Who We Are

The Irradiated Material Examination and Testing (IMET) Facility, Building 3025E, was designed and built in 1950 as a hot cell facility. It is a block-and-brick structure with a two-story high bay and houses six heavily shielded cells and 60 shielded storage wells. It includes the Specimen Prep Lab (SPL) with its associated laboratory hood and glove boxes; an operating area, where control and monitoring instruments supporting the in-cell test equipment are staged; a utility corridor; a hot equipment storage area; a tank vault room; office space; a trucking area with access to the high bay; and an outside steel building for storage. Tests and examinations are conducted in six dedicated hot cells and in a laboratory hood or modified glove boxes in the SPL.

What We Do

- Physical and mechanical properties testing
- Examination of irradiated materials
- Irradiated specimen storage
- Sample preparation

In-Cell Capabilities

- Sample sorting and identification
- Rabbit opening using a milling machine and slow speed saws
- Furnace annealing
- Automated welding
- Ultrasonic cleaning
- High-temperature, high-vacuum testing
- Tensile testing with high-vacuum chamber option
- Impact testing, fatigue and fracture toughness testing of standard and subsize impact specimens
- Micro-hardness testing
- Profilometry
- Scanning Electron Microscopy (PhilipsXL30)
- LLLW (Liquid Low Level Waste) System

Specifications

- 6 hot cells
- Dry lead glass
- Lead glass filled with mineral oil
- Lead glass filled with zinc bromide
- High-density concrete used for front, rear, and top shielding
- Process and service compressed gases, air, demineralized water, process water, recirculating heating and cooling water, steam, vacuum, and electrical services
- Transfer drawers between cells 1-5
- Master-slave manipulators
- Shielded carriers

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