



Foamfrax™ High Temperature Insulation Installation Case Study #14

High Temperature Insulation For Heat Recovery Steam Generator Auxiliary Ductwork

*Foamfrax Grade I High Temperature Insulation
2" (51mm) Thick, 8pcf (128 kg/m³), Veneer Over Existing Refractory Ceramic Fiber
High Temperature Insulation Modules*

Industry: Cogeneration

Location: SW United States

Installation Date: May 2002

Operating Temperature: 1600°F (871°C) Max

More Information

Web: www.foamfrax.com

Web: www.unifrax.com

e-mail: foamfrax@unifrax.com



Ductwork transferring hot gas exhaust from a gas turbine to a heat recovery steam generator (HRSG) required high temperature insulation to decrease the cold face temperature and increase thermal efficiency. Gas turbine exit gas velocities decrease in the ductwork section due to increased cross sectional area, and refractory ceramic fiber high temperature insulation is suitable for this application*.

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Unifrax I, LLC ♦ Corporate Headquarters ♦ 2351 Whirlpool Street ♦ Niagara Falls, NY 14305-2413

Phone: (716) 278 3800

Fax: (716) 278 3900

e-mail: foamfrax@unifrax.com

Web: www.foamfrax.com

Web: www.unifrax.com

Also at:

www.fyrewrap.com

www.fiberfrax.com

www.isofox.com

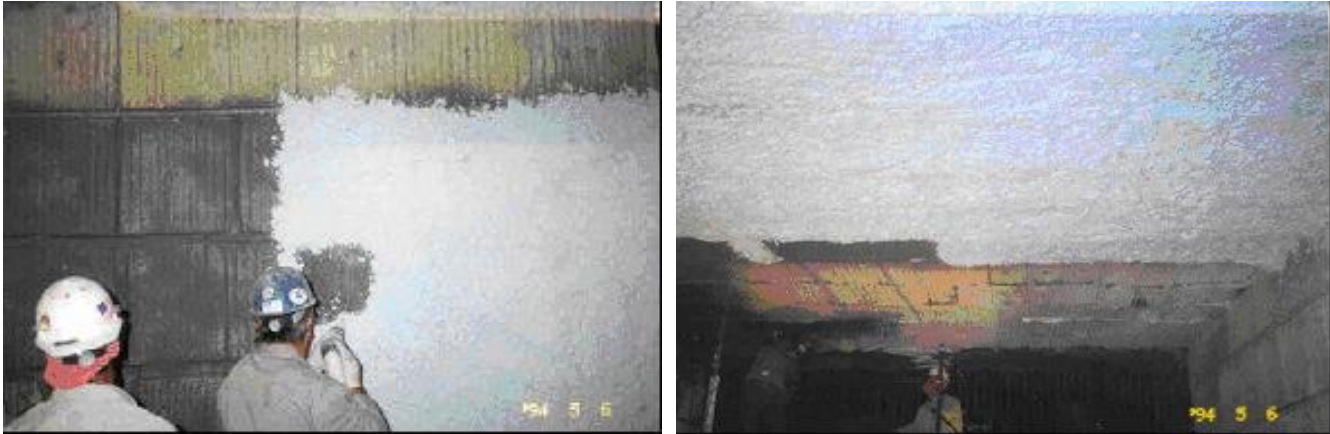
www.insulfrax.com

www.high-temperature-insulation.com

www.refractory-ceramic-fiber.com

C-4005-N

Foamfrax Grade I High Temperature Insulation was applied over the existing refractory ceramic fiber sidewalls and roof.



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

Use of correct 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 High Temperature Insulation can be immediately installed before the Fiberstick refractory cement dries.



The left hand image shows the completed installation looking at the turbine end of the ductwork section, the right hand view shows the completed installation looking at the HRSG end of the ductwork section.

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www.insulfrax.com	www.high-temperature-insulation.com	www.refractory-ceramic-fiber.com



Following the installation of Foamfrax Grade I High Temperature Insulation, the following customer benefits were realized:

- **Turnkey Installation** - A specially trained Unifrax distributor/contractor was able to supply Foamfrax High Temperature Insulation materials, equipment, and installation as a complete package.
- **Fuel Efficiency** - The additional lining thickness of Foamfrax High Temperature Insulation served to further lower heat loss and decrease the coldface temperature of the ductwork.
- **Extended Service Life** - The Foamfrax High Temperature Insulation upgrade provided extended service life for the ductwork and avoided a complete lining replacement and costly down time.
- **Installation Speed** - The complete Foamfrax High Temperature Installation was completed in one 8 hour shift, resulting in reduced unit downtime and increased productivity

Foamfrax High Temperature Insulation is an advanced gunnable monolithic insulation system comprised primarily of **Fiberfrax** refractory ceramic fiber. There are several Foamfrax grades available, suitable for application under various conditions and temperatures.

Isofoam High Temperature Insulation is a similar product, comprised primarily of revolutionary **Isofrax** soluble fiber – to meet European Health & Safety regulations for in-vitro solubility of vitreous fibers. Both advanced high temperature insulation materials are installed in the same manner.

For more information on **Unifrax** advanced foam high temperature insulation systems visit www.foamfrax.com or contact Unifrax I, LLC directly by e-mail: Foamfrax@unifrax.com

Foamfrax™ High Temperature Insulation is a registered product of Unifrax I, LLC

Unifrax I, LLC provides a wide range of woven and non-woven products for high temperature insulation, sealing and filtering applications

** Please consult the Unifrax Application Engineering Group for recommendations on the use of Refractory Ceramic Fiber products in areas of high velocity and gas stream turbulence.*

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