



# Foamfrax™ High Temperature Insulation Installation Case Study #15

## For Batch Forge Furnace High Temperature Insulation

*Foamfrax Grade II High Temperature Insulation  
3" (76mm) Thick, 8pcf (128 kg/m<sup>3</sup>), Veneer Over Existing Refractory Ceramic Fiber  
High Temperature Insulation Module Lining*

**Industry:** Forging  
**Location:** NW United States  
**Installation Date:** July 2002  
**Operating Temperature:** 2300°F (1260°C)

### More Information

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The existing lining in this batch forge furnace consisted of refractory ceramic fiber high temperature insulation modules on the sidewalls and endwall, with an IFB/bonded module roof. Due to the harsh operating conditions in this furnace, the sidewall modules had deteriorated, the bonded modules on the roof had suffered from spallation, and the underlying IFB had degraded significantly.

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[www.isofox.com](http://www.isofox.com)

[www.insulfrax.com](http://www.insulfrax.com)

[www.high-temperature-insulation.com](http://www.high-temperature-insulation.com)

[www.refractory-ceramic-fiber.com](http://www.refractory-ceramic-fiber.com)



Prior to the installation of Foamfrax High Temperature Insulation, the module surface was completely cleaned using a curry comb, and all loose bonded modules were removed. A dilute preparation of Fiberfrax Fiberstick™ cement was applied to all of the installed surfaces.



The installation thickness of Foamfrax High Temperature Insulation was maintained at 3” (76mm) across all the lining irregularities of the furnace - so as to not exceed the 3” (76mm) maximum recommended thickness for veneers. The improved consistency of the refractory lining after the installation of Foamfrax High Temperature Insulation provides balanced heating of the charge and results in higher quality forgings.

Following the installation of Foamfrax Grade II 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 provide more uniform heating for the product.
- **Extended Service Life** - The Foamfrax High Temperature Insulation upgrade provided extended service life for the forge furnace, and avoided a complete lining replacement and costly downtime.
- **Installation Speed** – The complete installation of Foamfrax High Temperature Insulation was easily completed in only 4 hours, resulting in reduced furnace downtime and increased productivity

**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**

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