

STAR-0160

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L.J. Star Sight Glass Specially Designed for Biogas Digester Tanks



TWINSBURG, Ohio August 2009 -- L.J. Star has introduced a new sight glass specially designed for installation in the digester tanks used in biogas production. The RD300 sight window has an innovative expanding gasket that conforms to irregularities in the cement walls and ports used in digester tank construction, creating a gas-tight seal.

A growing interest in alternative energy is fueling the construction of biogas facilities, which typically have large concrete digester tanks. Sight glasses are required at the tank work platforms where operators set mixing devices at optimum positions. A gas-tight seal is required to meet safety standards.

The RD300 sight glass has a tubular rubber gasket around its perimeter, sandwiched between high grade steel rings. As the mounting screws are tightened, the inner and outer rings draw together and force the gasket to expand. In addition, the sight glass includes three angled mounting brackets that are long enough to

accommodate the depth of the container wall.

The RD300 sight window is available with several options that are important for biogas applications. The unit may be ordered with an optional motorized wiper, a manually operated wiper, and a washer assembly. By turning a valve, operators can direct water spray on the interior of the glass. The spray tube is made of high quality stainless steel. Alternatively, the spray tube can be used to take fermentation gas from the container.

An optional Lumiglas® light is designed to hinge mount on the metal ring, providing directionally adjustable illumination. An optional Lumiglas VISULEX video camera may be mounted that provides remote observation of processes. Both the light and camera carry Cenelec IIc explosion proof ratings (Zones 1 & 2).

Observation Is Critical to Biogas Production

Biogas is produced through anaerobic digestion, a bacteria-based process that converts animal manure and other organic wastes into methane gas that can be used like natural gas.

Visual observation of the digester process is essential. Operators need to see changes inside the digester tank and to monitor the process for the formation of foam or crust. Fast response to these changes translates into significant biogas production efficiencies. In addition, early detection of irregularities helps ensure safety.

Monitoring is often performed remotely, in which case the sight glasses are equipped with explosion-proof lights and video cameras.

Sight Glass Specifications

The L.J. Star RD300 sight glass is made of high quality soda-lime glass. All metal components are made of 316Ti stainless steel (14571). The outside ring diameter is 295mm and the viewing area diameter is 220mm. It is available 4-6 weeks ARO.

To download high-resolution image, control-click www.ljstar.com/images/biogas.jpg.

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