



Installation Story #23 Foamfrax® Insulation

Industry: Pollution Control
Location: East Coast United States
Installation Date: July 2003
Operating Temperature: 1600°F (871°C)
Scope of Job: RTO Roof, Sidewalls, and Floor Sections. 6" (152.4mm) Foamfrax Grade I Fiber Full-Thickness Installation for the Roof and Sidewalls; 6" (152.4mm) Foamfrax RG Fiber Full Thickness for the Floor



To evaluate Foamfrax insulation versus modules, a section of the roof modules approximately 36" x 24" (914mm x 610mm) was removed in order to install the product. Once the steel was exposed, Foamfrax AB spider netting was attached to the steel and secured using Fiberwall speed clips (due to the condition of the steel). Fiberwall studs, SS-304, 5" (127mm) long were welded in place on 12" (305mm) centers. (The alloy grade of the Fiberwall stud is determined by the operating temperature of the furnace and is specified in the *Foamfrax Insulation Installation Guidelines*.) When the roof section was installed, 3" (76.2mm) of the Foamfrax Insulation was applied first and then one set of Foamfrax "X" anchor tines were installed using SS-304 Fiberwall washers to secure them. A second layer of 3" (76.2mm) was applied, which covered the anchoring hardware within the lining system.



To insulate the sidewalls, Foamfrax "V" anchors, SS-304, 5/8" (127mm) long were welded in place, with 1 anchor/SF. The Foamfrax Insulation was installed over the "V" anchors 6" (152.4mm) thick, and then a skim coat of foamy/lower-density product was applied to the hot face surface, and the lining was troweled smooth. Score marks were made on a 1' x 1' (305mm x 305mm) centers to control thermal shrinkage on the monolithic hot face lining.



The materials commonly used on RTO floors are either a refractory castable or ceramic fiber modules. Refractory castable is dense and not thermally efficient compared to a module floor. Modules, in turn, do not have the physical integrity required to support foot traffic or scaffolding. For a floor application, Foamfrax RG Insulation provides better insulating relative to castable and is strong to walk on for inspections, repairs, etc.

With the installation of Foamfrax Insulation, the following customer benefits were realized:

- **System Versatility**

- Both the Foamfrax RG and Foamfrax Grade I Insulation were installed using the same equipment, eliminating the need for multiple set-ups to install the different products.

- **Installation Speed**

- The entire Foamfrax installation was completed in one eight-hour shift, resulting in reduced downtime.
- Due to low rebound, minimal cleanup is required after the installation of Foamfrax Grade I or Foamfrax RG materials.