

IM-SHORAD DILEMMA: POLISH PIORUN MANPADS FOR THE US FORCES?

More and more experts are wondering why the Stinger missiles are going to be installed on the IM-SHORAD mobile systems offered to the US Army, as a much better (range-, maximum ceiling-, minimum ceiling-, and guidance-wise) Polish Piorun systems remain available on the market. The question is especially important, since it pertains to the safety of the US soldiers.

The discussion began when the Americans began to make arrangements with regards to the IM-SHORAD vehicles set up (Initial Maneuver-Short Range Air Defense). The platform in question is to provide direct air defence capability to the US Army. The project is being led by the US-based DRS Land Systems company which belongs to Leonardo.

The task assigned to Leonardo to deliver a SHORAD module dedicated for the Stryker A1 APCs. Relatively short timeline of the programme, along with the assumption that the module shall not impact on the mobility of the vehicles, forces Leonardo to utilize proven equipment. Most of the hardware is to be arranged around the RIWP turret delivered by the Moog company. The main sensors for the turret have already been selected, including the RADA fixed antenna radars and an optronic system.

The armament is also to be varied, as the arsenal is to include a double launcher for the radar-guided Longbow Hellfire ATGMs, M230 30 mm cannon, .308 machine guns and a module that would carry four Stinger AAMs. However, in the latter case, the selection made is not the best one. The issue is quite weird, as the Americans decided to go with the foreign-made RADA radars (optimal for the IM-SHORAD requirement), but they did not make a similar choice in case of the missiles.

Meanwhile, following a successful combat “debut” of the Polish Grom MANPADS solution in Georgia, with the US subsequently acquiring three lots of these missiles, and with a test programme involving such system carried out in Finland, the US military officials are well aware that Stinger missile is not the best solution currently available on the market. Meanwhile, when compared to the latest MANPADS systems such as Piorun, it may even be said that Stinger is obsolete.

The only advantage Stinger has over the Polish missile probably stems from the fact that it is a US-made product. When it comes to the remaining parameters of the missile, including the pricetag, “Piorun” missiles are considered to be a better choice by the experts, not only being advantageous over the US solution, but also being better than the latest Russian 9K333 system.

For instance, the minimum engagement altitude may be considered to be a disadvantage, in case of the Stinger missile. The unofficial data suggests that the earlier variants of the Stinger system had been incapable of acting against targets flying below the altitude of 200 metres, which is a capacity that has turned out to be useful when shooting down the helicopters. Meanwhile, Piorun missiles

undergo test firing against targets hung at the height of 10 meters. Maximum engagement altitude is defined as 5000 metres. This range of altitudes makes it virtually impossible for the enemy to operate helicopters at the frontline.

Piorun utilizes a new photo-diodes based seeker (the older seekers used photo-resistors). This extends the operation time for the seeker, which also translates into longer range, exceeding 6 kilometres. Thus, the missile may act against incoming targets at distances higher than 12 kilometres, if the target speed is defined as around 400 metres per second.

The Polish missile has been fitted with three types of a fuse (including a proximity fuse). The launcher features a recorder and authorization system making it impossible to use a stolen launcher. Furthermore, the guidance unit is characterized by high dynamic range of receiver systems, which makes it almost impossible to confuse the seeker with the use of flares-based countermeasure systems.

One should also remember that Poland is a close US ally and it may act as a secure supplier of MANPADS launchers needed by the Americans.