

# RUBBER SLURRY HEATING



## SUMMARY

### Goals:

- Eliminate hammer and plugging
- Eliminate back-flow into steam supply line
- Eliminate acid bathing

### Accomplishments:

- Installed Industrial Hydroheater
- Eliminated hammering
- Improved product quality
- Reduced maintenance

This major tire and rubber company needed to heat a 26% PVC slurry without hammering and plugging. The slurry required heat added before dewatering in a centrifuge. Indirect heating methods were not considered because of the high potential for the slurry to foul the barrier heat transfer surface. For this reason, a competitive direct-contact steam heater was being used; however, the heater hammered violently, compromising pipe fittings and supports. Periodically, the PVC slurry would cause backflow into the steam supply line and harden, requiring disassembly for acid bathing.

## CONDITIONS

Fluid:	26% PVC Slurry
Flow Rate:	45 GPM [10 m <sup>3</sup> /hr]
Inlet Temperature:	Variable; 35-120°F [2-49°C]
Discharge Temperature:	167°F [75°C]
Steam Supply Pressure:	60 PSIG [4 barg]

## SOLUTION

The Hydroheater was evaluated for this application because of its ability to handle viscous slurries with high solids. Internal modulation of steam in the Hydroheater would eliminate the hammering problems and the PVC slurry's potential to backflow into the steam lines.

Hydroheaters were installed and had been operating since 1987. The hammering problems associated with the competitive heater have been eliminated. Internal modulation of steam in the Hydroheater prevents the slurry from back-flowing into the steam supply lines. The need for routine cleaning has been eliminated due to its self-cleaning design.

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