets, determining their type. In addition, it is possible to install eight anti-tank guided missiles of the type Kornet-EM on the Soratnik. The UCGV can also work in conjunction with drone.

Defence Industry

BAE Systems introduces next evolution of Infantry Fighting Vehicle with new CV90 MkIV

Today at the International Armoured Vehicles Conference in London, BAE Systems presented the next phase of development for the CV90 Infantry Fighting Vehicle (IFV) with the launch of the new CV90 MkIV.

This fifth generation of the company's combat-proven IFV family represents the next step for the CV90 concept.

The new MkIV offers substantial capability upgrades, including increased drive train capabilities and active damping technology to improve battlefield speeds and handling. The new vehicle also features the latest NATO-standard Electronic Architecture to meet customer demands for sensor integration and the implementation of autonomous systems.

BAE Systems intends to offer the CV90 MkIV to the Czech Republic in the ongoing armoured vehicle competition to replace the Czech Armyrs legacy fleet of BMP-II IFVs.

"We are proud and excited to present the next step in the development of CV90," said Tommy Gustafsson-Rask, vice president and general manager for BAE Systems' Hдgglunds business. "The MkIV will now be available to both current and future users of the CV90, who can take full advantage of this combat-proven vehicle's ongoing development and benefit from these new capabilities. This approach provides the leading combination of a proven low-risk solution for the most modern IFV for future growth."

The CV90 IFV is a modern, adaptable, and combat-proven vehicle with 1,280 vehicles in 15 variants sold to seven nations, including four NATO allies. The most recent generation of the CV90, under delivery for the Norwegian Army, is one of the most modern IFVs in production in the world.

The CV90 MkIV includes a new Scania engine with up to 1,000 horsepower and the latest upgraded X300 heavy-duty transmission. The Gross Vehicle Weight Rating is increased from 35 tonnes to 37 tonnes, meaning users will benefit from two tonnes of extra payload without a decrease in vehicle agility, with the same level of protection. This gives any users an unrivalled amount of potential for future growth.

The MkIV capability upgrades also enable the full implementation of BAE Systems' iFighting™ concept. iFighting™ — or intelligent fighting — is the company's vision for the future complex battlefield. iFighting™ supports the vehicle's crew with significantly enhanced situational awareness, aiding the decision making process. This safeguards the vigilance and the endurance of the crew, while ensuring peak performance for the whole system. iFighting™ achieves improved ergonomics, more advanced autonomous support, augmented reality, and the possibility of remote operation.

The CV90 is currently in use in Denmark, Estonia, Finland, Norway, Sweden, Switzerland, and The Netherlands.

Future Technologies

ADS GmbH defines the next generation of Active Protection Systems by the rigorous application of highest safety standards

ADS Gesellschaft fьr aktive Schutzsysteme mbH (ADS GmbH), the pioneer in reliable and precise hard-kill Active Protection Systems (APS), today announces it has achieved a world first; the design and development of an APS to the highest safety standard, IEC61508. In 2018 ADS-Gen3 plans to be certified to IEC61508 SIL 3 (Safety Integrity Level), to be independently assessed by auditing firm tms (technisch-mathematische studiengesellschaft mbH) using the German Armed Forces' assessment methodology for weaponry safety.

After seven years of risk-assessed design, development and system testing, ADS-Gen3 delivers world leading consistent APS defensive performance, validating defensive operation as succeeding in at least 999 of 1,000 system responses, and potentially as high as 9,999 in 10,000 system actions. IEC61508 SIL 3 is the same safety integrity level used to ensure the explosives in our airbags in our cars don't fire inadvertently, yet respond in critical situations exactly when needed in the event of an accident.

Further, the system is designed to run continuously safely, thus assuring that dismounted crew or support infantry are not put at unnecessary risk by the APS automated defensive firing capabilities. The reliability of functional safety in ADS-Gen3 aims at a level higher than daily used elevators, critical components in public transport or traffic light controls.

"Functional safety is not about whether a system is working well in its field and delivering an expected performance – it's about whether it is safe for all of us to use such system – as operator or as any human being which simply happens to be nearby", clarifies Dr. Ronald Meixner, lead engineer for the ADS design.

The combination of defensive performance tested by the NATO STANAG group coupled with the highest degree of regard for the IEC61508 safety of those around an APS defended vehicle, defines a new era for APS design. The achievement of these different APS safety as well as system performance levels brings the same level of confidence we give to our car design to keep us safe, to the APS sector, marking a fundamental shift from new technology adoption caution to an assurance of the familiar and proven.

"With this announcement ADS GmbH confirms its technical pioneering leadership in APS design and development," said Stefan Haase, CEO, "by bringing our automotive engineering heritage and discipline to the APS sector we expect to reduce market adoption timeframes, enabling the rapid deployment of APS's to defend sorely pressed vehicle assets from the spectre of the insurgent with an RPG or ATGM threats."

About ADS GmbH

ADS Gesellschaft fьr aktive Schutzsysteme mbH, is a world leading pioneer in reliable and precise hard-kill Active Protection Systems (APSs). Part of the Rheinmetall group of companies, ADS GmbH brings the rigorous engineering principles of the automotive sector to the defence sector and specifically to APS's. As an innovator the company is the world's first APS developer to apply safety-critical design principles to APS development to deliver predictable and safe system performance.

Defence Industry

ATI Announces New Long-Term Agreements With General Dynamics Land Systems

PITTSBURGH -- Allegheny Technologies Incorporated announced that it has signed two new Long-Term Pricing Agreements (LTPAs) with General Dynamics (GD) Land Systems to be the preferred supplier of titanium plate for the Abrams tank (United States) and the AJAX specialist vehicle (United Kingdom). The Abrams LTPA runs through 2019 while the AJAX LTPA runs through 2021.

"We are pleased to enter into these agreements with GD Land Systems, marking the beginning of a new relationship with this strategic global customer" said Rich Harshman, ATI's Chairman, President and Chief Executive Officer. "ATI is forging a strong technology connection with GD and together we are developing specialty materials and components for improved protection and light-weighting of next-generation military vehicles.

"We believe these LTPAs recognize our leading technologies, broad manufacturing capabilities, and operational reliability. We continue to see opportunities to significantly grow our differentiated specialty materials and components business within the worldwide Defense market," Harshman stated.

"Revenue from these LTPAs will total approximately $75 million combined over the contract periods. This marks a significant increase in the Flat Rolled Products segment's strategic Aerospace and Defense market sales, which are an integral part of our ongoing portfolio transformation toward more high-value products," said Bob Wetherbee, Executive Vice President, Flat Rolled Products Group.

Production of the titanium products will begin at ATI's melt facility in Richland, WA and will be completed at ATI's Specialty Plate facility in Washington, PA.

This news release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on management's current expectations and include known and unknown risks, uncertainties and other factors, many of which we are unable to predict or control, that may cause our actual results, performance or achievements to materially differ from those expressed or implied in the forward-looking statements. Additional information concerning factors that could cause actual results to differ materially from those projected in the forward-looking statements is contained in our filings with the Securities and Exchange Commission. We assume no duty to update our forward-looking statements.