

High-Efficiency Thermocompressor

Case Study

Challenge A US paper mill installed Kadant Johnson stationary syphons, greatly reducing the amount of blow-through steam. However, the thermocompressors were not replaced at the same time and the mill ended up using more high pressure motive steam to recompress its blow-through steam resulting in unnecessary use of high-value energy.

Solution Kadant Johnson supplied properly sized, high-efficiency thermocompressors, new pressure transmitters, managed differential pressure control, and anti-choke logic.

Thermocompressors are used to recompress low-pressure steam and discharge steam at a higher pressure. Recent advances in the design of Kadant Johnson thermocompressors minimize the consumption of high-pressure motive steam while maximizing the entrainment of blow through steam.

Results The mill and its corporate technology group are very pleased with the results. The mill is saving 20,000 pounds per hour of high-pressure motive steam, allowing the generation of more electrical power. This packaged solution provided better results and demonstrated the value of motive steam reduction.

Highlights

- A partial solution to a problem may leave a lot of energy saving opportunities on the table.
- The Kadant Johnson Systems group can identify and quantify opportunities for energy savings.
- The right solution can bring a high return for the mill's investment.

