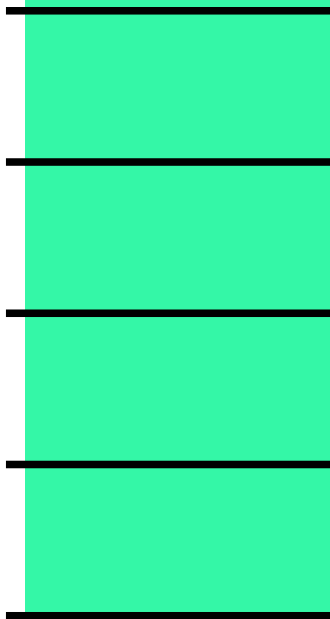


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- GCS sets a new standard in mechanical mine clearance



Defence Industry

The Dutch armed forces select Rheinmetall to modernize their Bergepanzer 3 Bfñfel

Rheinmetall is to modernize the Dutch military's fleet of Bergepanzer 3 Bfñfel ('buffalo') armoured recovery vehicles. A contract to this effect was signed on 18 April 2019 at Soesterberg, a military base near Utrecht. In a first phase, four vehicles will undergo a combat performance upgrade. The order is worth a double-digit million-euro figure. In a second phase, a further 21 vehicles are to undergo corresponding modernization. This option, also worth a figure in the double-digit euro range, already features in the contract.

Starting immediately, Rheinmetall will completely overhaul the Royal Netherlands Army's Bergepanzer 3 Bfñfel ARVs, bringing them up to the latest technological and tactical standard. This will extend the service life of these tried-and-tested combat support vehicles – developed by Rheinmetall on the basis of the Leopard 2 chassis – through to the year 2040. The Dutch armed forces will take delivery of the first vehicles at the beginning of 2021.

Modernization work will take place at Rheinmetall locations in Germany as well as in Ede in the Netherlands. It will include a complete overhaul of the individual armoured recovery vehicles and a new digital operating concept; the installation of advanced visualization technology; mission packages featuring ballistic and mine protection; and new battlefield recovery equipment together as well as a universal transport platform. Also included in the contract are technical documentation, training and other services.

This service life extension will give the Dutch armed forces a reconfigured state-of-the-art ARV with significant growth potential. New force protection features both on and in the vehicle will keep the crew extremely safe from modern battlefield threats. Cutting-edge visualization systems, digital operating elements and command systems will support the crew while carrying out their tasks. Furthermore, new battlefield recovery equipment will boost the vehicle's tactical effectiveness. It will be transferred to the rear section of the vehicle. This will let the crew hook up to a damaged Royal Dutch Army vehicle such as the Bushmaster, Boxer, CV 90 infantry fighting vehicle, PzH 2000 self-propelled howitzer, Leguan bridge-laying tank, Kodiak combat engineering vehicle or the Leopard 2 main battle tank without having to leave the safety of the fighting compartment, before towing it from the battlefield at high speed in forward gear. In addition, the modified version of the Bergepanzer 3 Bfñfel ARV will feature a flexible-use universal transport platform mounted on the rear section of the vehicle. To cite just one example, this can be used for carrying equipment for recovering other vehicles. The new equipment has already demonstrated its effectiveness during deployed operations.

This contract confirms the emergence of a new standard for modern armoured recovery vehicles. As

recently as December 2018, the Bundeswehr contracted with Rheinmetall to modernize its fleet of Bergepanzer 3 vehicles, ensuring they remain a match for current and future operational scenarios. Similar mission configurations are in service with the armed forces of NATO member Canada as well as Sweden.

Already underway, the service life extension of the Royal Netherlands Army's armoured recovery vehicles underscores once again Rheinmetall's comprehensive expertise when it comes to the globe-spanning Leopard 2 family. This expertise extends from maintenance and modernization programmes to advanced armament concepts, and from the production and technical knowledge of the system's original equipment manufacturer right through to comprehensive technical and logistic support for entire vehicle fleets – including service support during deployed operations. The portfolio of the Düsseldorf-based high-tech group for mobility and security also includes training and simulation solutions for Leopard 2 crews.



Defence Industry

GCS sets a new standard in mechanical mine clearance



Last month, GCS had the opportunity to test and demonstrate the maximum survivability of one of its remote-controlled multi-purpose machines, the GCS-200. Equipped with the T-200 Tiller attachment, the machine underwent a rigorous testing protocol by the Croatian Mine Action Centre – Centre for Testing, Development and Training (CROMAC-CTDT). The GCS-200 delivered an outstanding performance and successfully neutralised 22 mines. As a result, the GCS-200 received certification from CROMAC for safe, efficient and effective mechanical demining.

THE TEAM GETS READY

Damir Stimac, GCS Sales Manager Croatia, led and coordinated the project with CROMAC-CTDT at the Cerovac test site, around 60km south of Zagreb. "I am feeling very confident about the days ahead," said Stimac, "the GCS-200 remote-controlled platform represents the latest technology in mechanical mine clearance and outperforms any similar mechanical system on the market." The GCS-200 machine and the tiller attachment were transported to the test site from Germany by Christopher Thompson (our GCS-200 Senior Technician) and a team of GCS experts, with a fully equipped mobile service van. Upon arrival, the CROMAC-CTDT test leader, Mr. Ivan Steker conducted a pre-test inspection of the GCS-200 machine and

supporting equipment and the green light was given to proceed with the testing. The tests were conducted in accordance with the CWA15044:2009 and IMAS 09.50 for safe, efficient and effective mechanical demining.

PERFORMANCE TESTS

Following careful preparation of the site, the GCS-200 went up against the first round of tests – a thorough evaluation of the performance of the machine in three different soil topologies (sand, gravel and topsoil). The GCS-200 performed excellently in the three consecutive test lanes, demonstrating a continuous and consistent penetration on all soil types and at required depths at efficient speed. The day concluded with a vegetation clearance test, where the GCS-200 was evaluated for its capacity in clearing varying densities of vegetation; low, medium and high. The GCS-200 successfully cleared a few hundred square meters of vegetation in all scenarios. The tiller attachment cleared individual trees of up to 15 cm in diameter without any damage to the equipment.

COST EFFICIENT AND ROBUST



The intensity of the tests increased significantly over the course of the following days, with the GCS-200 enduring several challenging live mine test scenarios. Survivability and acceptance tests were carried out using 3 Anti-Tank (AT) and 19 Anti-Personnel (AP) blast and fragmentation mines, with some mines activated by pressure and others by tripwire or tilt rod. The robustness and efficiency of the GCS-200 proved irrefutable – the machine successfully neutralised all 22 mines with the help of the tiller attachment. Despite the enormous blasts and fragmentation of two of the AT mines, (which are specifically designed to destroy vehicles including tanks and armoured fighting vehicles), there was only very minor damage to two chisels and two chisel holders on the tiller attachment. The GCS-200 machine and tiller attachment continued to operate exceptionally without any issues. Our technicians only needed 10 minutes to fit replacements with the cost of material amounting to less than 350 Euros.

GCS-200 IS CROMAC CERTIFIED

The first-rate performance of the GCS-200 led to the successful accreditation certificate from CROMAC-CTDT for safe, efficient and effective mechanical demining in all types of soil, for clearance of all types of vegetation, and for mechanical demining of all types of AP and AT mines. “The GCS-200 machine provided excellent results against all test criteria without any malfunction or issues during the testing and accreditation”, said Stimac. “This reflects GCS continuous commitment to enhance the reliability, productivity and safety of mine clearance operations and

disposal of explosive remnants of war (ERW). By deploying its cutting-edge equipment alongside its highly-skilled certified staff, GCS can ensure that the very highest mine clearance standards are adhered to.”

