Low-Emission (LE) Product Guide
**STYLE® 2236**

**APPLICATION / BENEFITS:** Style 2236 is ideal for valves and can be used within a broad range of applications. It is well suited for power plants, refineries, petrochemical industries, chemical processing as well as sealing applications in steam at high pressure and temperatures.

This product is self-lubricating, non-hardening, dimensionally stable and resistant to gases and fluids as well as heat, pressure and chemicals. The Inconel® filament jacket affords mechanical stability and resists extrusion. The advanced construction provides leakage control and has high integrity in steam service.

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**KEY FEATURES**

» Certified Low-Leakage Packing Technology
» TA-Luft approved
» Suitable to VOC and VHAP emissions regulations
» Environmentally friendly valve stem packing with extreme emissions control
» API 607
» API 622
» API 624
» ISO 15848

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**SERVICE LIMITS**

**Products**

<table>
<thead>
<tr>
<th>2236</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temperature (°F (°C))</strong></td>
</tr>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
<tr>
<td>Steam</td>
</tr>
</tbody>
</table>

**Pressure (PSI (bar))**

- **Valves:** 6500°F (450°C)
- **pH:**

---

**Standard Package**

<table>
<thead>
<tr>
<th>Size</th>
<th>Packages**</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm (inch)</td>
<td>mm</td>
</tr>
<tr>
<td>kg (lb)</td>
<td>1kg (2.2lb)</td>
</tr>
</tbody>
</table>

**Note:** Subject to change depending on tolerance expected +/-10%.

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**Yarmouth Research and Technology, LLC**

**API 622 PROJECT SUMMARY**

- **Customer:** Teadit North America
- **Start Date:** 8-Jun-11
- **Project #:** 211142

**Packing Information**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Valve Type</td>
<td>87202</td>
</tr>
<tr>
<td>Valve Size</td>
<td>1.000</td>
</tr>
<tr>
<td>Stem Diameter</td>
<td>1.000</td>
</tr>
<tr>
<td>Bore Depth</td>
<td>1.250</td>
</tr>
<tr>
<td>Follower Height</td>
<td>1.015</td>
</tr>
<tr>
<td>Gland Bolt Diameter</td>
<td>5/8</td>
</tr>
<tr>
<td>Gland Height at Start</td>
<td>0.658</td>
</tr>
<tr>
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<td>35%</td>
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**Test Conditions**

- **Specification:** API 607, 2nd Edition, 2011
- **Test Media:** 99% Methane
- **Test Pressure:** 600 psig
- **Recommended Packing Nut Torque:** 57 ft-lb
- **Maximum Allowable Leakage:** 100 PPMv
- **Stem Linear Travel During Cycling:** 4.0 inches
- **Cycling Rate:** 45 seconds per cycle

**Dimensions (inches)**

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**Results**

- **Average Test Pressure:** 600 psig
- **Number of Mechanical Cycles Completed:** 1510
- **Number of Thermal Cycles Completed:** 5
- **Number of Packing Adjustments Required:** 0
- **Cycle Number(s) of Packing Adjustments:** n/a
- **Average Leakage Throughout Test:** 2 PPMv
- **Maximum Leakage Throughout Test:** 22 PPMv

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**Witness:**

Matthew J Wasielewski, PE
President, Yarmouth Research

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**API 622 Maximum 22 ppmv in 1,500 cycles and with an average of 2 ppm**

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**KEY FEATURES**

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ECOTAPE-LE® is manufactured to provide an advanced structural matrix which incorporates Graphite into the Expanded PTFE. Due to the excellent properties of PTFE and graphite, this combination ensures a wide degree of chemical resistance, low coefficient of friction, excellent heat dissipation due to the high thermal conductivity of graphite and superior mechanical resistance.

Our unique manufacturing process provides the final product a high degree of integrity proven to supply the best sealing solution for thread seal tape.

**METALFLEX® 913M-LE**

Low Emission Spiral Wound

The Metalflex 913M-LE spiral wound gasket is a major improvement on the traditional ASME B16.20 design. Where the traditional design is based primarily on dimensional criteria, the 913M-LE takes this and adds proven low-emission performance. Teadit Research & Development has discovered that density of the sealing element, a well-defined preformed metallic strip, and an enhanced soft filler material configuration, along with mandatory outer and inner rings, together play key roles in achieving sealing ability which can meet even the most stringent fugitive emission requirements. Furthermore, the design provides low-emission performance at a level significantly below the minimum ASME seating stress rating for spiral wound gaskets – making the 913M-LE a truly low seating stress design!

- **Reliability - High Pressures**
- **Sealability - Very Low Emission**

*Spiral Wound: Conventional vs. New Technology - Metalflex 913M-LE
Increase of metal windings, higher density*

*Material and Dimension per ASME B 16.20.*
Teadit is a global leader in the development and production of a broad range of sealing solutions. Our mission is to assist you in achieving leak-free and low-emission levels of performance.

The application parameters indicated in this brochure are typical. Specific applications should be looked at independently for an evaluation on compatibility. Please consult Teadit engineering for recommendations about specific use.

Sealing for a Safer and Greener Tomorrow

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