

MEMBRANE CASE STUDY



Highlights:

- Baghouse now operates at DP 5.5"-6.5" W.C. with a reduced cleaning frequency of 50 cycles per day vs. 300 per day previously.
- First set of ePTFE membrane bags have been in service for over two years vs. one year previously.

Bag failures are extremely low, thus reducing the cost and man power to keep up routine plant maintenance.

Problem: Approximately 12 months after this plant's start-up the pressure drop (DP) began to climb and the number of cleaning cycles increased. Eventually, the pressure drop reached 12-13" W.C. with continuous cleaning. The high cleaning frequency led to bag failures.

Due to the frequent bag failures, it took two men an average of four (4) man- hours per day on an intermittent basis to keep up with the fabric filter maintenance. As a result, overtime was needed to keep up with the routine maintenance needs of the baghouse. The frequent isolation of the compartments and subsequent cooling created a severe corrosion problem.

Solution: Since the failures were mainly flex-failures along the vertical crease lines, it was decided change the cleaning method. Midwesco converted the baghouse from a shake-deflate to reverse-air/sonic horn. Midwesco installed a new flat tube sheet, added sonic horns, disconnected the shakers, re-located the deflation air duct and installed ePTFE membrane filter bags with rings.

Results: After the conversion, the operation of the fabric filters improved dramatically. The baghouse operates at a differential pressure of 5.5"-6.5" W.C. with reduced cleaning cycles. After one year of operation, it was decided to upgrade the other lines in the same manner. It has been estimated that this facility will save \$260,000 over the life of the filter bags.

This is just another example of how partnering with Midwesco® has truly proven that we offer *trust, value, quality* and *service* to our customers.

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