

Spotlight on Sustaining Member

New 'Arctic Fox' Tanks from Ratermann Mfg.



Ratermann Manufacturing (CSA CSM) has recently launched a new line of cryogenic mini bulk tanks called "Arctic Fox." The tanks are currently available in 1,000 and 2,000 liter sizes, with a 500 psi delivery pressure. During the nearly four-year design period, Ratermann continuously solicited customer comments, feedback and requests and incorporated many of these into the current design to meet the wants and needs of the industry.

These designs include dual blow downs to take the pressure down faster and improve fill time efficiency, a diverter valve for safety valve redundancy and easy change-out without the need to blow down the tank, a vacuum port for field testing of vacuum integrity and a highly polished exterior to meet the most demanding aesthetic requirements of end users.

Ratermann Manufacturing is now a master distributor for Sherwood Valves. Sherwood valves are available to ship from their strategically located distribution centers. The company's sales repre-

sentatives are available to meet with customers to review applications and make recommendations for matching the correct valve for the application. All Ratermann sales representatives are knowledgeable professionals with extensive background and understanding of the compressed gas industry.

Valves are available to ship from their inventory for industrial gas, specialty gas, corrosive, chlorine or propane applications, as well as any specialty or custom application.

Contact sales@rmimfg.com, 925/606-2049, www.rmiororder.com.

INOXCVA Chooses Macro Technologies LNG Fueling Nozzle

Macro Technologies, LLC, a Superior Products company, announced that their Liquefied Natural Gas (LNG) fueling nozzle is being used in INOXCVA's LNG mobile refueling stations. INOXCVA recently built and delivered LNG mobile refueling stations in an effort to overcome the deficiencies in the LNG fuel infrastructure. INOXCVA relied on the engineering expertise of Macro Technologies to supply a new generation of LNG fueling nozzles.

Macro Technologies has performed extensive R&D, prototyping and field testing in LNG fueling applications. This commitment to engineering excellence made them a strategic partner for INOXCVA with

the fueling nozzles for the mobile fueling stations. Non-metallic bearings on the nozzle and air gaps minimize icing issues that may occur due to the low temperature of LNG fueling. For safety, the nozzle provides a positive stop, allowing gases trapped after the fueling process to be safely vented.

The nozzles can be quickly and easily repaired with kits, rather than having to send damaged nozzles back to the manufacturer. This feature in particular is invaluable for mobile refueling stations deployed in remote areas.

INOXCVA's LNG mobile refueling stations are expected to offer safety, speed and

ease of use to fueling station operators. Able to be deployed as semi-permanent LNG fueling stations or as service vehicles for refueling, INOXCVA's LNG mobile refueling stations provide a feasible solution for LNG fuel infrastructure.

In addition to their LNG fueling nozzle, Macro Technologies manufactures a number of other innovative LNG fueling products, including an LNG tank receptacle, cryogenic hose and relief valves. Macro Technologies is a supplier of safe, effective and cost-effective solutions for the LNG industry. Contact Marc Buenaventura, Product Manager, mbuenaventura@superiorprod.com.

AdSem Semiconductor NTC Thermistors for Cryogen Level Measurement

AdSem, Inc., the owner of unique technologies for manufacturing high-, low- and ultra-low temperature Si and Ge NTC thermistors, has developed a new family of

semiconductor cryogenic NTC thermistors specifically designed for sensing the level of cryogenic liquids. These SE-1MM thermistors have fast response and are perfect for measurements in cryogenic liquids with any boiling temperature down to 4.2K, like liquid noble gases (xenon, argon, neon), oxygen, nitrogen, hydrogen, helium. The thermistors work in non-linear regime at high voltage, specifically, in the range of 12V-35V, which causes thermistor overheating and sharp resistance decrease, when the sensor is out of the liquid. They can also work in Ohmic regime at low volt-

ages as highly sensitive cryogenic thermometers for temperature ranges of 400K-77K, 400K-20K, 400K-1.5K. Additionally, in applications where thermistors are submerged into liquid helium, they could be used also as a "furnace" for evaporation of liquid helium, when it's necessary.

The SE-1MM semiconductor thermistors are epoxy encapsulated with 3.0 x 2.3 x 2.2mm³ size and 8 mm length leads. Standard tolerances for resistance value at liquid nitrogen are $\pm 5\%$, $\pm 10\%$, $\pm 20\%$, $\pm 50\%$. Resistance value at room temperatures is 350 $\pm 10\%$ Ohm. Resistance values at such cryogenic liquids as oxygen, nitrogen, hydrogen, helium can be customized for any narrow subrange in the range of 15KOhm - 1MOhm. www.adsem.com.

