

POLISH LEOPARD 2 MBT UPGRADE CONTRACT SIGNED - POLISH INDUSTRY'S CONTRIBUTION TO THE MODERNIZATION PROGRAMME

The agreement covering the modernization of the Polish Leopard 2A4 tanks, the aim of which is to upgrade them up to the 2PL standard, is a final point of the long-term negotiations, aimed at providing the armoured component of the Polish Army with a new, indispensable solution. The contract, the value of which is contained in an amount of PLN 2.415 billion, covers modernization of 128 tanks, with optional works which could cover the remaining 14 examples. Rheinmetall Defence company is going to act as a strategic partner for the Polish Defence industry, within the scope of the aforementioned initiative.

Modernization of the Leopard 2A4 main battle tanks is one of the large programmes, that the Armament Inspectorate managed to initiate in the last month of 2015. The remaining contracts concluded include the one related to the Poprad air defence systems, and one concerning the Spike ATGMs. Both of the aforementioned agreements were signed in the last couple of weeks. When it comes to the Leopard 2PL programme, similarly as in case of the remaining two initiatives, 25% of the total value of the agreement is going to be covered by the assets of this year's defence budget, making it possible to increase the level of utilization of the assets allocated to be used throughout 2015. Polish Deputy Defence Minister took part in the event which took place at the seat of the Polish Armament Group, in Radom.

On behalf of the administrator, the agreement was signed by the head of the Polish Armament Inspectorate, Brig. General Adam Duda. The consortium, the goal of which is to realize the modernization programme concerning the Leopard main battle tanks was represented by Arkadiusz Siwko, President of the PGZ company, and President of the ZM Bumar-Łabędy S.A. facility, Adam Janik. The latter company acts as the technological leader of the undertaken initiative. Adam Janik additionally signed an agreement with the Wojskowe Zakłady Motoryzacyjne S.A. [Military Automotive Works] facility, realizing the overhauls of the Leopard 2A4 main battle tanks. These works constitute a part of the modernization programme. The Poznan facility was represented by Elżbieta Wawrzyńkiewicz, the President of the company.

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Leopard 2PL - materiał reklamowy Bumar-Łabedy

Leopard 2A4 main battle tank modernization programme is planned to be realized between 2018 and 2020. The agreement may be amended, in order to modernize additional 14 vehicles acquired back in 2013, together with a lot of Leopard 2A5 vehicles. During the year 2017, the consortium is going to deliver two prototype Leopard 2PL tanks. In 2018, 6 vehicles are going to be modified by the German Rheinmetall company, with the use of the Polish components. Another 12 examples of the tank will be modernized at the Bumar-Łabedy facility, with increased contribution of the Polish companies. Starting from the 18th example, the Poles are going to become the leading party of the works, until the moment when the 128th example is modernized - this is planned to happen in 2020. In 2021, an annex is planned to be signed - and the remaining 14 tanks used by the Polish Army will undergo the modernization process.

Test programme for two tanks is planned, since two phases of the modernization programme are scheduled - first one, involving the foreign partner, and second one, starting from the seventh example, when the roles will be switched, so that the Polish Party takes the lead, starting from the 18th example of the tank (...) The example modernized by the Germans, taking the lead role in the programme, as well as the one modernized by Poles, will both become subject to the test programme, described by the agreement. Test firing procedures (testing the quality of the armour - editing team) are also contained in the programme.

Head of the Polish Armament Inspectorate, Brig. General Adam Duda.

On behalf of the Germans, Rheinmetall company is the main foreign participant, along with the IBD Deisenroth Engineering company, supplying the modified modular armour for the tanks. The company

will also provide the Rosomak S.A facility based in Siemianowice Śląskie with a license, allowing the Polish facility to manufacture the modular armour for the tank turret. In case of Poland, Bumar-Łabędy S.A. company is going to act as the integrator and the implementing party when it comes to the final assembly, however other companies that form the Polish Armament Group are also going to be involved in the modernization process. Rosomak is going to provide the elements and components of the modernized armour. PCO S.A company, based in Warsaw, will deliver thermal imaging systems for the targeting devices used by the commander and the gunner, along with cameras which are going to form the driver's observation suite. These devices will be integrated with the tank's onboard systems by the Rheinmetall Defence Electronics company, with a seat in Bremen. ZM Tarnów is going to supply the elements for the electric turret drive, replacing the hydraulic system applied in the A4 variant of the tank. Gliwice-based Obrum company is to be involved in development and implementation of simulators and training devices, used within the training activities involving the Leopard 2A4 crews.

The above listed initiatives are just some of the elements of the modernization which, in general, is going to cover a complex improvement of the operational capabilities possessed by the Leopard 2A4 main battle tanks. Detailed data and information related to the components involved in the Leopard 2PL programme has not been publicized. According to the information provided by a representative of the Rheinmetall company, the above mentioned information is going to be released at the beginning of January 2016. The secret was partially unveiled by the head of the Armament Inspectorate, who referred to the requirements contained in the technical specification of the Leopard 2PL programme.

Modernization is related, above all, to increasing the armour's ballistic resistance, through application of the solutions provided by the German IBD company, and to the process of improving the operational awareness of the crew, realized through implementation of the targeting devices for the commander and the gunner, along with a reversing camera. Moreover, the issue of security of the soldiers is significant - here I am referring to the fire protection and IED protection systems. Both in the engine, as well as in the crew compartment. Moreover, modernization of the cannon, so that it is capable of shooting the DM11 and DM63 ammunition is planned. (...) Weight of the tank after the modernization shall not exceed 60 tonnes. Obviously, numerous elements I do not want to mention also exist, within the scope of tailoring the systems which are going to be changed due to the changes of the tank construction itself, also when it comes to emergency exits, handles, attachments, rigidity of the drivetrain and the load-bearing wheels. These are only details.

Head of the Polish Armament Inspectorate, Brig. General Adam Duda.

The detailed information is yet to be released, however the available data suggests that the tank's cannon is going to be modified as well. Changes of the recoil mechanism, loading system and the breech mechanism, along with modifications of the targeting-ballistic computer, are all required to be implemented, in order to utilize the DM11 and DM63 ammunition. The new ammo has an increased

level of effectiveness, in comparison with the projectiles that were being used earlier. The software of the computer needs to be updated with the data pertaining the newly implemented projectiles. Nonetheless, the most relevant changes are related to the armour of the turret and the hull. Scope of those changes has a decisive value in increasing the tank's survivability. However, the works within that scope are limited, by a requirement, according to which the tank weight shall not exceed 60 tonnes. Thus, some areas will not be modified within the scope of the armour. Moreover, turret structure modifications may also be expected, so that the weight-effect relationship is improved. This is related mainly to the front part of the turret and "ballistic trap" of the "window" which features the optronic and targeting system.



Leopard 2A4 z opancerzeniem AMAP-B firmy IBD - fot. Rheinmetall

Within the scope of the modernization Agreement, issues related to training activities and logistics are also discussed. The existing simulators and training devices used throughout the training process for the Leopard 2A4 crews are to be upgraded up to the Leopard 2PL standard, together by Rheinmetall and by the Obrum Gliwice Mechanical Devices Research and Development Centre. The agreement also covers creation of a spare parts inventory, for one year of operational use, however the amount of PLN 2.4 billion does not cover the expenditure required to overhaul the tanks that are being modernized. Moreover, it does not cover the process of creating a spare parts inventory, required when the tanks are being operated. According to General Duda, the spare parts inventory, within the scope of the quantitative dimension of the issue, is going to be handled by the Armed Forces Support Inspectorate. When it comes to the overhauls, the cost of repairs is going to be based on the real wear of the parts in the modernized tanks, and thus it is not being covered by the agreement.

The repairs are not covered by the amount defining the agreement, since its value would be threatened by too big risk to change. These are

the consequential works, the scope of which would be known only after the tank is dismantled. Then, verification may be carried out – and this is a part of this agreement. This part is going to be placed within the scope of responsibility of the Armament Inspectorate, so that the Support Inspectorate is not involved, as the latter body, according to the generally used rules, is responsible for the overhauls. In this specific case, the Armament Inspectorate is going to be the main body responsible for the whole modernization. Each verification is going to be accepted by the Armament Inspectorate.

Head of the Polish Armament Inspectorate, Brig. General Adam Duda.

The overhauls related to the Leopard 2A4 tanks will be realized, within the scope of the powerplant and drivetrain, by the Poznan based Wojskowe Zakłady Motoryzacyjne facility, since the plant is in possession of full qualifications required to carry out the F6-level overhauls – according to the respective licenses and agreements. When it comes to the potential and qualifications possessed by the Bumar-Łabędy plant, the company already began its investment in the infrastructure. Within the framework of the agreement it is going to receive half billion zlotys from the Ministry of Defence as an advance payment, covering the Leopard 2PL programme. These funds are going to come from the 2015 budget.