press release



22 February 2015

Rheinmetall 120mm DM 11 and RH31 tank ammunition: enhanced firepower for modern combat operations

In order to further enhance the combat effectiveness of man battle tanks, Rheinmetall has developed two types of 120mm tank ammunition: the DM11 and the RH31. The Group's versatile family of HE ammunition – optimized to meet the needs of the modern battlefield, fielded by three NATO countries and combat proven in service with the US Marine Corps – is on display at IDEX 2015.

DM11 and RH31 both can be fired from any currently fielded 120mm smoothbore gun (L44 and L55), and are intended to widen the operational spectrum of modern tanks, making sure they remain a match for the steadily evolving threat.

Rheinmetall developed its 120mm x 570 HE Temp. DM11 cartridge on behalf of the German Ministry of Defence. From the technical standpoint, it is characterized first and foremost by the programmability of the loaded round and by its airburst capability. The necessary system modifications (programmability) can be retrofitted into any modern MBT with a 120mm smoothbore gun and an advanced fire control unit. A lower-cost solution is also available.

Modular in design, the HE Temp. DM11 consists of warhead with a programmable fuse as well as a ballistic cowl, tailfin assembly, drive band, combustible casing with propelling charge, and a newly designed case base containing the primer and an integrated data cable for programming.

The interfaces between the drive and the warhead ensure that the drive can be subsequently exchanged at a reasonable cost to extend the round's service life, or fitted in future with a different type of fuse. Another unique performance characteristic: this ammunition is safe to fire in all climate zones (-46°C to +71°C).

The HE Temp. DM11 is designed for engaging non-armoured and lightly armoured targets such as vehicles, antitank positions (whether dug-in or in the open), and field fortifications. Furthermore, thanks to its high precision and maximum effective range of up to five kilometres, it can be used for penetrating barriers and engaging targets taking cover behind walls, etc., as well as for breeching enemy defences and creating avenues of approach for friendly forces in built-up areas.

In order to maximize the round's range of applications, it can be employed in three different fuse modes:

- Impact fuse mode/point detonation (PD); here the warhead detonates inside the target medium in order to create a larger breech;
- programmable delay/point detonation with delay, (PDwD); here detonation of the warhead takes place following penetration of cover;
- programmable airburst (AB) mode; in this case the warhead detonates either ahead or above the intended target, at ranges of up to 5,000 metres.

The US Marine Corps already uses the DM11 under the designation Mk 324 for engaging non-armoured and lightly armoured targets in asymmetric conflict situations. Battle-tested, the ammunition meets the Corps' technical readiness level 10 criteria.

Rheinmetall also offers a lower-cost variant of this cartridge, the RH31 HE SQ ("High Explosive Super Quick"). It features an impact function without delay. The cartridge can be fired with no need for modifying existing systems. It can also be used in all climate zones. Due to the modular design of the 120mm ammunition family the Rh31 is an ideal starting point for upgrading to the DM11.

Rheinmetall, one of the most trusted names in the global defence industry, has already booked the first orders from Leopard 2/ M1 Abrams user nations.

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