Lightweight Small Caliber Ammunition Presentation + Panel Discussion

General Dynamics – OTS Canada

Repentigny, Québec, Canada

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NDIA Armament Conference / Small Arms Division Themes

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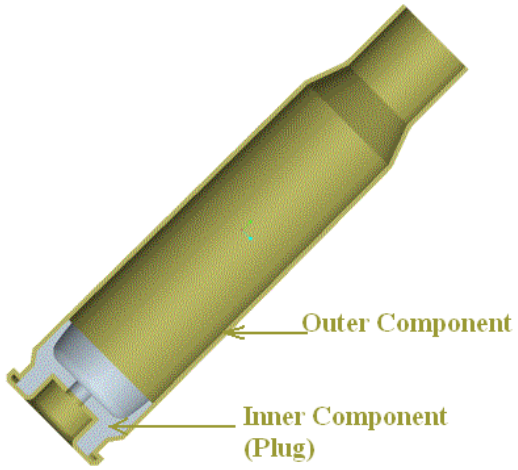
Metal Lightweight Case Evolution

- 2005-2012: Initial cartridge case design used a thin Stainless Steel outer shell along with an **internal** aluminium plug in the head for reinforcement:



- 2017- : New cartridge case design uses a thin Stainless Steel outer shell along with an **external** aluminium plug as the cartridge case head:

Weight Advantages

- Stainless Steel/Aluminium LW case weighs about 45% less than brass case
- 20% reduction in overall cartridge weight

.338 Norma LW Machine Gun Cartridges

Weapon Interactions

- Stainless Steel/Aluminium LW case is a direct, drop-in substitute for brass cases
- Cartridge case as robust as brass case
- Links like standard brass cases
- Machined aluminium extractor groove does not wear out extractor
- Two-part .338 case assembly will resist a 500 pound average disassembly force

Ballistic Advantages

- Internal case volume of LW Stainless Steel/Aluminium case is equivalent or higher than brass case (from 2% to 7% more, depending on caliber)
- Firing with .338 Norma LWMMG weapon provided up to 30 m/s higher muzzle velocity
- New LW cartridge cases have been tested up to 500 Mpa in .338 caliber with no issues
- Cartridges have been successfully fired from -54°C to +71°C.

Future Developments

- More than 1,000 LW cartridges fired in .338 LWMMG
- Many more .338 trials scheduled in coming months
- Testing with new LW External Plug case design will soon begin with 7.62mm and .50 caliber
- Due to multiple customer requests, design of a 5.56mm cartridge is now getting underway
- Patent Pending

Point of Contact

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