

CASE STUDY

OIL MIST ELIMINATION

OBJECTIVE

Implement a solution to decrease oil mist emissions from a combustion turbine lubrication system.

EXISTING

The lubrication system was equipped with a standard venting arrangement. During operation, oil mist was released through the vent system, resulting in oil accumulation in the working environment.

THE PLAN

1 Analyze the Application

A review of the venting system identified oil mist bypass as the source of environmental contamination. The vent-cap was allowing for air exchange into and out of the reservoir, but without proper filtration, oil mist droplets were exhausting from the reservoir and collecting on surfaces.

2 Determine the Requirements

Vent/Air Flow Rate: 300 CFM

Retention Parameters: Capture sub-micron oil mist particles while limiting excessive pressure drop

Special Considerations: Continuous operation with minimal maintenance, seamless integration with the existing vent system, and zero pressure drop across the filters

**3**

Select the Proper Filter

C.C. Day selected the **Hilco Static Oil Mist Eliminator** (OME). The OME was equipped with HILCO's coalescing Demister Cartridge, using inside-out flow to trap oil from the air stream and return it to the reservoir.

4

Calculate the Size

Hilco's standard **DM639 Demister Cartridge** can handle 100 CFM per filter. Given the requirement of 300 CFM, an OME housing designed to hold three (3) elements was selected.

CONCLUSION

As proof-of-concept, the customer installed the unit on one of three turbine lube oil reservoirs. Following installation, the facility achieved cleaner operating conditions, reduced oil residue accumulation entirely, and improved overall maintenance efficiency. They've since installed a second system and are making arrangements for the third.

Contact C.C. Day Filtration to learn how we bring the right solution to every application!

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