Oil Mist Eliminators

THE NEED

Large high speed rotating equipment - Gas and Steam Turbines and axial and centrifugal compressors - are the most widely used power sources in the world today. In either primary or stand-by power mode, they are reliable and cost effective, but require large volumes of mineral or synthetic oil for lubricating, cooling and sealing the bearings. When subjected to the temperature and mechanical forces of the bearings, large volumes of mist and vapour result, creating a visible plume from the lube oil vent. These airborne emissions are subject to increasingly stringent environmental laws and regulations at all government levels throughout the world.

In addition, owners and specifiers of high speed rotating equipment are recognising the need to control this oil mist emission for four primary reasons:

1. Environmental
   There is a growing awareness both at work and at home that everyone must take responsibility for keeping our environment clean.

2. Economics
   Any oil mist from the vent is lost forever. A reservoir venting 340 Nm³/h with a 100 ppm oil mist concentration will lose almost 380 litres of oil a year.

3. Maintenance
   It is much easier to maintain a clean machine than a dirty one.

4. Safety
   Oil mist and condensing vapour can settle on adjacent areas such as ladders, walk ways etc, creating slippery dangerous conditions.

THE CHALLENGE

Fugitive emissions are difficult to eliminate because the majority of oil droplets fall in the range of less than 1 micron in diameter. The traditional control technologies which have been used in the past include mesh pads, packed fibre bed filters, rotating drums and electrostatic precipitators (ESP's) The manufacturers of these technologies all claim at least 95% efficiency... some even go as high as 99%! That's the problem.

While all of these are satisfactory, for removing large oil droplets, they are totally inadequate for removing sub-micron emissions of 0.5 micron and smaller and therefore a clearly visible oil plume remains.

THE SOLUTION

The Dollinger Oil Mist Eliminator is a highly efficient dynamically engineered filtration system for source control of mist created by high speed rotating equipment. The product range includes both non-blower and blower assist models for positive and negative pressure lubricating oil systems.

THE DOLLINGER ADVANTAGES

1. Eliminates all visible oil plume
   Complies with all environmental regulations. The Dollinger OME offers unequalled efficiency - 99.97% of all droplets and particles 0.3 micron and larger; guaranteed less than 5ppm by weight oil mist carryover providing unsurpassed reliability and performance in a simple, compact design.

2. Simple, efficient energy saving operation
   Once installed, provides years of trouble free operation; also prevents undue power loss and maintenance by stopping mist from entering nearby air intake systems.

3. Maintenance Free
   Depending on the dirt loading, has a filter element life up to five years.

4. Compact
   Space-saving physical envelope and lightweight structure make it ideal in a crowded environment.

5. Quiet Operation
   All models conform to OSHA standards and Directive 86/188/EEC.

6. Proven Performance
   Years of demonstrated performance on gas turbine packages for power generation and on oil reservoir vents on large compressors.

SPECIAL ENGINEERED OPTIONS.....
OE-158 Non-Blower Model

For positive pressure lubricating oil systems

Technical Data
- Maximum operating temp: 175°C
- Maximum recommended operating temp: 82°C
- Minimum operating temp: -15°C

Element Differential Pressure
- Dry: 150 mm WC.
- Fully saturated: 460 mm WC.

Recommended Pressure Differential for
- Element change: 760 mm WC.

OE-158B Blower Assist Model

For negative pressure lubricating oil systems

Technical Data
- Maximum operating temp: 150°C
- Maximum recommended operating temp: 82°C
- Minimum operating temp: -15°C

Element Differential Pressure
- Dry: 150 mm WC.
- Fully saturated: 460 mm WC.

Recommended Pressure Differential for
- Element change: 760 mm WC.

OE-158 Non-Blower Model

With positive pressure systems there is usually sufficient pressure in the reservoir to overcome the differential pressure (approx 460 mm WC) of our mist eliminator.

OE-158B Blower Assist Models

Many gas turbines and turbo compressors are designed to operate with the lube oil reservoir maintained at a negative pressure (-25 to -100 mm WC). When installing an oil mist eliminator on such systems, a blower assist model is used to overcome the differential pressure of the filter and, at the same time, keep the negative pressure in the reservoir under control.
Global locations

AMERICAS
SPX FLOW TECHNOLOGY
4647 SW 40th Ave
Ocala, FL 34474
P: +1 800-344-2611
F: +1 800-628-4778
E: sales.dollinger@spx.com

APAC
SPX FLOW TECHNOLOGY
25 International Business Park
#03-03/12 German Centre
Singapore 609916
P: +65 6568 1568
F: +65 6265 9133
E: sales.dollinger@spx.com

EMEA
SPX FLOW TECHNOLOGY
IDA Business and Technology Park, Tiernaboul,
Killarney, Co.Kerry, Ireland
P: +353 64 6633322
F: +353 64 6633371
E: sales.dollinger@spx.com

The SPX Flow Technology segment designs, manufactures and installs highly engineered solutions used to process, blend, meter and transport fluids, in addition to solutions for air and gas filtration and dehydration. The segment supports global food and beverage, dairy, pharmaceutical, oil and gas, energy, and industrial markets. SPX (NYSE: SPW) is a global Fortune 500 multi-industry manufacturing leader with over $5 billion in annual revenue, operations in more than 35 countries and over 18,000 employees. For more information, please visit www.spx.com

SPX reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region. For more information visit www.dollinger-spx.com and www.spx.com.

The green ">" is a trademark of SPX Corporation, Inc.

ISSUED 05/2012    SB-Dollinger OE158/158B-EN
COPYRIGHT © 2012 SPX Corporation