

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

Helge Stadheim  
Program Manager 40mm Ammunition  
Nammo Raufoss

**Nammo**

# Overview

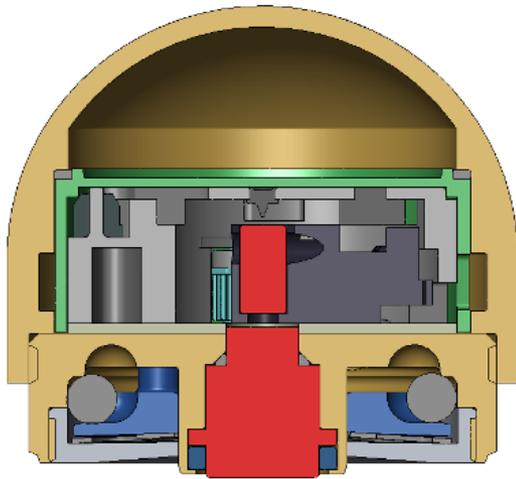
- History
- Technical overview
- US Qualification Status
- US Production

# 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

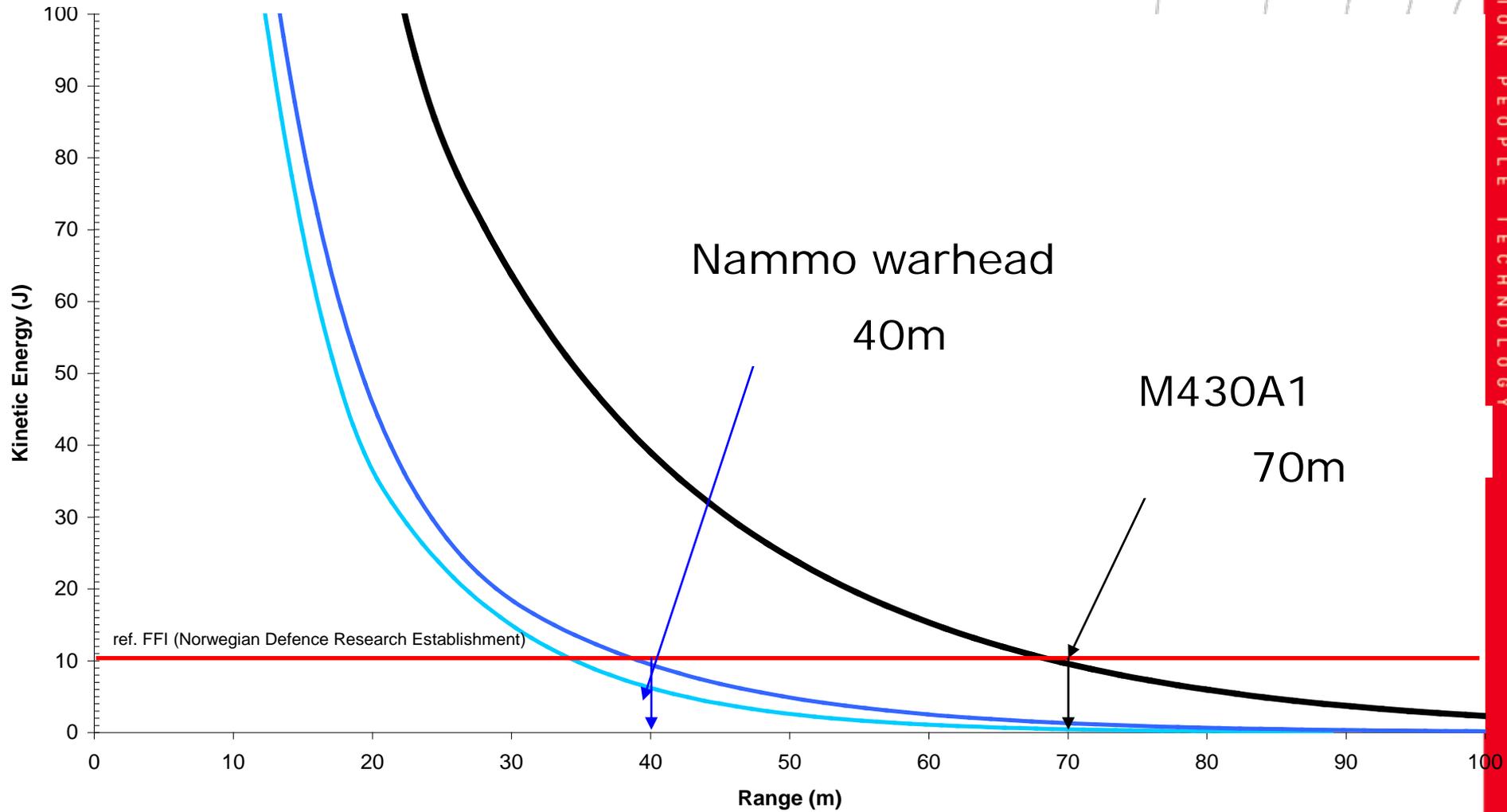


# Warhead

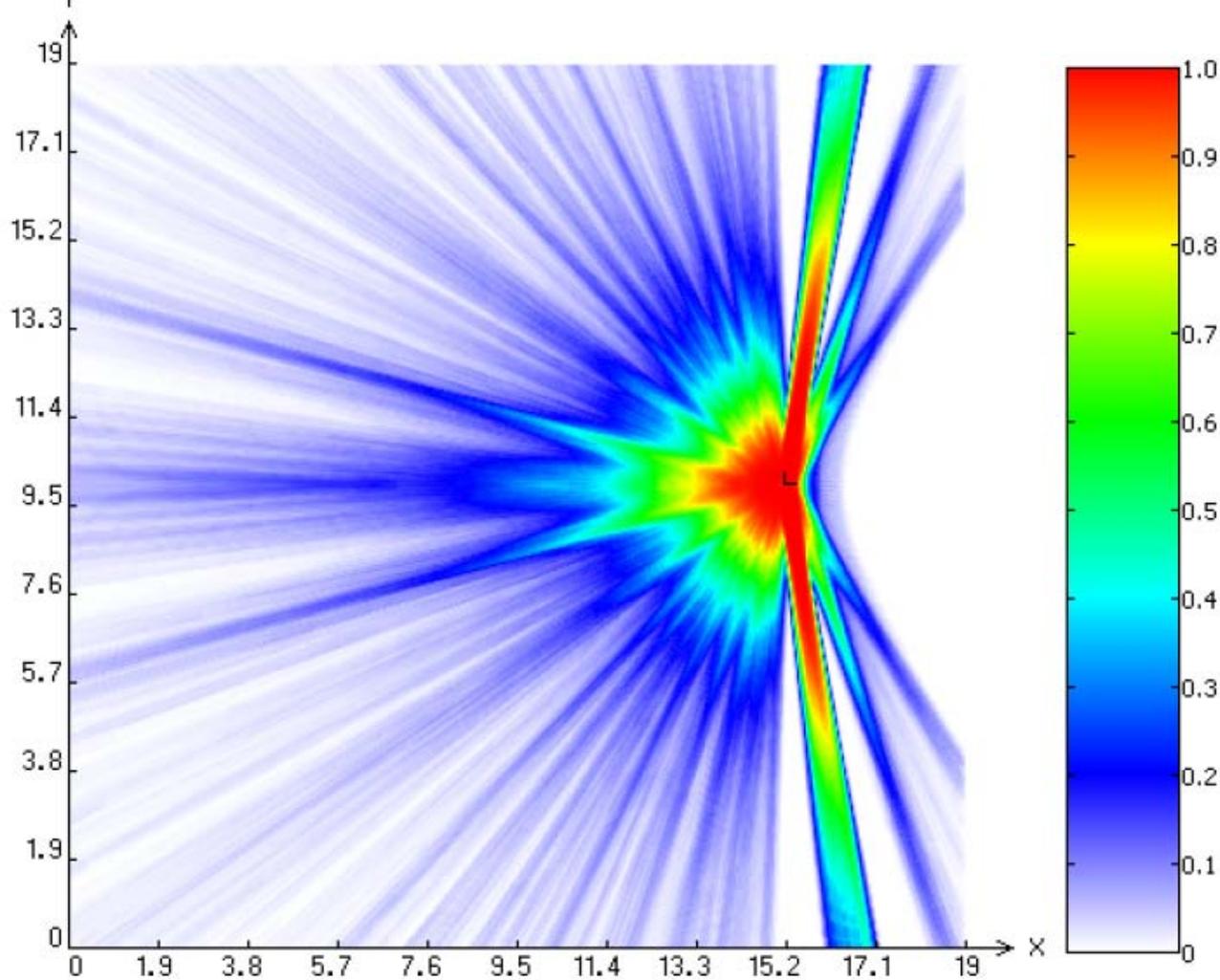
- HEDP Warhead
  - Steel Warhead with plastic jacket
  - IM Explosives (PBXW-11)
  - Penetrates more than 65mm of Rolled Homogenous Armor
  - Reduced Safety Zone



# Fragment energy study



# Lethality footprint



Lethal radius: 10,7 meters, or 35 feet  
Graph covering 19x19 meters, or 62x62 feet



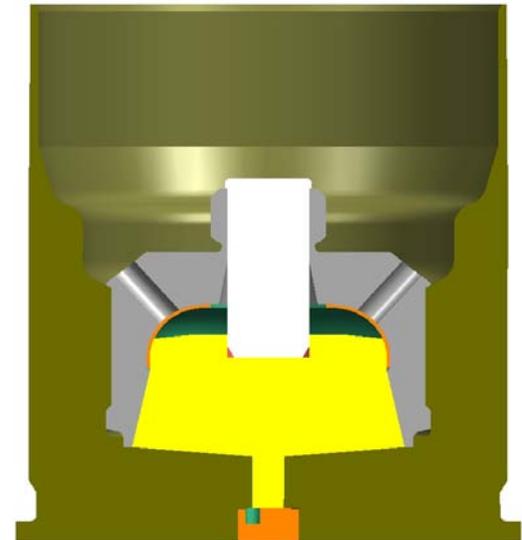
# After Armor Effect



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



**Nammo**

# US Production

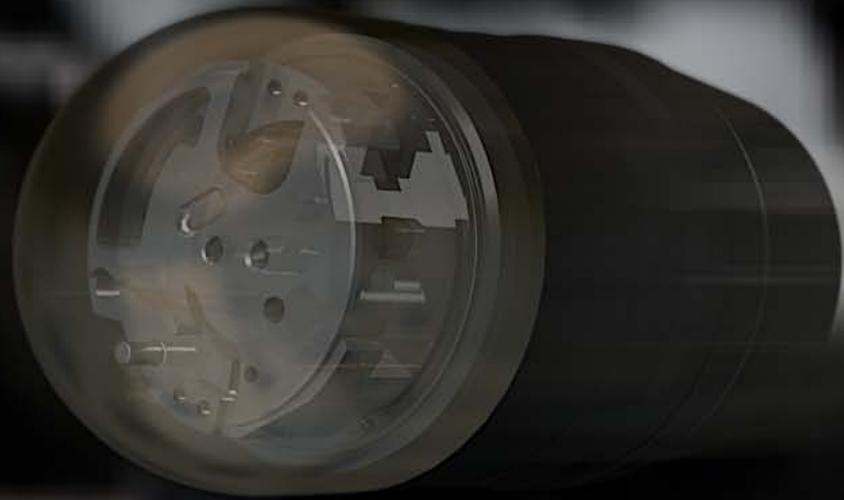
- Nammo has partnered with Rheinmetall to create a joint venture (N2) to produce the MK315 in the US
- N2 is currently finalizing the US supply chain and production plan

# 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??