



GORE® Filtration Products

Metals Industry

Case History 7

AOD Vessel

OPTIMIZATION POTENTIAL

Originally the baghouse used polyester filter media. As the vessel blowing rate increased to meet increased production demands, the baghouse inlet temperature exceeded the allowable temperature for polyester media. The plant changed to aramid filter media to handle the higher temperature. After converting to aramid fiber the baghouse differential pressure increased to nearly 16 inches w.g. during the blowing period. As a result the gas flow dropped drastically thus limiting the vessel blowing rate and production.

SOLUTION

Optimized system settings and replaced the existing woven aramid bags with GORE® ePTFE membrane filter bags with 10 oz/yd² acid resistant fiberglass backing.

RESULT

The baghouse differential pressure dropped to a maximum of 5 to 6 inches w.g. The gas flow and productivity of the vessel increased dramatically.



- Application:** AOD (Argon Oxygen Decarburization) unit for refining specialty steels
- Baghouse:** Reverse Air Cleaning
1,224,000 Am³/h (720,000 acfm)
- Number of bags:** 5568
- Filter area:** 26,200 m² (282,000 ft²)
- Temperature:** Up to 204 °C (400 °F)
- Filter material:** GORE® membrane filter bags with 339 g/m² (10 oz/yd²) acid resistant fiberglass backing material.

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