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Lokring Tube Connection

Purdue ECT Team

Purdue University, ectinfo@ecn.purdue.edu

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LOKRING TUBE CONNECTION

THE NEED

A fast and solderless system for connecting air-conditioning and refrigeration tubing of the same or different metals (aluminum, copper, steel) and between the same or different sizes. The system provides a hermetically sealed metal-to-metal connection that is intrinsically safe. It can be used in areas where flammable or explosive conditions may exist.

THE TECHNOLOGY

When the connection is made, the LOKRING elements are joined together in a way that the internal profile of the connection is producing an inward radial pressure against the union body and the tubes being joined. This connection forms a metal-to-metal hermetic seal that eliminates the possibility of a pressure drop.

The connection is made in the following way: A specially formulated anaerobic sealant is applied to both tube ends to fill any surface scratches. Each end is inserted into a LOKRING connector. The LOKRING tool is then used to join both ends to the connector.



FIGURE 1 THE LOKRING TOOL

THE BENEFITS

- Allows an extremely fast cold connection. Ten times faster than equivalent weld connections.



- Four times stronger than a soldered joint. It is resistant to forces of high pressure, vibration, and thermal cycling. Expansion or contraction of the material caused by change in temperature has no impact on the elasticity of the tube connection.
- Makes direct transitions from one tube size to another using reducers or tee connections.
- Can connect tubes of different metals.
- Requires no special training.
- This type of connection eliminates the possibility of any system contamination.
- Can withstand pressures up to 3,000 psi and operating temperatures from -50° C (-58° F) to +150° C (+302° F).

STATUS

The LOKRING system has been field-proven in millions of installations since the 1970s and because of its benefits and potential impact, this technology is still considered as a High-impact emerging construction technology.

BARRIERS

The connections are limited to only diameters from 1.6mm (1/16") to 22mm (7/8").

POINT OF CONTACT

Jennifer Wyrosdick, Customer Service Coordinator. American LOKRING Corporation.

Phone: (941) 325-9262, Fax: (941) 324-4008 E-mail: lokringusa@lokringusa.com

REFERENCES

1. LOKRING Catalog (<http://www.lokring.com>)



REVIEWERS

Peer reviewed as an emerging construction technology

DISCLAIMER

Purdue University does not endorse this technology or represents that the information presented can be relied upon without further investigation.

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