Radioactive Material Handling Mechanism

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Creating a safer laboratory environment for radiological workers by designing safer Radioactive Material Handling Mechanism (RaMHaM) containers used in non-destructive neutron beamline tomographic imaging research.

- **Functionality:**
  - Non-destructive neutron beamline tomographic imaging
  - Spent fuel rodlet transportation between national labs
  - Use as payload in Type-B container

- **Safety constraints:**
  - Low attenuation on the exterior.
  - Fail safety mechanism
  - Regulated by Nuclear Regulatory Commission

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**Container Design**

- Modular Motor
- Plug Securing Plate
- Center Shaft
- Beam Port Shutter
- Neutron Beamline Source
- 304 Stainless Steel Inner Shield
- Cast Lead Fill-in

- Pneumatic Airlift
- Top Plug
- Side Port Shutter
- Neutron Beamline Source
- Nuclear Spent Fuel Rodlet
- 304 Stainless Steel Outer Shield Frame

**Type B Transportation Cask**

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**Laboratory Space**
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