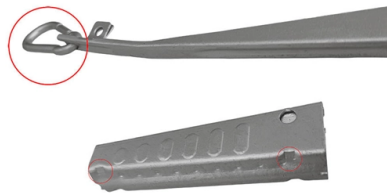


Fixing of spiral wound tubing for petroleum and petrochemical applications



AI Overview

Spiral wound gaskets are installed by carefully aligning the inner and outer rings, selecting compatible materials, and following ASME B16.20 standards to ensure leak-free sealing under high pressure and temperature conditions.

Overview Spiral wound gaskets are semi-metallic seals made by alternately winding a V-shaped metal strip (commonly stainless steel 304/316 or Monel) with a soft filler such as flexible graphite or PTFE. This construction provides resilience under fluctuating pressures and temperatures, making them ideal for petroleum, petrochemical, and refinery piping systems ().

Components and Function

- Inner Ring (Solid Metal Ring):** Prevents the winding from collapsing under high bolt loads and is mandatory for Class 900 and above. It enhances sealing performance in high-pressure and vacuum applications ().
- Winding Body:** Alternating metal and filler layers create the primary seal. Filler density typically ranges from 1.0–1.4 g/cm³ for flexible graphite ().
- Outer Ring (Centering/Retaining Ring):** Aligns the gasket on the flange, limits over-compression, and acts as an anti-blowout device. Thickness is generally 0.117–0.131 inches (2.97–3.33 mm) ().

Installation Best Practices

- Surface Preparation:** Ensure flange faces are clean, smooth, and free of debris or corrosion.
- Gasket Alignment:** Place the gasket so that the inner and outer rings are properly seated. The centering ring should contact the stud bolts lightly to maintain alignment ().
- Bolt Tightening:** Apply torque evenly in a cross-pattern sequence to avoid uneven compression. Follow manufacturer-recommended torque values and ASME B16.20 guidelines ().
- Inspection:** Check for proper compression and alignment before pressurizing the s...

Article Content

Capillary Tubing

Hanging in gas wells, capillary tubing strings are subject to the well environmental conditions and must be designed accordingly. When selecting capillary tubing strings, many of the same considerations

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One of the common challenges with spiral wound gaskets is the risk of blowout, especially in high-pressure applications. This can be mitigated by using gaskets with outer rings and

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This article will comprehensively introduce the relevant knowledge of metal spiral wound gaskets, including its definition, classification, application scenarios, market demand and trend

What is a Spiral Wound Gasket? Applications, Types, Construction,

A Spiral Wound Gasket is the most widely used common metallic gasket used in industrial applications involving a range of pressure and temperatures. They are popular in the oil and gas, chemical,

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A state-of-the-art review regarding offshore application of spiral welded pipe is presented in the chapter. No design code fully covers the use of SAWH pipe for offshore applications.

Spiral Welded Pipes

Spiral welded pipes are a highly reliable and cost-effective solution for a wide variety of pipeline applications. Manufactured through a specialized

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Discover the benefits and applications of spiral wound gaskets. Learn about types, materials, and installation tips for reliable sealing solutions.

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Learn how to install spiral wound gaskets correctly — surface prep, bolt torque sequence, hot retorque, material selection, and ASME B16.20 compliance tips.

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What is a spiral wound gasket? Learn about the types of spiral wound gaskets, their construction, and when to use them in various applications.

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Metal spiral wound gaskets, with their composite structure of elastic metal and flexible filler, create a unique "rigid-yet-flexible" sealing solution. This article reveals why they are the ultimate choice for

Spiral Wound Gasket: Types, Structure & Industrial Uses | CRI Gasket

This comprehensive guide covers everything you need to know about spiral wound gaskets including their structure, types, applications, materials, advantages, and how to select the

Ultimate Spiral Wound Gasket Guide - Types & Uses | Unifit

Explore top-quality spiral wound gaskets including SS316, graphite, PTFE & metal types. View prices, specs & supplier info from Unifit Metalloys.

Spiral Wound Gasket Design, Materials and Application

Complete guide to spiral wound gasket design, materials, and applications. Learn about retaining rings, filler materials, compression specs, and ASME B16.20 requirements for industrial

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Spiral Wound Gaskets Explained | Industrial Sealing Guide

A complete guide to spiral wound gaskets covering materials, ASME standards, flange compatibility, PTFE vs graphite fillers, and industrial sealing applications.

The Source of Spiral-Wound Tubing for All Kinds of Applications

When it comes to spiral-wound tubing, few names have as much clout across multiple industries as PPG. It stands to reason. Spiral-wound tubing was invented by the founder of one of

Spiral Welded Pipes: Applications, Manufacturing, Advantages, and ...

Applications of Spiral Welded Pipes Spiral Welded Pipes are commonly used to convey liquids (oil, water, etc.), gases (air), steam, etc in Chemical Industries Petrochemical industries Water and

Spiral Wound Gaskets for Reliable Sealing | IGP Engineers

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(PDF) Spiral Wound Pipe as a Rehabilitation Method

An analysis of the materials, structural properties, and construction methods used to install this pipe was conducted to figure out the most

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