Acid Plant Furnace Optimization

- A newly installed, custom two-fluid atomizer more efficiently injects liquids into the furnace, lowering furnace temperatures and natural gas use.
- Excess low-pressure steam in close proximity to the furnace preheats incoming air and reduces natural gas use in firing the air preheater.
- Additional steam stripping of the spent acid residue before it is fed into the furnace decreases water load and natural gas use.
- Reduced excess oxygen decreases the amount of incoming air that must be heated.
- Automatic temperature controls reduce temperature oscillations and inefficient use of energy.

Benefits
- Saves over $3 million per year in electrical and natural gas costs.
- Makes productive use of low-pressure excess steam.
- Controls furnace temperatures more closely.