Product Used

Pyrogel® 6670

Aerogel Insulation Dramatically Saves Space and Weight on Yacht Exhausts

Aerogel provides high temperature resistance, flexibility to fit exhausts

Customer

Mive Eco

(www.miveeco.it)

Challenges	• Provide a high performance insulation solution for custom yacht exhaust systems. • The insulation needed to be thinnner than fiberglass insulation while reducing the outside temperature of the exhaust system to 60°C or lower. • The insulation needed to be flexible to conform to the curves of the exhaust systems, as well as be easy to cut and install.
Aerogel Solution	• Aspen Aerogels and Mive Eco designed a solution using 6 mm **Pyrogel® 6670** insulation, which achieved significant space and weight savings. • The Pyrogel 6670 solution allowed Mive Eco to wrap the exhaust system with insulation, then apply phenolic resin over it, which can be painted.
Benefits	• The Pyrogel 6670 solution effectively blocked the inside temperature of the exhaust system (570°C), providing an external touch temperature well within the 60°C limit for personal safety. • Pyrogel 6670 was flexible to fit any exhaust shape and easy to cut and install. • The total thickness of the Pyrogel 6670 solution was 27 mm, half the thickness for fiberglass, a critical benefit in space-constrained yacht engine compartments. • Using Pyrogel 6670 reduced the weight of the exhaust system, which also is a critical benefit for yachts.

Pyrogel 6670 was easy to wrap around the varied shapes of yacht exhaust systems. It was only half as thick as fiberglass, making it ideal for the confined spaces of yacht engine compartments.

Pyrogel 6670 solution:

- Silica cloth
- Pyrogel 6670 (6 mm)
- Pyrogel 6670 (6 mm)
- Fiberglass (12 mm)
- Glass cloth (3 mm)
- Phenolic resin

  TOTAL = 27 mm

Fiberglass solution:

- Silica cloth
- Fiberglass (25 mm)
- Fiberglass (25 mm)
- Glass cloth (3 mm)
- Phenolic resin

  TOTAL = 53 mm