ZITHA TECH SPECIALTY CABLES (Pty) Ltd

Reasons for pigtail loops



Overview

What are Pigtails | Piping GlossaryA pigtail is a coiled or looped section of tubing used in piping and instrumentation systems to absorb vibration, manage.

Key Takeaways

Pigtail loops are used to protect instruments from high temperatures, pressure surges, and vibration while ensuring accurate and reliable measurements.Thermal Protection

Pigtail loops, often installed as coiled or U-shaped sections of tubing, act as a cooling loop or condensate trap. In high-temperature steam or gas systems, the loop allows a small amount of condensate to form, creating a liquid seal that prevents direct contact between the hot medium and sensitive components like Bourdon tubes in pressure gauges. This protects the instrument from overheating and potential damage, maintaining measurement accuracy and extending equipment life .

Pressure Surge Buffering

The curved design of a pigtail loop provides a mechanical buffer against pressure spikes, pulsations, and water hammer effects. By absorbing these surges, the loop reduces stress on the connected instruments, preventing sudden failures and improving the longevity of gauges and transmitters .

Vibration Reduction

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Pigtail loops also minimize vibration transfer from the process line to the instrument. The flexibility of the coiled tubing allows it to flex under mechanical vibrations, which helps maintain stable readings and reduces wear on sensitive components .

Condensate and Corrosion Control

In systems with corrosive or scaling-prone media, the condensate collected in the loop acts as a protective barrier, preventing harmful substances from reaching the instrument. This reduces corrosion, blockages, and long-term maintenance issues .

Installation and Operational Considerations

Pigtail loops can be installed vertically or at an inclined angle to ensure proper condensate retention. They are commonly used in steam boilers, thermal pipelines, and high-temperature pressure systems. Proper installation may include filling the loop with water or another fluid to enhance phase separation and create a liquid seal before operation . In summary, pigtail loops are essential in piping and instrumentation systems for thermal isolation, pressure buffering, vibration reduction, and protection against corrosive media, ensuring accurate, reliable, and long-lasting operation of pressure measurement devices .

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Protecting Your Pressure Gauges with Steam Siphons

Pigtail siphons. These instruments are specifically made for vertical piping configurations and are identifiable by their

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Learn what an electrical pigtail is and why this short jumper wire is essential for safe, code-compliant connections in

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Pigtail wiring is a crucial concept in electrical work that ensures safe and efficient connections. It involves joining multiple wires

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How to Make Pigtail Electrical Wire Connections

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We hypothesize that the pigtail sign (see graphic) on flow pressure loops correlate with secretions and may be more

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Don''t expose the pigtails to harsh environments; most pigtails are designed for indoor applications. Benefits of using a

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Flow pressure loops were evaluated before and after suctioning. Only flow pressure loops that had an initial pigtail sign were

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