The MK315 Mod 0
40mm x 53 HEDP
Transition to U.S Production
Overview

- History
- Technical overview
- US Qualification Status
- US Production
MK315, The beginning

- IHV-HEDP (Improved High Velocity High Explosive Dual Purpose)
  - Self Destruct
  - After Armor effect
  - IM properties
  - Improved reliability
  - Improved Accuracy
Fuze

- PD/SD Fuze (MK443 Mod 0), Venus Fuze
  - Mechanical Impact Function
  - Mechanical Self Destruct
Warhead

- HEDP Warhead
- Steel Warhead with plastic jacket
- IM Explosives (PBXW-11)
- Penetrates more than 65mm of Rolled Homogenous Armor
- Reduced Safety Zone
Fragment energy study

- Nammo shell: Safe separation zone ~ 40 meters
- A430 A1 shell: Safe separation zone ~ 70 meters

Ref. FFI (Norwegian Defence Research Establishment)

Nammo warhead
- 40 meters

M430A1
- 70 meters
Lethality footprint

Lethal radius: 10.7 meters, or 35 feet
Graph covering 19x19 meters, or 62x62 feet
After Armor Effect

6mm RHA, gas can behind
Propulsion System

- Screw on cartridge case. Rheinmetall’s solution for assembling the warhead to the cartridge case.
- Identical to the proven system used on the MK281 MOD 0 cartridge in US service.
- The Rheinmetall propulsion system provides a consistent “break point” that yields a low standard deviation for the muzzle velocity.
MK315 Mod 0 HEDP

- US qualification testing completed
- More than 900 rounds fired
- Reliability > 99%
- Delivered to Canada in 2011
US Production

- Nammo has partnered with Rheinmetall to create a joint venture (N2) to produce the MK315 in the US
- N2 is currently finalizing the US supply chain and production plan
US Production planning

- Load, assembly and packing will be performed in the US
  - Projectile body manufactured in the US
  - Explosives delivered by US vendors
  - Shaped charged liner manufactured in the US
  - Warhead assembly will be done in America by a qualified vendor.
- Propulsion system to be manufactured by Rheinmetall in Camden, Arkansas
- Fuze will be manufactured in Switzerland by the original fuze designer (Nammo MTH)
SUMMARY

- Original Requirements fulfilled
  - Self Destruct
  - After Armour effect
  - IM properties
  - Improved reliability
  - Low velocity dispersion
- US Qualification testing completed
- US Production planning in process
Questions??