



Service/Product Provider

Koch Filter Corporation

4411-A Darien Street
Houston, TX 77028

Business: HVAC Filter Manufacturer
Bob Sheppard
Regional Sales Manager
Phone: 713-672-6550
Email: bobs@kochfilter.com

Industrial Partner

Dow Chemical

2301 Brazosport Boulevard
Freeport, TX 77541

Business: Chemical Manufacturer
John Theile
Reliability Engineer
Phone: 979-238-1894
Email: jtheile@dow.com

Koch Filter saves Dow \$156,000 by improving air flow to turbines

Project Scope

Koch Filter Corporation evaluated the turbine operation at a Dow Chemical facility. They determined that the gas turbine's air intake system was undersized and pre-filters had an initial resistance that was too high, causing the turbine to be "starved" for air. Koch replaced these filters with a better filter that eliminated the problem.

Project Summary

Koch Filter Corporation converted the pre-filters on Dow's gas turbine to Koch's Multi Pleat GT-HD Pre-filters. The lower air resistance enabled Dow to realize energy savings of \$156,000 annually. Besides the energy savings, Dow was able to extend filter-change life cycle time from 3 months to 6 months, and reduce filter costs by 35%.

- **Energy Savings**
\$156,000 per year
- **Investment**
35% less than the cost of the original filters
- **Financial Return**
Immediate - no additional investment costs were required to produce the savings
- **Other Benefits**
Extended filter life, reduced labor costs for change-outs, increased production uptime, and reduced landfill costs

Monitoring & Verifying Energy Savings

Dow has replaced filters at the new change interval, and has determined that the new filters are performing as designed.

Distinguishing Value

Koch Filter Corporation responded to Dow's need to decrease energy cost and extend filter life cycle. In addition, Koch has been able to produce subsequent replacement filters in a timely manner, eliminating costly shut-downs of the gas turbine.