

PYROGEL HPS RESOLVES MECHANICAL CLASH ON HOT REHEAT LINE, MINIMIZING HEAT LOSS, SURFACE TEMPERATURE, AND EXPENSE

PLANT SITUATION

A gas-fired power plant is replacing the hot reheat piping on one of their units. This piping is large (18"-22" OD) and is insulated by rigid calcium silicate. It runs from the top of the boiler down through multiple floors of their plant, between other piping and equipment on its path, ultimately connecting up with the steam turbine.

INSULATION CHALLENGE

For this replacement, five inches of conventional rigid insulation was specified to maintain safe touch temperatures. However, due to the congested pipe routing and the expansion of the hot reheat piping upon startup, it would not have been possible for the contractor to install the full thickness in many areas. Accordingly, the level of thermal protection would have been reduced or, in some areas, omitted entirely. was reduced or, in some areas, omitted entirely.

PYROGEL SOLUTION

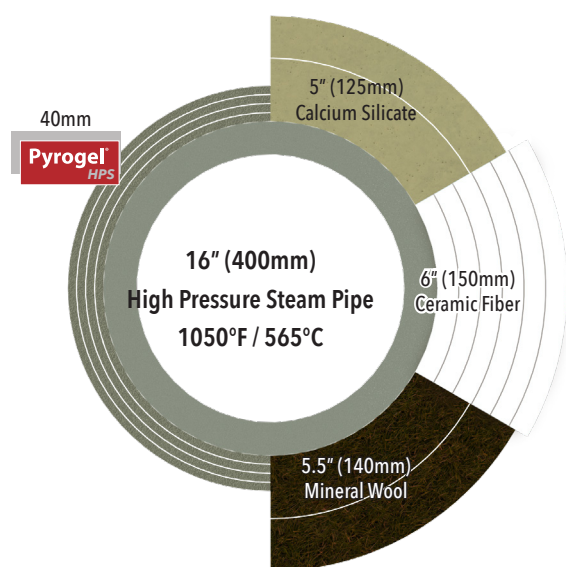
Two inches (50mm) of Pyrogel HPS was selected to replace the rigid insulation. Due to the reduced thickness, the contractor was able to install the requisite amount of Pyrogel HPS on the entirety of the hot reheat line.

OPERATOR BENEFITS

Restoration of the designed thermal protection ensures that plant personnel are fully protected and heat loss is minimized.

Despite their initial unfamiliarity with Pyrogel HPS, the intuitive application method ensured that the outage team completed their work package on time and on budget.

Pyrogel HPS is engineered to thrive in extreme service; unlike conventional high temperature insulations, it can be removed and reused for future inspections, minimizing costs and avoiding waste.



All systems provide the same energy efficiency

Pyrogel® Configurations



Pyrogel®
XTE

Medium to High Temperature Insulation

Maximum Service Temperature

1200°F / 650°C
0.4 in (10mm) - Yes
0.2 in (5mm) - Yes
Full Roll - Yes
Pony Roll - Yes
Color = Maroon

Optimized For

- Medium Pressure Steam
- Condensate Lines
- SCR Pipework
- Duct Liners
- Maximum CUI Defense



Pyrogel®
HPS

High Temperature Thermal Insulation

Maximum Service Temperature

1200°F / 650°C
0.4 in (10mm) - Yes
0.2 in (5mm) - No
Full Roll - Yes
Pony Roll - Yes
Color = Gray / Green

Optimized For

- Gas & Steam Turbines
- High Energy Pipes & Vessels
- Boiler Expansion Joints

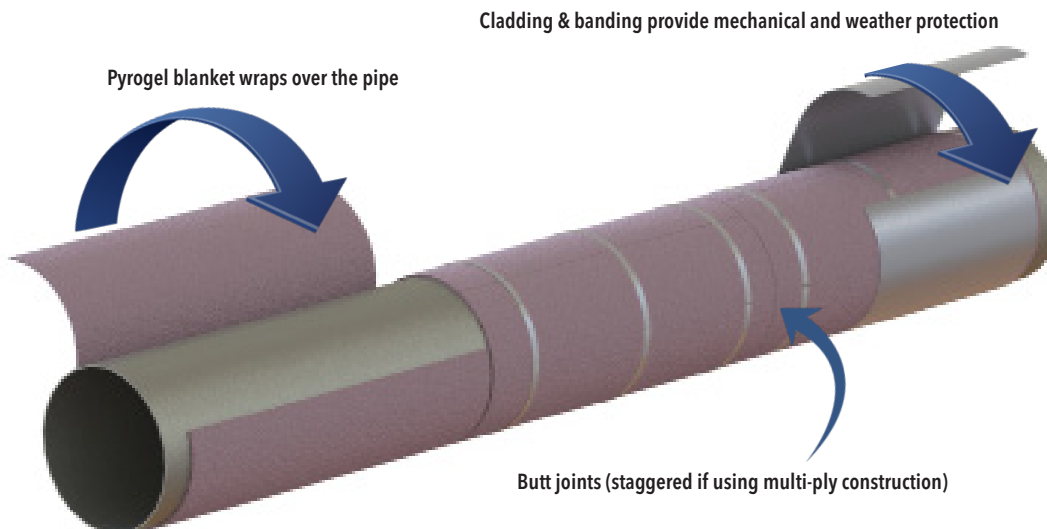


80 ft² Pony Rolls in 0.4 in. (10mm) - 45 lb / roll



850 ft² rolls in 0.4 in. (10mm) - 350 lb / roll
1500 ft² rolls in 0.2 in. (5mm) - 320 lb / roll

Pyrogel® Installation Method



IMPORTANT NOTE - Pyrogel Products

The use of tape and spray adhesives is limited to application temperatures below 250°C (480°F).

18G insulators wire or stainless steel banding at 18 inch centers must be used above 480°F

Cut With Shears, Cutting Knife, Insulation Saw

Secure With Fiber Reinforced Tape, 18G Stainless Steel Insulator's Wire Or 3/4 In. Steel Banding

Technical Support

We engineered Pyrogel to resolve power generation's toughest insulation challenges, it is supported by a team of application specialists and design engineers. If you are not satisfied with the performance of your existing thermal insulation, get in touch to learn how we can assist with a Pyrogel solution tailored to your needs. Our services include

Problem Diagnosis

Site Inspections

Training Seminars

Trial Installations

Specifications

Contractor Training