

Upstream End

- Two components for the US end: (MD-406262)
 1. Semi-ellipsoidal formed window head (MD-406263)
 2. End Ring (MD-406264)
- The shape of the window formed head:

Semi-ellipsoidal with pressure @ concave side efficient for the thickness
- The shell thickness $t = 3/16$ "
 1. Calculate thickness per the code.
 2. Choose closest available thickness
 3. Material: SA 285, Gd. C (S=13.8 ksi)
- End Ring has multiple functions:
 1. Stiffener to the main decay pipe
 2. Stiffener to the semi-ellipsoidal window head
 3. Connector for the decay pipe and the window head
- Design and Fabrication
 1. Eliminated flange and seals
 2. Reliable (radiation level, leaking)
 3. Cost: flange, seal more expensive than weld
 4. Flange/Seal motivated by Hose, no longer necessary
- Installation for the upstream end to the main decay pipe
 1. Adjustment device
 2. Weld-full penetration with back strip

Downstream End

(ME-406258)

- *Downstream Decay Pipe Extension (ME-406258)*
 1. Length-84 in
 2. Main Pipe (MD-406145)
 3. For connecting the main decay pipe to the DS window head end.
 4. House for the manhole and pump port.
 5. Shell thickness t

- *Downstream Formed Head End (MD-406259)*
 1. Similar to the upstream window head

- *Rough Port-pump pipe (MC-406148)*

- *Access Port-manhole (MD-406146, MD-406268)*
 1. Size-24" OD
 2. Reinforcing plate (MD-406147) for the opening
 3. End Cap is semi ellipsoidal type with pressure @ convex side. Direct weld, elimination of the flanges (2) and seals.

- *Saddle Support (MD-406195)*

- *Installation of the downstream end to the main decay*

pipe

- Engineering Design Drawings and Note

1. Engineering Note
2. Per Fermi ES&H Manual 5033
3. Engineering design drawings