

# TECHNICAL TRAINING

## GAS TURBINE AIR INLET FILTRATION

### QUICK FACTS

Camfil Power Systems - Test & Learn Event

**Montreal, Canada**

2-day training: 8:30am - 5:00pm

### OBJECTIVES

- Understand the basic theory of air filters and gas turbines.
- Identify environmental/site conditions in order to determine the types of contaminants that are affecting your gas turbine.
- Describe the principles of engine degradation (erosion, fouling, and corrosion), and how to mitigate these risks with a well-designed inlet system appropriate for your site conditions.
- Explain how to design an inlet system according to your site conditions.

### COURSE OVERVIEW

The Gas Turbine Air Inlet Filtration course will give you the opportunity to develop valuable skills that will shape your decision-making process, whether you are designing or retrofitting a system, managing a gas-fired power plant, or managing the maintenance of a gas turbine. The training will focus on site conditions, how to mitigate any risks with a well-designed auxiliary system, and how to optimize maintenance and profitability.

### GENERAL COURSE OUTLINE

Air Filtration Theory

Testing Standards

Air Pollution Effects on GT

Air Filter Types

System Selection

Inlet System Design

Filtration OPEX & CAPEX Optimization

- 2 full training days
- Lab testing & demonstrations
- Course booklet
- Lunches and dinners
- Networking opportunity
- 16 professional development hours



*"Technical training at the Camfil Test & Learn center is a unique experience, granting the platform to both receive a much needed additional knowledge and also to share experience with other training participants, whether they are Camfil employees, agents, GT manufacturers, GT owners or other filter users . The training was both practically fruitful on a professional level and very enjoyable on a personal level, mostly due to kind and caring organization by Camfil. We would recommend this training both to the newcomers to the field of filtration and to the already seasoned GT managers and engineers, since all can learn something new and none will be disappointed. Thanks again for the excellent hospitality and experience." Aizenberg Constantine, Mechanical Engineer, Gas Turbines Section, IEC*

*"I am very impressed with the Test & Learn Center experience, and I'm not being polite. I thought I understood filtration but I learned a lot of things. We both learned from each other, and that's how it should be." Steve Ingstov, Principal Engineer, Watson Cogen*

*"The Test & Learn Center is a unique environment - it is a toy store for grown-ups. You have your products laid out, you have your test equipment laid out. We can talk about products, and if there's any questions, you go over to the lab and play with it. As an engineer, I can't ask for anything better." Senior Engineer, Power Company*

*"Great Training! The instructors providing training were very knowledge and made the learning very enjoyable. They provided real life examples and answered all of the questions. I would recommend this training." Asset Reliability (Engineer in Training), Pipeline Operator*

*"The Camfil project team and their state of the art facility was quite impressive during the two day training session hosted at their facility in Montreal. The session included some technical background on the importance of air intake systems for GG application, and in-depth industry specific training on various filter designs and models. The training agenda was well paced, and focused on conversation between the Camfil team and the trainees, rather than a predetermined schedule. This led to productive discussions on industry specific challenges, which was a great takeaway for everyone involved. A highlight of the session was the testing of the filters in their on-site wind tunnel, where analysis of empirical data helped with conveying two important parameters in filter design: pressure drop and filter efficiency. Overall, it provided great learnings and provided new insight into the filter selection and the impact it has on operations. Would recommend to any group that works with filter systems in operations and maintenance." Asset Reliability Engineers, Pipeline Operator*

Camfil Power Systems