



EXPLOSIVE PILOT PROCESS FORMULATION, LOADING, DEMILITARIZATION AND MUNITIONS PROTOTYPING CENTER

LABORATORY INFORMATION FACT SHEET

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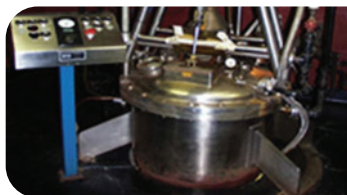


The Explosive Pilot Process Formulation, Loading, Demilitarization and Munitions Prototyping Center (EPPFLDMPC) is a dedicated Department of Defense facility for the development of energetic formulation and loading parameters for all military ordinance.

TECHNOLOGY/FACILITY DESCRIPTION:

The pilot plant capabilities focus on flexible melt pour, cast cure, high & low viscosity injection loading, formulation of energetics and demilitarization capabilities. The facility has the ability to

rapidly develop process parameters for new energetics or munition designs. The process equipment is versatile and extensively instrumented to enable the duplication of production operations to address on-going production issues or provide input for new improved production parameters. The formulation equipment has the capability to handle various raw energetic materials in order to produce up to 1500 pounds of developmental/qualified materials. The cast cure system has the ability to mix 30 gallons of material and load into wide variety of end items. The injection systems equally have the ability to process large quantity of materials under various conditions to ensure proper quality requirements are met for each specific item(s). The melt pour systems have the ability to load representative of production quantities for items ranging from medium caliber (i.e. grenades, bangalore torpedo, mortars) to large caliber (i.e. artillery, general purpose bombs), all while ensure the proper quality requirements. All systems are computer controlled and have integrated data collection system on a wide variety of parameters, including the ability to measure actual cooling profiles of the end item. The demilitarization capability range from autoclave system with near-infrared analysis composition capability to thermal decontamination oven (1350 cu ft) capable of safely inerting up to 8,000 pounds of metallic materials without damaging the end item/equipment.



EQUIPMENT AND EXPERTISE AVAILABLE:

- 10 gal, 25 gal, 50 gal, 75 gal and 150 gal stainless steel melt kettles (hot water/steam heating)
- 30 gal Baker Perkins High Shear Mix System (hot water/steam heat, vacuum, remote operations)
- Autoclave System
- Low viscosity Injection Loader
- High viscosity Injection Loader
- 25ft Sandvick Stainless Steel Belt Flaker
- 8000lb Thermal Decontamination Oven
- Grid Melters
- Vapor Collection Systems on all equipment

- Conditioning ovens for all size munitions up to 5000lb bombs
 - Allen Bradley Controller and Monitoring Systems
 - 40,000 gal Pink Water Treatment Facility
- Items Developed/Processed:
- 60 mm/81 mm/120 mm mortars
 - 105mm/155mm artillery rounds
 - General Purpose Bombs (500 lb/1000 lb/2000 lb)
 - Reactive Armor Tiles
 - Shape Charges
 - Grenades

- Super Large Scale Gap Tubes
 - N Fragmentation Test Unit
 - Bangalore Torpedo (2.5 ft & 5 ft versions)
 - Demolition Shape Charges (15lb & 40lb)
 - M54 Burstur Tubes
- Formulations:
- Composition B with various developmental waxes
 - IMX-101, IMX-104, IMX-102 formulations
 - PAX-21, PAX-194, Composition B5 formulations
 - DEMN formulations
 - Aluminized TNT and IMX base explosives