

DEKORON®

Unitherm™

Tubing Bundle Experts Since 1962



INDUSTRIES SERVED

REFINING



COAL FIRED POWER



COMBINED CYCLE POWER



RAIL & TRUCK LOADING



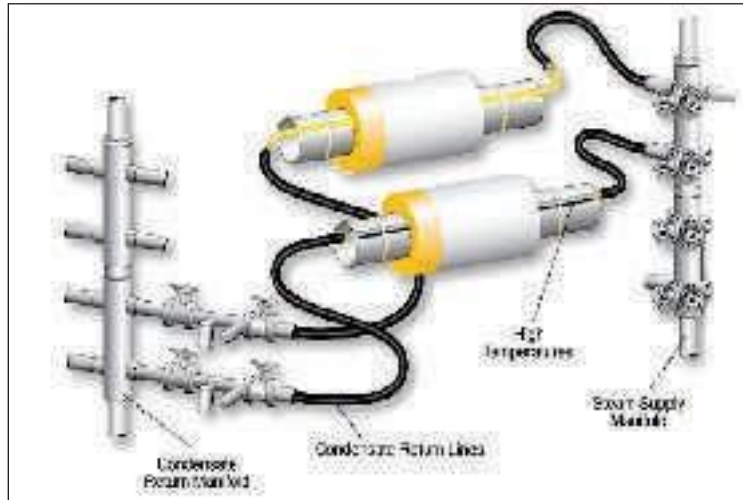
SHIPBOARD



PLATFORM



PRE-INSULATED PRODUCTS FOR STEAM TRANSPORT AND CONDENSATE RETURN



What are pre-insulated and condensate return lines

Pre-insulated transport and condensate return lines are a critical part of any modern day steam tracing system. Pre-insulated tubing carries the tracing medium from the header or manifold to the individual tracers used to heat the pipe or vessel. Once the steam or tracer medium has given up its energy it is returned to the boiler for re-heating. This provides not only energy efficiency but also personnel and environmental protection.

The Pre-insulated tubing consists of a thermally insulated single metal or polymer process tube wrapped with either fibrous glass or aerogel insulation then covered with a continuously extruded polymer jacket.

DEKORON® Unitherm™

Pre-insulated products provide:

- Consistent Thermal Properties
- Low Heat Loss
- Personnel Protection
- Low Maintenance
- Significant Cost Savings Over Field Fabrication



THE DEKORON® Unitherm™ DIFFERENCE

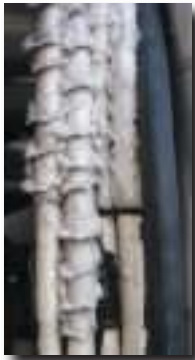


← PROPER INSTALLATION

POOR
INSTALLATION →



Tubing bundle life expectancy is directly related to how well terminations are sealed. While insulation is typically specified as low chloride and non-wicking. Fibrous glass insulation contains anywhere from 20 PPM to over 100 PPM of free chlorides. In general no insulation material with a free chloride content greater than 30 PPM should ever be used. While non-wicking, fibrous glass will absorb moisture, once wet all thermal properties are lost as well as increasing the chance of chloride corrosion cracking of stainless. Even when using an ultra-low chloride, hydrophobic insulation such as aerogels it is always best practice to seal all terminations with either boots or RTV sealant.



← SPALLED JACKET DUE TO
MOISTURE ENGRESS &
FREEZE THAW CYCLING

NOT ALL HEAT SHRINK BOOTS ARE CREATED EQUAL

Unlike other manufacturers, **DEKORON®UNITHERM™** heat shrink boots are designed to handle the temperatures of steam. Heat shrink materials are designed to shrink when exposed to heat, typically 250F and are only rated for 230F continuous service. Low, minimum and high pressure steam temperatures range from 250F to 1,000F. Based on traditional installation methods the boot extends on to the transport tube in order to seal the end and prevent the insulation from getting wet. Unfortunately, due to operating temperature the boot material will continue to shrink ultimately splitting and allowing the very thing it was installed to prevent, moisture egress. **DEKORON®UNITHERM™** boots incorporate a state of the art thermal barrier to prevent overheating by tube contact. In addition the sleeves are treated with a proprietary silicone formulation to insure a weather tight seal that will last the life of our pre-insulated system.



CONTINUOUS EMISSIONS MONITORING SAMPLE LINES



APPLICATIONS

- Dilution
- Extraction
- Mercury
- HCL
- Ammonia
- Flare Gas



INDUSTRY

- Oil & GAS
- Coal Fired Power
- Gas Turbine
- Shipboard
- Engine Test Cells
- Waste to Energy



CONTINUOUS EMISSIONS MONITORING SAMPLE LINES

THE DEKORON® Unit herm¹_M DIFFERENCE



- Multiple circuits one power source
- Individual sensors to control each circuit
- Choice of Thermocouples or RTD's
- Heaters to meet every need



- Self Regulating
 - Resistance Wire
 - Constant Power or Self-Limiting
- Proprietary Designs
 - INTEGRITY SERIES®
 - RELIABILITY SERIES®



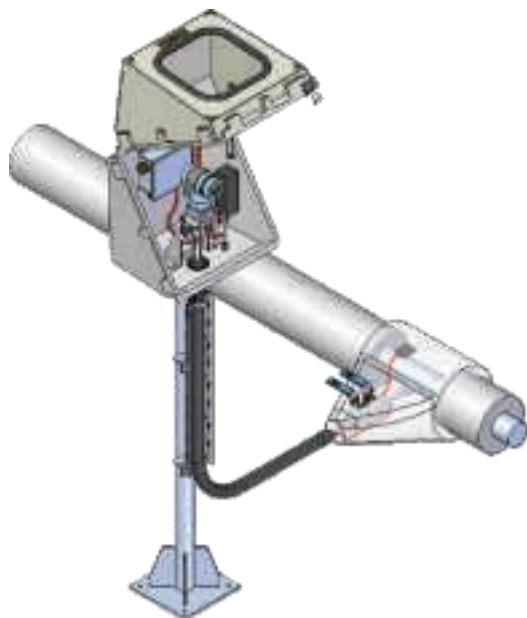
- Communications & Fiber Optic cables available
- Plug & Play end connections
- Marine CEMS Ship Sets



HEATED SAMPLE LINES FOR PROCESS AND ANALYTICAL MEASUREMENT

DEKORON® UnithermrM offers the widest range of heated samples lines in the industry

- Lines are designed to meet process response times & minimize uptake and release times
- All designs are cabled to insure uniform heat transfer
- Temperatures from freeze protection to high temperature maintenance
- Heating mediums include Electric, steam, hot water & oil
- Designs for ordinary and hazardous locations and all T ratings



THE DEKORON® UnithermrM DIFFERENCE

- Proprietary Insulation Materials
- Cabled design
 - Eliminates temperature variations in sample
 - Allows for smaller footprint & easier installation. No manual twisting of line for multi-plane installations
- Buffered designs for both intermittent & continuous exposures

STANDARD MATERIALS OF CONSTRUCTION

- Commercial & proprietary fluoropolymers
 - Ultra High Purity
 - Conditioned
 - Double wall containment
- Seamless & welded austenitic stainless steel
 - T-304/L
 - T-316/L
 - Duplex & Super Duplex
 - Semi-conductor grade
 - Electropolished
 - Silco-Tek coatings

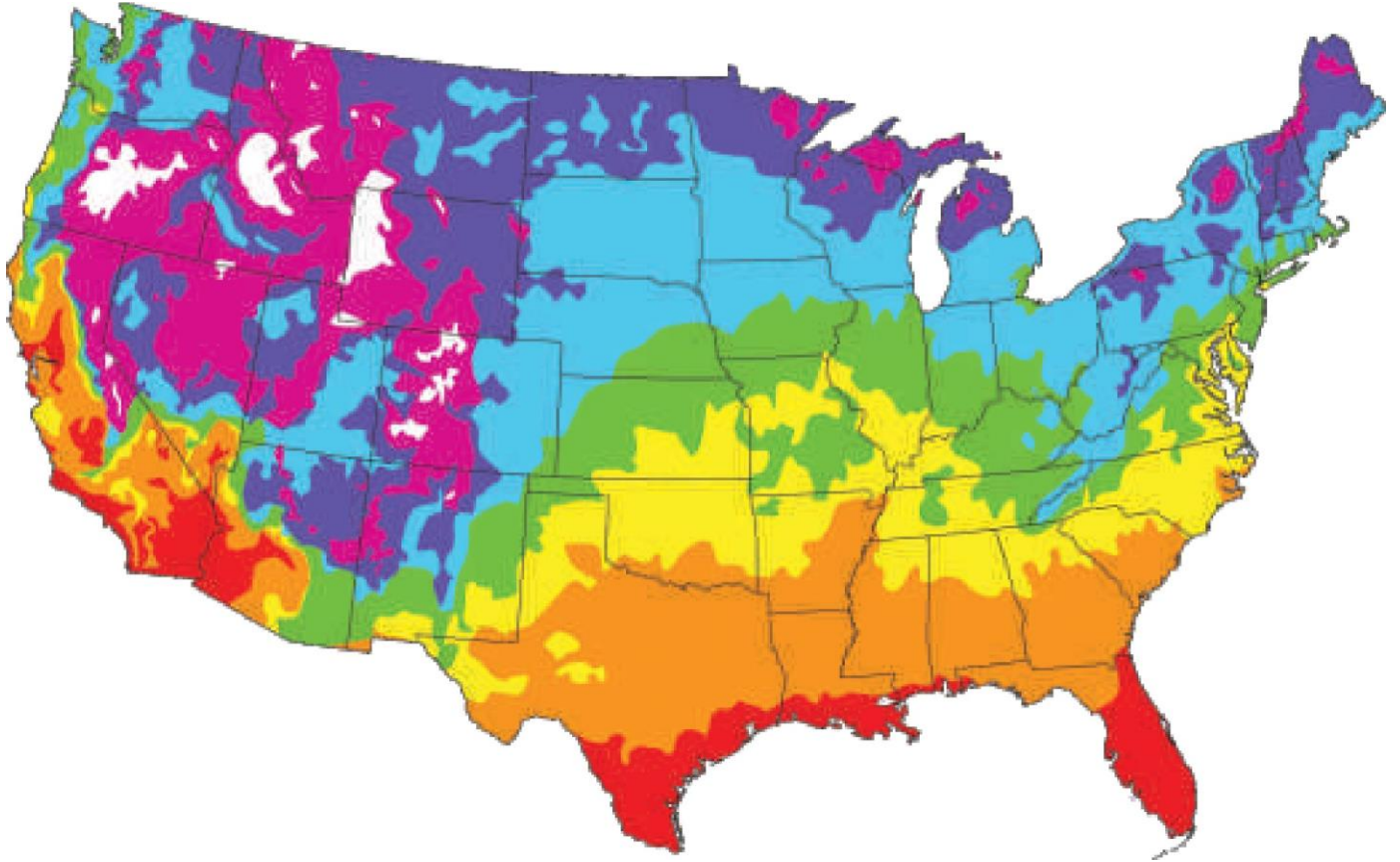


What do you do when critical heated sample lines fail? Wait 4 to 6 weeks for a replacement or field fabricate a temporary line until the replacement arrives. If you use **"CHANNEL TRACE"** by **DEKORON®Unitherm™** simply replace the heater and be back sampling product within hours not days or weeks.



HEATED HOSE

DO YOU NEED FREEZE PROTECTION?



*If you are **NOT** located in the **RED** areas, the answer is **YES**.*



INDUSTRIES SERVED

- Oil & Gas
- Coal Fired Power
- Combined Cycle Power
- Mining
- Food



TYPICAL APPLICATIONS

- Water Lines
- Slurry Lines
- Dust Suppression
- Chemical Injection
- Bulk Transfer
- Discharge



HEATED HOSE TEMPERATURE MAINTENANCE



INDUSTRIES SERVED

- Oil & Gas
- Asphalt
- Chemical
- OEM
- Emissions Monitoring



TYPICAL APPLICATIONS

- Hot Spray
- Chemical Injection
- Extrusion
- Truck Loading Arms
- Rail Car Loading Arms
- Drum Transfer Lines
- Engine Exhaust Testing



ACCESSORY PRODUCTS

BUNDLE BENDER



JACKET CUTTER



RTVSEALANT



BOOTS



SEAL PATCH KIT



CABLE ENTRY SEAL



HEATER TERMINATION KITS



POWER CONNECTION KITS



AMBIENT & LINE SENSING THERMOSATS





DEKORON® UN/THERM™ is the inventor of pre-insulated & heat traced sample lines. We have been producing product since 1962. With over 55 years experience, ***DEKORON®*** is a world leader in the design and manufacture of pre-insulated & heat traced tubing and small bore pipe. Our products have been installed on every continent and in some of the harshest environments known to man.

DEKORON®
Unitherm™
Tubing Bundle Experts Since 1962

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