



Products Used

Pyrogel® 2250
Spaceloft™ 6200

Aerogel Insulation Maximizes Space and Minimizes Heat Loss On Board Classic Oil-Fired Ship

Thinner aerogel blanket meets performance requirements while allowing space to breathe beneath wood shell

Fabrication and Installation Partner

Insulcon, Holland
(www.insulcon.com)

Challenges

- Insulate an oil-fired boiler on board a ship built with original parts from famous classic ships.
- The insulation was used to prevent heat loss and protect personnel. Maximum temperature of boiler surface can exceed 200°C (392°F).
- The boiler was surrounded by arched girders with insulation filling the voids between the girders.
- Insulation space was limited since the boiler was being transported in a container.
- Fiberglass alone did not meet the above specifications.

Aerogel Solution

- Aspen Aerogels designed a solution of one layer of **Pyrogel® 2250** and two layers of **Spaceloft™ 6200** wrapped around the boiler, in addition to fiberglass.
- A silicone-coated glass cloth was used to mitigate dust.
- The insulated boiler was plated with traditional wood as in classic ships.

Benefits

- Aerogel solution delivered required thermal performance while minimizing insulation thickness for optimal container loading.
- Minimal heat transfer prevented drying out of the wood plating.
- Aerogel was thin enough to leave an air gap between the insulation and the wood, allowing natural convection and preventing condensation.

