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
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

• For additional information, please contact:

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