

## UNIFRAX APPLICATION STORY



**Product Solutions:** Fiberfrax® Durablanket® S Ceramic Fibre  
**Industry:** Petrochemical  
**Applications:** Hotface lining to the walls and roof  
**Location:** Russia

DECEMBER 2018

### Business Challenge

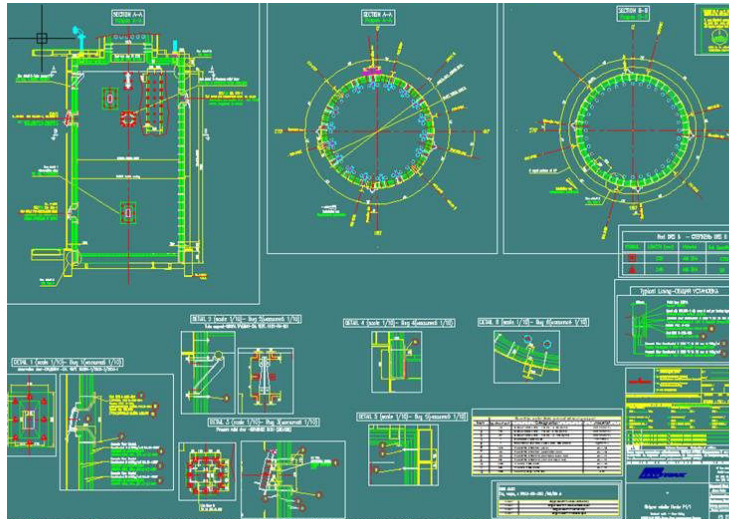
The applications for Petrochemical plant located within large oil refinery complexes are one of the most challenging applications to service due to their infrequent shut down and maintenance schedules. They have detailed specifications for components and their operating processes. These present a certain level of difficulty when trying to determine the proper lining requirements in order to provide the correct balance between thermal performance and service life.

Petrochemical plant equipment and heaters will operate for two or more years between major shutdowns, so failures of the lining and/or the attachment hardware is completely unacceptable. It is essential that a precise engineered system based on sound lining principals and proven materials are employed. This will help to guarantee a lining solution that will not cause costly shutdowns.

### Application

In July 2013, Unifrax received an order for the supply of Fiberfrax Durablanket S, plus associated fixings. This was required for the hot face lining of 3 Heaters. These were for installation on a Petrochemical site located in Russia. The first type is classed as a Stripper Reboiler, the other 2 units were Reboiler Heaters. These are typically used for the industrial distillation process in the petrochemical industry.

**“a proven Fiberwall® lining system was installed quickly”**

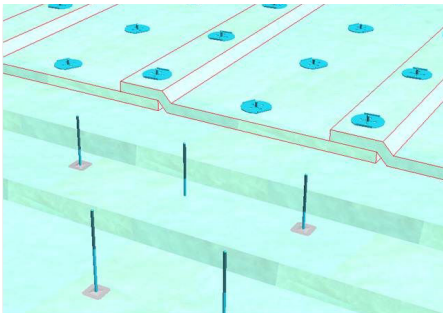


*Typical lining and installation layout drawing*

### Solution

The heaters were internally insulated using a layered blanket construction. These units are cylindrical and are comprised of a radiant section, a roof and a convection section.

The layered construction method provides a simple, efficient and fast method of insulation. Typically it is used where the operating temperature is below 900° with a gas velocity under 12m/s.

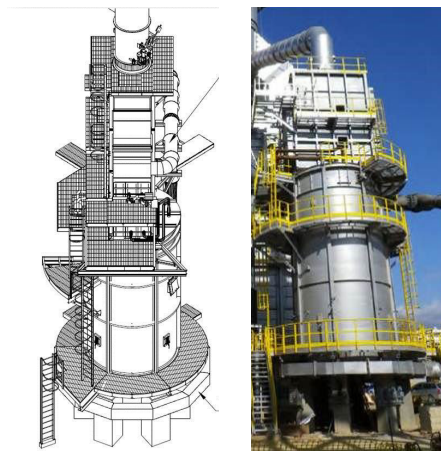


*Blankets are overlapped by 100mm and retained using studs and washers. Grade AISI 310 for 880 °C zones and AISI 304 for 720 °C zones.*

For this project Unifrax supplied an engineered solution including around 700 rolls of Durablanket S ceramic fibre blanket to insulate an area of 400 m<sup>2</sup>, through our French distributor. The number of layers and blanket density was related to the zone and temperature.. Thickness could vary from 100 to 225 mm.

### Customer Advantages

- High Temperature Stability
- Ease of Installation
- Low thermal conductivity
- Low heat storage
- Energy saving
- Light weight



### About Unifrax

Unifrax is a global leader in high-performance specialty products used by many industries in a diverse group of industrial applications. Our products provide substantial improvement in thermal performance, save thousands of dollars in energy costs and can help reduce your operations environmental footprint.

### Contact Us

To learn more about Unifrax Thermal Management Solutions, contact your Unifrax sales representative or the Unifrax Application Engineering Group in your region:

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