

Canadian Chemical Production Facility Installs 26 Therm-O-Mix® Tepid Water Delivery Stations

Safety showers and face or eyewash stations are critical equipment in any workplace where chemical spills are a potential threat. ThermOmegaTech®, a leader in self-actuating thermostatic technology, offers an innovative solution to the challenge of supplying safety fixtures with consistently tepid water on demand.

An industrial chemical manufacturer in Ontario, Canada, recently began a $2 billion expansion of their existing production facility. Due to the presence of potentially hazardous materials in chemical manufacturing, the installation of safety showers and face/eyewash stations was a plant necessity.

The company's other sites have had success using ThermOmegaTech®'s Therm-O-Mix® Station for instantaneous tepid water delivery. Therefore the station was again selected for this expansion to promote overall conformity of safety equipment and procedures. ThermOmegaTech's TV/SC-A valve was also chosen to control the safety station enclosure's ambient temperature.



Therm-O-Mix Station

The Therm-O-Mix® Station is a 100% self-operating tepid water heater. It utilizes only a facility's existing steam and water supply to deliver tepid water to safety showers and face or eyewash stations.

When an emergency fixture is activated, the pressure drop on a diaphragm in the unit establishes flow. It opens a steam control valve, which the station uses to heat the cold water. The unregulated water travels through an initial tempering valve adding cold water to reduce the water temperature to about 100°F (37.7°C).

The flow then goes through a second mixing valve which adds additional cold water to lower the temperature to an OSHA approved 80°F (26.6°C) before being delivered through the emergency fixtures.

The expansion project included a mix of classified and non-classified environments. Equipment in the classified section of the plant needed to be explosion-proof due to the sensitive nature of the chemicals produced on-site. By selecting the Therm-O-Mix®, the facility avoided the need for an expensive insulation process.

“Our Therm-O-Mix® Station operates completely mechanically,” Timothy Hartung, industrial product manager at ThermOmegaTech®, commented. “It doesn’t require a source of electricity to operate, so it is the ideal tepid water delivery product for refineries and factories with explosion-proof environments.”

A necessary addition to any new or existing facility to comply with ANSI Z358.1, the Therm-O-Mix® Station has a small footprint, does not require insulated tanks or expensive recirculation systems, and is self-purging, so there is no need for an elaborate drainage system.

At the chemical plant, the Therm-O-Mix® Stations were mounted onto the outside of polar cubicles and plumbed to deliver tepid water to the safety showers and face/eyewash station inside it.



TV/SC-A Valve

ThermOmegaTech’s TV/SC-A valve was selected to automatically control the flow of steam inside of the cubicle to maintain a temperature level where users would feel comfortable disrobing for proper safety shower operation.

A thermostatic actuator on the end of the TV/SC-A valve located inside the polar cubicle monitors and responds to the ambient temperature inside the cubicle. When the temperature falls to the valve’s set point, the TV/SC-A modulates open to allow steam to flow through a radiation element, which is traced inside the cubicle to warm it up. Once the ambient temperature has risen, the valve modulates closed again to conserve steam.

“Installation of 26 integrated units is underway at the facility and will be completed by the end of 2019,” Hartung commented.

Compact and reliable, the Therm-O-Mix® tepid water delivery station is an essential fixture in any facility where chemicals are being handled to ensure worker safety and guideline compliance.

ThermOmegaTech’s Therm-O-Mix® Station and TV/SC-A valve are available through the company or one of our distributors. For more information, visit www.ThermOmegaTech.com or call 877-379-8258.