

UNIFRAX APPLICATION STORY



Product Solutions: PUREFRAX® Fiberfrax Rigidform Shapes
Industry: Iron Oxide Catalyst Recovery
Applications: Hot Gas Filtration
Location: Europe

DECEMBER 2018

Business Challenge

Unifrax PUREFRAX® elements are being successfully used at this Iron Oxide based catalyst recovery plant.

The extremely low pressure drop we can achieve with our PUREFRAX® can provide an excellent solution for problematic bag plants. One such problematic bag plant which benefitted from the retrofit of our filter elements is described here.

Application

The main problem at this process was hot agglomerates of catalyst burning holes through the filter bags. Modifications were made to the existing bag house so that our 1.5 metre long (125 mm O.D.) elements could retrofit the bags.

The modifications were relatively inexpensive when compared against the previous loss of catalyst and plant shut down costs for bag replacements.

There are two filter plants, each containing 100 PUREFRAX® filter elements each and operating at 275-325°C. One plant was commissioned in 1999 and the other in 2000.

Both have performed extremely well since with minimal replacements since. Each filter pod is collecting approximately five tonnes per day of recovered catalyst.

*“proven performance
and service life”*



Solution

Rigiform shapes can be manufactured from either Fiberfrax® (refractory ceramic fibres) or Insulfrax®/ Isofrax® (low bio-persistent fibres), blended with specially selected inorganic and organic binders to give rigid insulating shapes with exceptional characteristics.

The vacuum forming manufacturing method permits considerable freedom to vary shape, thickness, density and hardness.

Rigiform shapes often provide the most economical answer to producing large quantities of parts in simple or complex configurations for a wide range of applications up to 1300 °C.

Customer Advantages

Rigiform shapes and boards have the following outstanding characteristics:

- High temperature stability
- Low thermal conductivity
- Resistance to thermal shock
- Lightweight
- Complex shape capability

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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