

INSULTECH®

HEAT SHIELD INSULATION

FOR STEAM TRAPS & STEAM SPECIALTIES

SHANNON ENTERPRISES OF W.N.Y. INC. **INSULTECH®**
HEAT SHIELD INSULATION

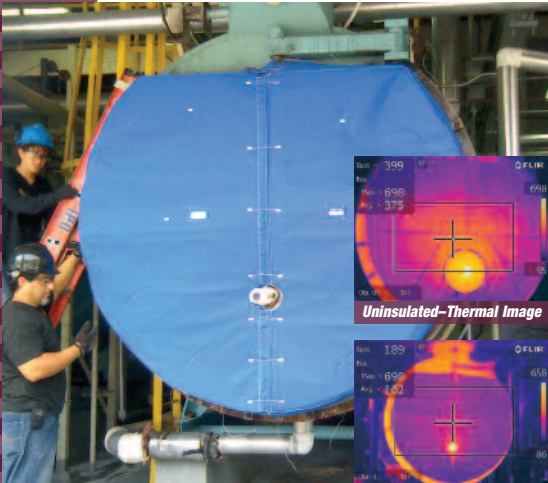


STEAM TRAP

INSULTECH® Heat Shield
Design: LT500HS - 1/4" thickness
Fastener: Velcro Flaps

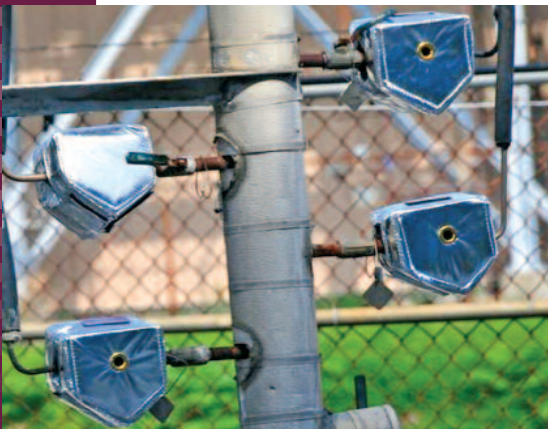


"Solving the Problem with Steam Trap Radiant Heat Loss"



BOILER DOOR

INSULTECH® Heat Shield
Design: LT500HS - 1/4" thickness
Fastener: Stainless Steel Wiretwists



STEAM MANIFOLD SERVICE TREE-STEAM TRAPS

INSULTECH® Heat Shield
Design: LT500HS - 1/4" thickness
Fastener: Velcro Flaps

...is a "cost effective" thermal insulation system designed with many of the features and benefits of a traditional blanket insulation system. INSULTECH® Heat Shield Insulation is removable and reusable for easy installation, easy removal and easy re-installation, making access to steam specialties simple. Reduce cycle times and extend trap service life.

...will create a SAFER WORK ENVIRONMENT by lowering surface temperatures on critical applications. Enhance your V.P.P. (Volunteer Protection Program) with a simple solution.

...is compliant to OSHA standards for exposed heated surfaces, if there is a potential for injury. OSHA standards include; 1910.261(k)(11), 1910.262©(9), 1910.23©(3), 1910.147 & 1910.132(a), Section 5(a)(1) of the OSHA act.

...will SAVE ENERGY. Steam Traps covered with INSULTECH® will show an estimated ENERGY SAVINGS of 75%. With average surface temperatures of 250 F, this reduction equates to payback periods on investment of less than 6 months. The savings will continue, year after year. A single steam trap can generate \$130.00-\$740.00 per year in energy loss. Calculated savings will be \$95.00 to \$546.00 per year. A 15 year service life could be \$1,425.00 to \$8,190.00 for each steam trap! Following a steam trap survey can lead to very large energy savings.

...is a custom fit, self contained insulation system. Design LT500HS, features a sewn, self contained construction with Velcro® flaps for easy install. INSULTECH® is capable of withstanding both temperature and frequent removal. The quick release fastening system with a high quality sewn construction allows easy removal and re-installation. Trap inspection can be performed without removal through an inspection grommet, strategically placed. Labeling includes information derived from your steam trap management program.

...is a CAD/CNC manufactured design for exact fit and finish. With close tolerances on complex surface geometry, the INSULTECH® Heat Shield insulation system allows standardized offerings for almost any steam trap and steam specialty fitting. Applications include; Steam Traps, ATP (Automatic Pumping Traps), Condensate Pumps, Steam Tracing & Steam/Condensate Manifolds.

INSULTECH® has become the recognized name in the insulation industry both for its high quality and high engineering standards. As an industry leader, Shannon Enterprises can assist in solving your insulation problems. We are the market leader in design and innovation.

Thermal Efficiency Safety Noise Reduction

INSULTECH®

HEAT SHIELD INSULATION

**FOR STEAM
TRAPS & STEAM
SPECIALTIES**

Energy Survey Sample

Presented By: Shannon Enterprises of W.N.Y., Inc.		Survey Date: 10/23/13	
Presenter Contact: Frank Kovacs - Ph/Email: 716-693-7954 / fkovacs@shannonent.com		Proposal Date: 11/01/13	
Project Name: Sample Steam System Inc. - Anywhere, USA		Product Specification: LT500HS	
Project Contact: Mr. Energy Manager - Ph/Email: 555-555-5555 / EnergyMgr@steamsystem.com		Fuel Cost (\$/mmBTU): \$12.80	
Survey Completed By: Shannon Employee - Ph/Email: 716-693-7954 / info@shannonent.com		Steam Cost: \$17.07	
Quote / WO#: 123456		Typ. Insulation Thickness (In.): 0.25	

QTY	Tag #	Description / Location	Ambient Temperature	Operating Hours	Bare Heat Loss (BTU/Hr)	Bare Oper. Cost (\$/Year)	Insulated Heat Loss (BTU/Hr)	Insulated Oper. Cost (\$/Year)
50		Armstrong 813	90	7884	178880	\$24,068.95	45138	\$6,073.47
50		Gestra MK-45	90	7884	24786	\$3,335.05	7082	\$952.87
50		Spirax Sarco FT-15/FT-30	90	7884	30983	\$4,168.81	8852	\$1,191.09
50		Spirax Sarco TD52	90	7884	13728	\$1,847.15	3464	\$466.10
50		Armstrong 800	90	7884	35114	\$4,724.65	10032	\$1,349.90
50		Armstrong 15-B4	90	7884	34494	\$4,641.27	9855	\$1,326.08
50		Watson McDaniel WFT-15	90	7884	35320	\$4,752.44	10091	\$1,357.84
50		Dunham-Bush (MEPCO) 44/45-715A/730A/7125A	90	7884	40071	\$5,391.66	11449	\$1,540.47
50		Armstrong 15-J8	90	7884	187961	\$25,290.76	53703	\$7,225.93
50		Spirax Sarco FTB-175/200	90	7884	162968	\$21,927.92	46562	\$6,265.12
50		Gestra MK-45	90	7884	24786	\$3,335.05	7082	\$952.87
50		Hoffman TD6426	90	7884	12186	\$1,639.73	3482	\$468.49
50		Armstrong 811	90	7884	27265	\$3,668.55	7790	\$1,048.16

Annual Energy Savings Summary

Total Heatloss - Bare (BTU/HR):	6,374,530,148.40
Total Heatloss - Insulated (BTU/HR):	1,770,609,365.76
Heatloss Savings - w/ INSULTECH®:	4,603,920,782.64

Detailed Financial Analysis

Total Operating Cost per Year - Bare:	\$ 108,791.98
Total Operating Cost - w/ INSULTECH®:	\$ 30,218.40
Cost Savings - w/ INSULTECH®:	\$ 78,573.58
Total Blankets / Blanket Assemblies:	650
INSULTECH® Blanket System Cost:	\$ 66,570.28
Estimated Labor to Install:	\$ 2,160.00
Total Project Cost:	\$ 68,730.28
Payback (Months):	10.91
Lifetime Savings (15 Year Life):	\$ 1,109,873.44

Heatloss Calculation

$Q = K (DT) / L + (K / Ht)$
 Q = Heatloss (BTU/Hr. / Sq. Ft.)
 K = Bare Thermal Conductivity (STL and C.I. = 26.9)
 K = Insulated Thermal Conductivity (M.G.@300°F=27)
 L = Insulation Thickness
 DT = Surface Temp - Ambient Temp.
 Ht = Combined Coefficients (300° F. = 3.2)
 (Radiation, Convection, & Conduction)

Natural Gas (mm BTU) 4,603.92

CO2 (Tons)	269.57
NOx (lbs)	690.77
N2O (lbs)	9.99
SO2 (lbs)	2.59
PM10 (lbs)	8.51
VOC (lbs)	24.78
CO (lbs)	110.57

6 Fuel Oil (mm BTU) 4,603.92

CO2 (Tons)	411.21
NOx (lbs)	1,809.40
N2O (lbs)	*
SO2 (lbs)	5,160.83
PM10 (lbs)	328.75
VOC (lbs)	52.88
CO (lbs)	164.56

* (Amount is less than 0.05 lbs)

Emission Savings

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Representation By:



ENTERPRISES OF W.N.Y. INC.