Insulation Insights

Pizza Blankets – Heating up the North.



With the cold winter still upon us, what better time to tackle a topic that gets asked of us from customers with northerly operations – Can our blankets be used to keep piping and components from freezing in cold weather?

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In general, our insulation products are used to retain and contain heat,

and to reduce the amount of heat released to the ambient surroundings. If there is heat there, we can minimize the heat loss, but in general, we can't put back heat that is not there in the 1st place.

All this changed a number of years ago, when we were approached by a customer of ours who was operating equipment in extremely cold weather conditions. The equipment was stationed outdoors, and the hydraulic hoses would freezeup and become rigid, preventing them from being coupled (connected) properly. The company was looking for a solution that would allow them to keep their hydraulic hoses warm enough so that they maintained their flexibility and could be quickconnected to the equipment.

Firwin's R&D department went to work at a solution. The idea was to add electrical heating pads to our standard removable insulation blankets. When things got too cold, these blankets would be plugged in and wrapped around the line, heating the line up to the point were it regained its required flexibility.

Rael Herman, who heads up Firwin's R&D department, describes the process as follows:

"A heating pad alone would not have worked, as they would have allowed too much heat to escape into the open air; this would have been wasteful from an energy point of view, and also would have taken a long time to heat up the hydraulic lines." "We also had to take into account the local environment when designing these blankets. For example, we had to ensure that the electrical cords function properly in the extreme cold weather environments, and that the material used in the blanket construction was such that it would not become brittle in extreme cold weather conditions."

It took a number or prototype iterations to get it right, but Rael and his team came up with a blanket design that has since seen several hundred of these heating pad blankets being produced, with excellent results. *"We needed a way to refer to them in-house, and since they somewhat resemble the cover that pizza delivery people use to keep their pizzas warm, we somehow started to refer to them as 'pizza blankets'.*

Other possible applications for this technology would be pipeline valves, which can also be exposed to extremely cold weather conditions and can get stuck due to the cold. *"Essentially any application that operates in cold weather that requires defrosting would be a candidate for these blankets"*, noted Rael. *"The advantage that Firwin brings to the table is that we can incorporate a heating pad into any custom shaped blanket a customer wishes, with the heating pad held tightly in place"* added Rael.

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