

## Thermal Blanket Insulation for the Process Industry

**The solution to problem insulation** areas on all types of steam process equipment. The removable, reusable features of Shannon products drastically lower operation costs, shorten down-time, save valuable energy, improve the work environment and reduce labor costs associated with installation, removal and reinstallation.

**Custom designed and self-contained.** This means quality construction for specific applications, quality designs retrofitted to field conditions and design features that make Shannon friendly for the field mechanic.

**CAD technology for maximum design accuracy.** Through years of information gathering, Shannon can produce standard and customized designs for equipment including condensate pumps, all types of valves, slip and bellows expansion joints, ball joints, strainers and steam traps. Shannon can engineer blankets for even the most difficult geometric surfaces (e.g., steam turbines).

**Self-contained insulation system,** constructed of a high density insulation filler with a fully encapsulated outer jacketing. The outer jacketing is double sewn and bound at the closing seams. The jacketing and sewn construction ensure long lasting protection to the insulation filler.



### BIO-CHEMICAL PLANT

Main Steam Supply Header - Post M&V Survey  
Design: LT450TT - 1.5" thickness (Green PTFE Fabric)

**Withstands extreme conditions** such as steam tunnels and manholes. High chloride environments with high humidity and possible flooding have little or no effect on specific blanket designs. Shannon offers a wide range of specialty designs to accommodate these extreme conditions.

### Comes equipped with fastening hardware.

Fasteners are an integral part of the blanket design and the dominant feature for installing and removing it quickly and easily. All metal hardware is stainless steel for strength and durability. Velcro® can be sewn into both the belting system and the outer jacketing flap.



### HEAT EXCHANGER HEAD & BODY

Design: LT450TT  
1.5" thickness (white PTFE)  
Fastener: Velcro® Flaps/  
Stainless Steel Wiretwists



THERMAL



ACOUSTIC



SAFETY

*Engineering Reusable Solutions for a Sustainable Planet*

## Thermal Blanket Insulation

**3.5" x 1.5" identification tag for each blanket piece.** Each stainless steel or aluminum tag 1/8" embossed lettering for individual piece labeling is riveted directly or indirectly to the outer jacketing surface. The tag becomes an integral part of the blanket. When the blanket is removed, the tag will identify its place at the time of installation.

**Accommodates temperature extremes (Ambient to 1100°F).** With many design specifications established as industry standards, optimum service life can be expected with cost efficiency. Consult a factory representative for further information.

**Not just a product purchase.** Our goal is problem-solving. Shannon offers energy surveys for steam and process systems, sound surveys for noisy equipment or engineering services for packaged systems. Our knowledge of insulation is broad and our abilities as a full service blanket insulation manufacturer are unprecedented in the industry.

**Energy Surveys** – Shannon offers a calculated heat loss review of your steam system. With a number of survey formats to choose from, Blanket Insulation, for example, can be installed on flanged piping

systems -- which lack proper thermal performance -- or any exposed areas (e.g., valves, flanges, fittings, PRVs strainers, etc.). Shannon can also calculate heat loss. From the heat loss calculations, operating costs and payback period can be determined. The energy survey becomes a personalized heat loss summary of your steam system, with detailed descriptions of specific locations and fittings. Typical energy surveys show payback periods between one and two years. When calculating the economic benefit of the initial investment, gains are as high as 15 times the initial investment. Not many capital projects match these economies.

**Engineering Services** – Shannon is a market leader in design, product development and application. Product line catalogs are available for both thermal, acoustic and safety. We are a blanket manufacturer bridging the gap between theory and applications.

**Support** – Shannon supplies insulation systems to the domestic end user market and the O.E.M. and international markets through a global network of sales managers, manufacturer's representatives and distributors.



**COMMERCIAL BAKING OVEN**

Design: LT500LFP, 1.5-inch thickness

Fastener: 4" wide D ring straps (quick release)



**STEAM PASTEURIZING HEAT EXCHANGER  
PIPING & FITTINGS**

Design: LT500LFP – Food grade

Fastener: PTFE cross film straps and non-metallic side release buckles





**DISTILLATION COLUMN HEAD  
FLANGES & PIPING**

Design: LT450TT – 1.5-inch thickness

Fastener: Stainless steel wiretwists & Velcro® flaps



**CENTRIFUGAL PROCESS PUMPS & VALVES**

Design: LT450TT – 1.5-inch thickness

Fastener: Stainless steel wiretwists & Velcro® flaps



**CHEMICAL PLANT – TOP OF BOILER  
STEAM DRUM & MANWAY**

Design: LT450TT - 1.5" thickness

Fastener: Stainless steel wiretwists



**GATE VALVES AND FLANGED ENDCAPS**

Design: MT800SGM - 2" thickness

Fastener: Stainless steel wiretwists



**STEAM COOKING KETTLE (64" DIAMETER)**

Design: LT500LFP-1 ½" Thickness

Fastener: Stainless Steel Wiretwists



**STEAM CONDENSATE RECEIVER TANK  
PIPING & VALVES**

Design: LT450TT-1" Thickness

Fastener: Velcro® Flaps / Wiretwists

# Performance Highlights

Operating Temp.	Thick.	Surface Temp.	Thick.	Surface Temp.	Thick.	Surface Temp.
250°F (121°C)	1"	100.2°F	1.5"	92.0°F	2"	87.4°F
300°F (149°C)	1"	108.6°F	1.5"	98.2°F	2"	92.3°F
350°F (177°C)	1"	117.2°F	1.5"	104.6°F	2"	97.4°F
400°F (204°C)	1"	126.0°F	1.5"	111.2°F	2"	102.7°F
450°F (232°C)	1"	135.0°F	1.5"	118.0°F	2"	108.0°F
550°F (288°C)	1"	154.0°F	1.5"	132.0°F	2"	120.0°F
650°F (343°C)	1"	175.0°F	1.5"	148.0°F	2"	133.0°F

- The above reference cold face surface temperatures should be used as guidelines for blanket thickness design.
- The cold face surface temperature of the blanket should approach ambient temperature conditions.
- The economic thickness of the blanket should consider blanket cost to thermal performance.
- Heat loss calculations are based on a 70°F ambient using a flat surface condition.

## Design Features



1. "D"ring strap fastener with Velcro® tab
2. Stainless steel wiretwist fastener
3. Side release buckle with nylon strap fastener



1. Stainless steel wiretwist fastener
2. Side release buckle with nylon strap fastener
3. "D"ring strap fastener with Velcro® tab



1. Wind flap with draw cord
2. Two-piece construction (separate body and bonnet)
3. Riveted and embossed ID tag
4. Double sewn lock stitch construction
5. Teflon® PTFE fiberglass cloth

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