

# Aerogel Insulation Installs Faster and Saves Costs on Large Vessel

Thinner aerogel is easier to store, handle, and install than cellular glass — with equal thermal performance



## CASE STUDY

### CHALLENGES

- Replace specified cellular glass insulation with Aspen Aerogels insulation on one complete vessel including heads.
- Vessel was 20 ft (6.1 m) by 12 ft (3.7 m).
- Work was executed outdoors on an elevated equipment platform within a chemical facility.
- Weather conditions were overcast with intermittent light rain.



### SOLUTIONS

- A single 0.24 in (6 mm) layer of **Pyrogel® 6350** was used instead of the specified 1.5 in (38 mm) thick cellular glass.
- Large sections of Pyrogel 6350 blanket were wrapped completely around the vessel, instead of small cellular glass blocks.
- The installation required only a tape measure, box cutter knife, and straight edge.

### BENEFITS

- The vessel was insulated with Pyrogel 6350 in one third as much time as cellular glass.
- Because installing aerogel blankets doesn't require access to the entire vessel, scaffolding costs were reduced 25%-50%.
- Installers did not need any shop equipment; all aerogel sections were cut from a roll on the vessel platform.
- Pyrogel 6350's compact roll reduced shipping, handling, waste, and storage costs compared to boxes of cellular glass.
- Rain did not halt work, since aerogel insulation is hydrophobic and did not have to be covered.

## How the Vessel Was Insulated

**1.** Less than one roll of Pyrogel 6350 was needed to insulate the entire vessel. All work was done on the vessel platform.



**2.** The material was cut to the outside circumference of the vessel and wrapped around in one complete blanket.



**3.** The material was secured at the bottom only with the adhesive insulation pins.



**4.** For the vessel heads, the material was cut into pie sections and attached with adhesive insulation pins at each end.



**5.** After the large pie sections were installed, smaller sections were made to accommodate the ends.



**6.** Completed insulated vessel with Pyrogel 6350 aerogel thermal insulation.

