

# REMOVABLE INSULATION COVER (RIC) SPECIFICATION

## FABRICATION REQUIREMENTS

- All RICs are custom fabricated and will conform to the configuration of the pipe or fitting being insulated
- RICs will include openings for all protrusions such as pipes, packing glands on valves, supports, instrument lines and other obstacles in the vicinity
- RICs are designed so that bending and/or folding is not necessary for installation
- All seams except final closing seams are inside seams. All RICs are sewn inside-out and then turned correct side out before insertion of the insulation core. A final closing seam is sewn on the exterior of the RIC
- Three-inch wide flaps at terminal ends are provided to overlap adjacent RICs
- Machine stitching is used for all sewing. Sewing is always double straight-stitched with 8-10 stitches per inch and parallel stitch rows are spaced from 1/8 inch to 2 inches apart. All thread at seams is Teflon<sup>®</sup> coated.
- Parting seams are always installed at the low point of each RIC to allow drainage without the use of weep tubes or grommets
- Valve bonnets are usually always covered and packing glands remain exposed
- RICs for valves are designed so that each bonnet section is sewn to the body section. For larger valves, the RIC may be fabricated in two sections, each section containing one-half of the valve body and bonnet
- RICs with a weight of 40 lbs. or less will be fabricated in one piece and those with a weight of more than 40 lbs. will be fabricated in more than one piece

## SECUREMENT DEVICES

- Securement straps and buckle straps will be the same material as the specified weather barrier
- All straps are placed 2 inches back from parting seams and on 6 inch centers
- All straps are fabricated with an additional piece of material sewn inside the weather barrier to provide extra strength at the point of securement
- Fire retardant Velcro<sup>®</sup> is used to fasten the securement strap to the weather barrier after the strap passes through the double buckle
- Terminal end flaps will be the same material as the weather barrier material with yellow Nomex<sup>®</sup> drawcords

## THERMAL CONDUCTIVITY

Temperature	K-Factor
300°F	.35
500°F	.48

## WEATHER BARRIER & TEMPERATURE LIMITATIONS

### Option A – LFP 2109 PTFE-coated Fiberglass Jacketing

Weather barrier, liner, gussets, straps and flaps will be constructed of a 13.5 oz. PTFE coated fiberglass cloth, LFP-2109, as manufactured by TCI. This flexible, tear resistant PTFE jacketing is proven to be unaffected by complete immersion in wet environments since its invention in 1993. All un-insulated flaps for terminal ends will be of the same material as the weather barrier and sewn to the insulated end of the RIC.

Temperature Limit:	600°F (316°C)
Weight:	13.5 oz/yd <sup>2</sup>
Thickness:	0.009"
Recommended Use:	Hot, wet environments - steam manholes, vaults and tunnels

### Option B – 1750 SA-2 Silicone Impregnated Fiberglass Jacketing

Weather barrier, liner, gussets, straps and flaps will be constructed of a 17.5 oz silicone impregnated cloth, 1750 SA-2, as manufactured by LEWCO. This flexible, tear resistant silicone jacketing is typically used by TST on pipe applications that do not see unusually hot, wet rigorous conditions in confined spaces. All un-insulated flaps for terminal ends will be of the same material as the weather barrier and sewn to the insulated end of the RIC.

Temperature Limit:	500°F (260°C)
Weight:	17.5 oz/yd <sup>2</sup>
Thickness:	0.0175"
Recommended Use:	Indoor piping applications with ambient atmospheric temperatures

## INSULATION CORE

- All core insulation will be constructed of a 9-11 lb. density needled fiberglass mat insulation as manufactured by LEWCO, Claremont or BGF. The thickness of the core insulation will vary according to pipe size:

NPS (in)	Core (in)
1" to 3 1/2"	1"
4" to 5"	1 1/2"
6" to 24"	2"

- Interior bulk insulation is composed of 100% select grade Type "E" glass fibers needled together into mat form. It is processed in such a way as to maximize thermal efficiency. It is non-respirable, incombustible, asbestos-free and contains no resinous or inorganic binders
- To prevent insulation settlement, the insulation core is secured within the RIC through both weather barriers
- Insulating cores with more than one piece will have staggered joints to prevent hot spots and heat loss. Joint edges are butted together and will provide better securement at the edges

## IDENTIFICATION TAGS

- Each RIC is identified by a permanently attached Type 304 stainless steel ID with embossed lettering. The tag is attached to a tag flap sewn to an inside seam or a webbing strap sewn to the exterior of the cover to serve as a lifting handle
- ID Tags will be located in the same area on similar type RICs
- Each ID tag will include the following information, but may also include any pertinent information required by the owner:
  - Type of item being covered
  - Location of item (i.e. Manhole #)
  - Recording and tracking information