

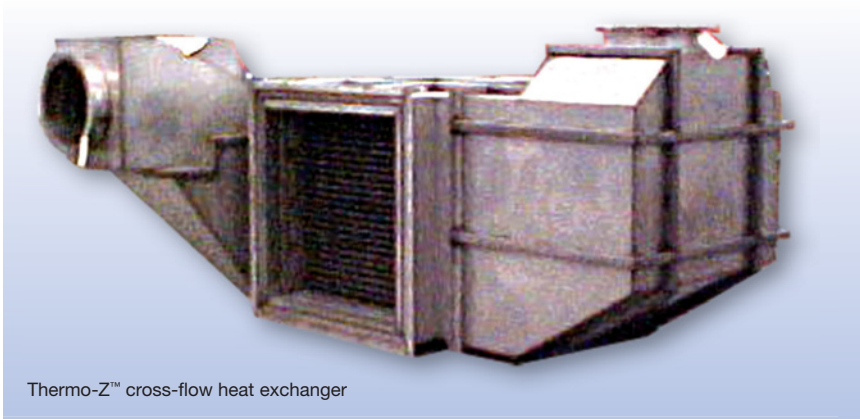
Alyeska Pipeline Project

Located along the Alyeska pipeline on the northern slopes of Alaska, a major turbine manufacturer turned to Munters to provide a solution to their icing issues. With outdoor air temperatures reaching a harsh -70°F , turbines that draw in outdoor air for operation can frequently experience icing on the inlet. In order to minimize icing, the inlet needs to be tempered. To achieve this, the turbine manufacturer needed a heat exchanger that was not only durable and efficient, but also offered the lowest cost and smallest footprint.

When time came to design the heat exchanger, Munters had many things to take into consideration. First was the flow; the hot flow was about 1/10th of the cold flow and had a very high ramp rate. Secondly, the customer required the unit to fit into a very tight space with special connection sizes to adapt to their ductwork. Finally, since the application was preheating air for a turbine, the inlet air had to be free of debris which required the heat exchanger to be very clean.

The solution came in the form of a Munters Thermo-Z™ cross-flow heat exchanger with side ribs. This Thermo-Z™ was designed with tight spacing on the hot side and wide spacing on the cold side. This type of design provides efficiency despite uneven airflows. This unit was constructed of heavy-gauge (.063 in.) plates and internal expansion compensation so that it could withstand high ramp rates. In order to ensure the highest level of cleanliness prior to shipment, the units were specially cleaned with brushes and high-pressure air and then sealed.

To adhere with the turbine's rigorous standards, the heat exchanger had to undergo inspections prior to installation to ensure the highest quality product. A successful inspection left the customer satisfied with the final product and feeling confident in their decision to choose Munters.



Thermo-Z™ cross-flow heat exchanger

CASE STUDY: Alyeska Pipeline



BENEFITS

- Designed for -70°F ambient air temperatures
- Special transitions supplied for tight inlet/outlet connections to turbine
- Specially designed for large flow imbalance and very fast hot inlet temperature ramp rate
- Units specially cleaned to ensure units met strict cleanliness requirements for turbines

Munters Corporation
Tel: (800) 843-5360
E-mail: dhinfo@munters.com
www.munters.us

