



Installation Story #14 Foamfrax® Insulation

Industry: Cogeneration
Location: Southwest United States
Installation Date: May 2002
Operating Temperature: 1600°F Maximum
Scope of Job: HRSG Auxiliary Ductwork ⁽¹⁾
2" (51mm) Foamfrax Grade I Veneer Over Ceramic Fiber Modules



The ductwork section targeted for Foamfrax Insulation transferred the hot gas exhaust from the gas turbine to the heat recovery steam generator (HRSG). The increase in cross sectional area in this ductwork section lowered the gas velocities enough so that was a suitable application for ceramic fiber. The scope of work was to apply Foamfrax Insulation over the existing ceramic fiber sidewalls and roof.



Prior to the installation, all loose material was removed from the hotface surface of the modules. Fiberfrax® Fiberstick™ refractory cement was diluted at a ratio of 2:1 Fiberstick to water by volume and sprayed onto the module surface. Foamfrax Insulation was then gunned directly onto the existing module lining.

⁽¹⁾ Please consult the Unifrax Application Engineering Group for product recommendations on the use of Ceramic Fiber in areas of high velocity and gas stream turbulence.



Using the proper Fiberstick dilution is critical for success. If the Fiberstick preparation is too thin, adherence will not be optimized. The Fiberstick surface preparation should only be applied to areas where Foamfrax Insulation can be immediately installed before the Fiberstick cement dries.



This view shows the completed installation looking at the turbine end of the ductwork section.



This view shows the completed installation looking at the HRSG end of the ductwork section.

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.
- **Fuel Efficiency**
 - The additional lining thickness of Foamfrax Insulation served to lower heat loss and decrease the coldface temperature of the ductwork.
- **Extended Service Life**
 - The Foamfrax Insulation upgrade provided extended service life for the ductwork and avoided a complete lining replacement and costly down time.
- **Installation Speed**
 - The complete Foamfrax Installation was completed in one eight hour shift resulting in reduced unit downtime and increased productivity.