



## **Installation Story #16 Foamfrax® Insulation**

Industry: Steel  
Location: Midwest United States  
Installation Date: September, 2002  
Operating Temperature: 2000°F (1093°C)  
Scope of Job: Cylindrical Coil Annealer, 11' Diameter x 25' Tall  
6" Foamfrax Grade I Full Thickness Lining, Upper Walls and Roof



Coil annealing furnaces require an efficient lightweight refractory lining because they are thermally cycled and lifted/moved on a regular basis. Therefore, refractory ceramic fiber is a natural choice to insulate these units due to its light weight, resistance to thermal shock, and performance in reducing atmospheres. Standard ceramic fiber installation practice for coil annealing furnaces is either module or stackbond construction. Foamfrax Insulation was proposed for this application because of its speed of installation and unique monolithic ceramic fiber construction.



“V” anchors and spider netting were used to anchor the Foamfrax Insulation on the sidewall of the coil annealer. Foamfrax Insulation was easily gunned around the “V” anchors and against the bench at the base of the wall.



For the roof of the coil annealing furnaces, “X” anchors along with spider netting and Fiberwall® studs were used to anchor the Foamfrax Insulation. An initial thickness of 4” was applied onto the roof before the “X” anchors were installed and held in place using a Fiberwall washer. After the “X” anchors were installed, an additional 2” of Foamfrax Insulation was shot over the anchors to achieve the final lining thickness of 6”.



Once all of the Foamfrax Insulation is installed, a low density skim coat is applied and the surface is troweled smooth.



To control thermal shrinkage, score marks are placed on approximate 2’ x 2’ centers into the finished hot face surface.

This unit has been performing well with over one year in service. With the installation of Foamfrax Insulation, the following customer benefits were realized:

- **Turnkey Service**
  - A specially trained Unifrax distributor contractor was able to supply materials, equipment, and installation as a complete package.
- **Installation Speed**
  - The entire Foamfrax Installation was completed in two eight hour shifts which is less than half the time required for a comparable module or stackbond lining. This results in reduced unit downtime and increased productivity.