Rovanco[®] Piping Systems

FLIR Technology - Precise & Absolute Validation Of **The Insulation Process**



Rovanco Piping Systems, Inc.

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> ISO 9001:2015 **CERTIFIED COMPANY**



Rovanco's injected foam process and stringent testing procedures assures each foam insulated piping system we construct is free of voids, allowing our foam to maintain it's industry leading k-factor of 0.14 BTU-in/hr-ft2-F.



Rovanco® Piping Systems

Our Foam has the Industry Leading K-Factor for a Reason

Aluminum diffusion barrier is not needed with Rovanco polyisocyanurate foam.

Coupled with our proprietary formulation is our foam insulating process and strict testing standards & practices.

Our Process for Foam Insulating Success

- Injected foam totally fills air space around carrier pipe(s).
- Every inch of foam tested for voids using Forward Looking Infrared Technology (FLIR).
- Insulating process is continually monitored by a Quality Control Technician.

Overview on FLIR Technology

- Thermal imaging technology uses temperatures to clearly define a given object, area or space.
- Provides an infrared image of a complete scene without a need for a moving sensor.

Why Rovanco Uses FLIR Technology

- Foam insulation expands producing heat allowing FLIR to monitor flow.
- Expanding foam appears as bright yellow/orange
 empty voids as cooler blue/purple color.
- Technology allows Rovanco QC Technician to monitor process & assure total air space is filled.



Note: Picture above depicts pipe with open section to show no voids after foam insulation is injected.





- 1 Foam being injected starts to expand from bottom of pipe.
- 2 Foam expands upward to fill entire air space of piping.



- 3 Foam expanded and air space totally filled with insulation.
- 4 Foam continuing to expand, black dots shown are spacers which are hollow to allow continuous insulation.



- 5 Two pipes on the left are awaiting the injecting of the foam.
- 6 Three pipes on right have expanding foam filling the air space.