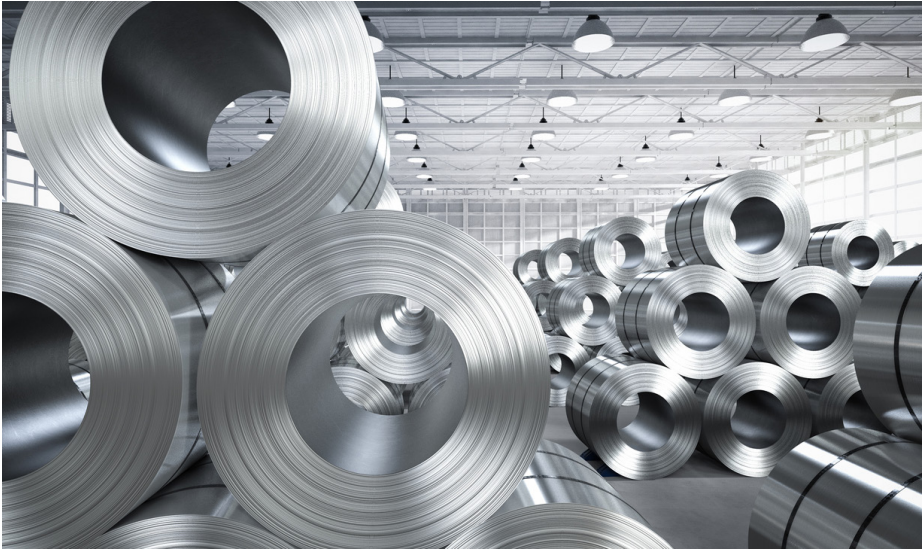


UNIFRAX APPLICATION STORY



Product Solutions: Isofrax Module and Board
Industry: Non Ferrous
Applications: Furnace Exhaust Hood Lining
Location: Middle East

NOVEMBER 2018

Business Challenge

Our client is an industrial engineering group with locations in over 30 countries worldwide. They supply machines, process equipment and production lines for the world's largest industrial markets including the aluminium, steel, glass, automotive, aerospace, logistics, cement and minerals, energy and sugar sectors.

This business sector are actively involved in the design, engineering, supply and commissioning of process equipment for the melting and distribution of molten aluminium for several major producers.

Application

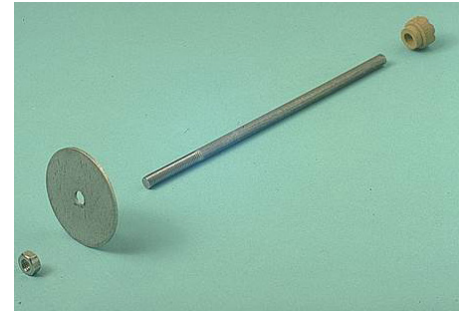
Unifrax were asked to provide an effective thermal insulation solution for an exhaust hood system to a pair of aluminium melting furnaces. These are fabricated in mild steel and have vertical side and end wall plates and an angled roof section leading to a horizontal section with a circular opening.

A competitive board had been used for this application in the past and failed.

“We subsequently received several orders for similar units.”



*Anchor-Loc Thread-Loc Modules
Isofrax grade. Installed on 13mm
Isofrax Blanket 128 kg/m³*



*Isofrax 120LD Board 40mm thick installed
on 13mm thick Isofrax Blanket 128 kg/m³.
Board lining retained using M5 threaded
stud fixing sets (with hexagonal nut and
washer 38mm dia.). Grade AISI 310 s.s.*

Solution

For the first units we replaced the competitive board with 100mm thick Isofrax grade Anchor-Loc Modules, edge-stacked (170 kg/m³) with a 13mm thick back-up layer of Isofrax Blanket.

Based upon this success we obtained an order for two complete units required for one furnace. Isofrax Modules were once again supplied for the sloping and horizontal roof sections. For the vertical side and end wall panels we supplied Isofrax 120LD Board 40mm thick. These were installed on a 13mm thick back-up layer of Isofrax Blanket. The board layout was in accordance with our guidelines. Boards were retained using M5 threaded studs welded to the casing, and hexagonal nuts and washers.

The Application Engineering department developed a series of installation drawings, plus stud layout drawings to aid installation, in addition to a dedicated Bill of Materials. The design and installation were successful.

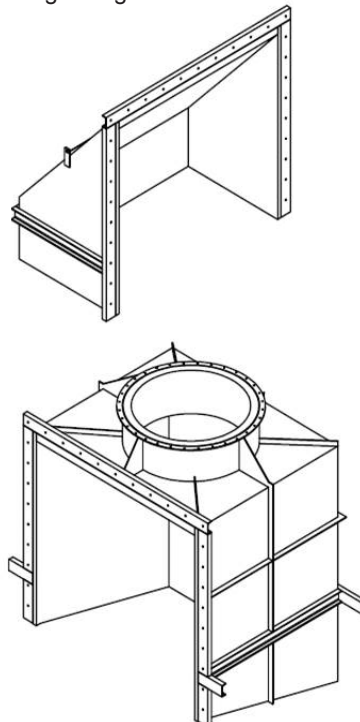
Shortly after completion of this installation, the client invited us to a meeting to review this lining. We subsequently received several orders for similar units.

We received very positive feedback and have developed closer ties with this client for the development and implementation of further projects.

Customer Advantages

A summary of the advantages and benefits that were obtained by this engineered lining solution can be summarised as follows.

- High temperature stability
- Thermally efficient lining system
- Ease of installation - Anchor-Loc Thread-Loc system
- Low heat storage
- Stud layout and lining drawings, plus installation guide.
- Tailored engineered solution
- Lightweight



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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