LGG INDUSTRIAL

HDLE

Product Information Bulletin

THE PROBLEM:

As early as 1989, industry sources estimated that more half of the 6.3 million pounds of toxins released in North Baton Rouge over the course of a year came not from spills, smokestacks and waste, but from the sum of tiny emissions.

Subsequent fugitive emissions research at a large U.S. refinery determined that in a single year, 630 flanges with leak rates over 500-ppm released 380,000 pounds of VOC's (Volatile Organic Chemicals) into the atmosphere, per AQMD (Air Quality Management District) calculations.

These leaks had tangible financial impacts.

- Environmental fines: $160,000
- Charges for wire wraps and injections by leak sealing contractor: $150,000
- Approximate company labor charges: $130,000

Total impact: $440,000, or $700 per leak!

THE SOLUTION FOR FUGITIVE EMISSIONS:

After extensive research into potential improvements, we introduced the HDLE (High-Density, Low Emission) spiral wound gasket. This proven design includes:

1. Tightly wound sealing element with increased density
2. APX-2 graphite to obtain low oxidation
3. Wider graphite material that extends above the metal winding
4. Fully compliant with ASME B16.20

For solutions that impact your plant, contact your nearest LGG Industrial location by visiting our website.

Advanced Sealing

Even considering recent sealability standards and requirements, current spiral wound gaskets are not emission-control devices and significant emissions are permissible.

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In complying with the new ASME B16.20 testing requirements, we recently performed sealability tests comparing standard spiral wound gaskets to HDLE gaskets. These tests were conducted by Yarmouth Research Lab* and utilized Methane as a test medium.

SUMMARY

- The spiral wound gasket has been a main-stay of refining and chemical processing for over 100 years.
- The need for improved sealability, and the need to reduce VOC emissions, has driven the research that has shown how spiral wound gaskets can be upgraded to meet new sealing requirements.
- The HDLE gasket (shown above) has been tested in multiple platforms to demonstrate that it is able to meet the sealing demands of the modern process industry.

**Yarmouth Research - Document available on request*

ASME B16.20 TESTING AT YARMOUTH RESEARCH LAB RESULTS

Size	Standard Spiral Wound	HDLE
3” 150#	59-ppm	0.1-ppm
6” 300#	46-ppm	0.5-ppm
8” 150#	122-ppm	2.1-ppm
12” 150#	38-ppm	0.5-ppm
Average	**66-ppm**	**0.8-ppm**

Low Emission (LE) gaskets must register less than 10-ppm leakage.

The HDLE gasket seals 80-times as good as the standard

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Advanced Sealing