

Case study: Stable sealing performance against oxidizing fluids

TOMBO™ No. 1891-NM Kammprofile gasket



Industry

Chemical

Customer

Chemical manufacturer

Background

Customer was using molten heat transfer salts (HTS) in the manufacturing processes. Since HTS is an oxidizing fluid, the gaskets that can be proposed are limited. Conventional spiral wound gaskets commonly used in this application were not an option in this case. Especially spiral wound gaskets with expanded graphite were not suitable for this application due to their lack of resistance against oxidizing fluids. Customer was looking for a gasketing solution that would not get damaged by exposure to HTS and hence maintain a stable sealing performance.

Challenges faced

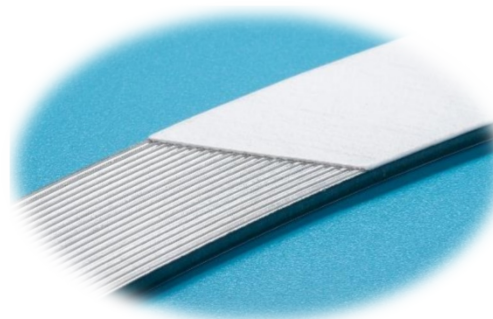
Customer had limited selection of gaskets that could be used in their production. Spiral wound gaskets require a reinforcing inner ring due to the risk of buckling. Spiral wound gaskets are also limited in terms of the flange dimensions where they can be used. Due to the required dimensions, a spiral wound gasket with fluid resistance could not be proposed. Therefore, the customer required a replacement with adequate structural stability and fluid resistance to maintain sealing performance. Under the usage conditions, the spiral wound gasket could not achieve the structural stability and fluid resistance required by the customer.

Solution and benefits

Based on customer requirements review, the technical team selected TOMBO™ No. 1891-NM due to its structural stability and oxidizing fluid resistance. Unlike spiral wound gaskets, TOMBO™ No.1891-NM

Kammprofile gasket is a semi-metallic gasket with concentric grooves on both sides of a metal ring and NM sheet attached as a surface material. Therefore, it does not require a reinforcing inner ring like spiral wound gaskets. In addition, NM sheet has excellent oxidation fluids resistance. Weight loss when exposed to HTS is the same as other products on the market. Ultimately, by adopting TOMBO™ No.1891-NM, the customer reduced the risk of gasket damage and subsequent leakage due to oxidation, and acquired a stable sealing performance.

For more information, please visit:
<https://nichias.co.jp/en/>



TOMBO™ No. 1891-NM Kammprofile gasket



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