

Minimizing energy loss/gain in fluid transfer applications with Insulon Vacuum Jacketed Hose, MLI

Insulon vacuum jacketed hoses are engineered for cryogenic and high-temperature applications from -270 to 815°C (-454 to 1500°F). Ultra-high performance models of Insulon Hose include proprietary **multi-layer insulation (MLI)**. MLI is a series of thin, highly reflective layers of materials that minimize radiation heat transfer.

Features & Benefits

- Minimizes boil off losses
- Reduces condensation
- Improves thermal energy efficiency
- Maintains safer surface temperatures
- Compatible with a range of end fittings including compression unions, adapters, flared swivel nuts, flanges, and more
- 316L stainless steel construction
- Wide operating pressure range
- ASTM G93 oxygen cleanliness up to Level A available upon request

LN2 Boil-Off Testing Insulon Hose with MLI vs. Other Vacuum Insulation with MLI മറ 70 Insulon Hose with MLI reduced boil-off losses by 45% 60 compared to the other 50 vacuum insulation with MLI. (8) sseW Other Vacuum Insulon Vacuum 30 Insulation with MLI Insulation with MLI 20 Boil-off: 1.1 W/m Boil-off: 0.6 W/m 10 0 120 150 180 Time (m) —Insulon Performance Conventional Performance

Setup: Two 1/2" ID x 6' L vacuum jacketed hoses are bent 180° into a "U" configuration. Both ends of each hose assembly are fixtured onto a load-cell. The hoses are filled with LN2. A DAQ system pulls data from both load cells to plot the mass loss of LN2 with respect to time.

Range of sizes

- Inner diameters include
 1/4 in, 3/8 in, 1/2 in, 3/4 in, 1 in ID
- Lengths up to 66 feet (20 meters)

Support

Engineering support available.
Contact us to discuss your project.

Learn more at **conceptgrouplic.com**

