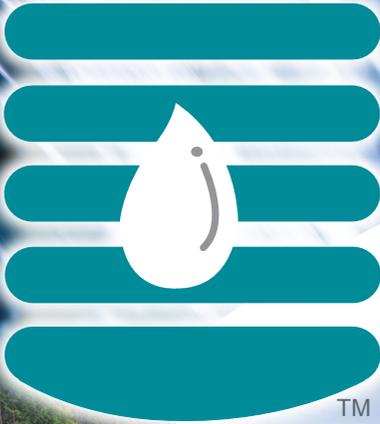


LIQUID LINE



IN THIS ISSUE

**Liquid Handling Equipment
Answers the Question:
Why A Magnet-Drive Pump?**

**Technical Spotlight -
Shop Drawings:
The "Silent" Communication Between
Engineer and Fabrication Shop**

**Product Spotlight -
The Poly Processing SAFE-Tank
Cost-Effective Cross-Linked Polyethylene
Double-Wall Tank Systems**

**A Liquid Handling Equipment
Success Story**

**Meeting Your Process Needs
Liquid Handling Equipment's
Full Line of Products**

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**Liquid Handling Equipment's
After-Hours Emergency Phone Number
980-402-8079**

Liquid Handling Equipment Answers the Question: Why A Magnet-Drive Pump?

Mechanical seals are widely regarded as the weakest point in any pumping system that utilizes them. Over 85% of pump failures involve mechanical seal failure and/or leakage through static seals, such as gaskets and/or O-rings, as well as bearing failure.

Frequently when planning a new pump installation or an upgrade to an existing installation, the financial impact of the mechanical seal support system is considerable. Once such a system is installed, further cost complications are caused by the need to comply with local, regional or national environmental requirements that often involve monitoring the effectiveness of such a system.

Magnetic-Drive Sealless Pumps offer significant advantages over sealed designs:

- No Seals
- No Seal Support Systems
- Complete Fluid Containment
- Zero Emissions
- Zero Contamination of Liquid
- Reduced Installation Costs
- Cost Effective Installation
- Longer Mean Time Between Failures
- No EPA Monitoring
- Improved Operator Safety
- Protection of the Environment

With the above listed advantages, it's easy to understand why a magnetic-drive sealless pump is the most efficient, cost-effective choice for any pumping system!

Check with your area Liquid Handling Equipment salesman to discover the superior Magnetic-Drive pumping opportunities we offer.





Technical Spotlight on: Shop Drawings: The “Silent” Communication Between Engineer and Fabrication Shop

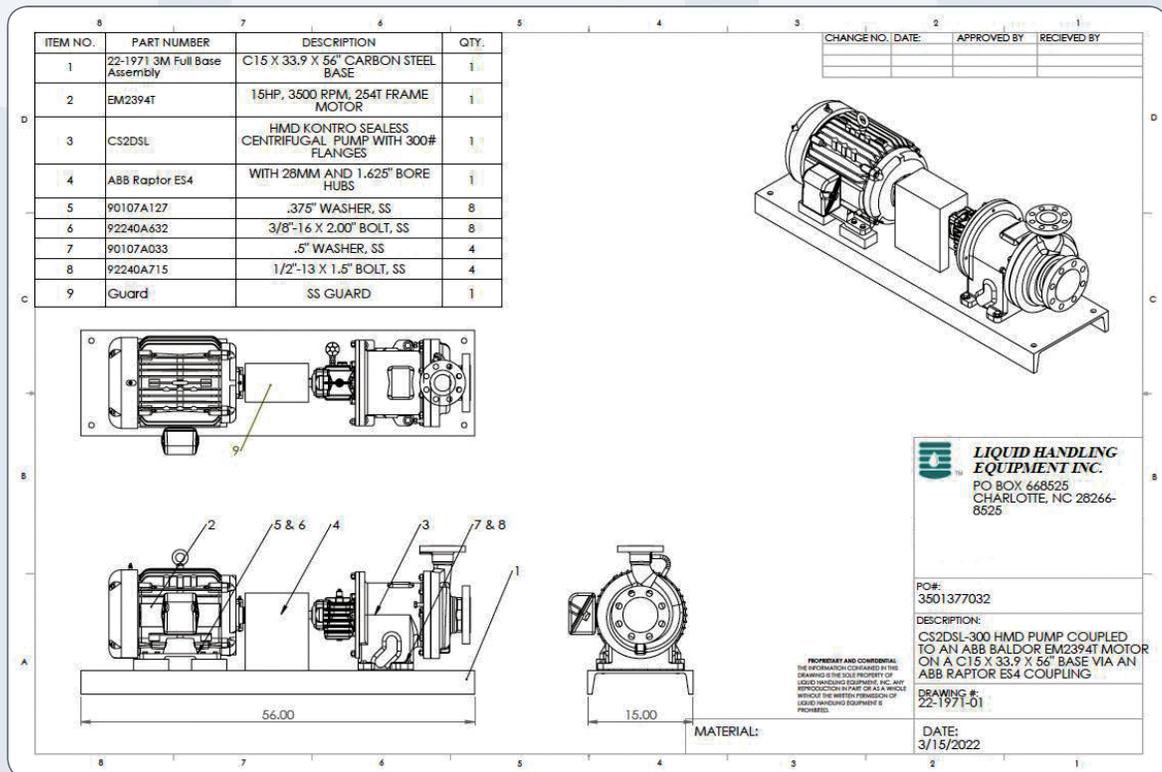


John Hickner
Mechanical
Engineer

In a machine/fabrication shop, the last thing a machinist wants is to stop in the middle of an assembly to ask the engineer a question about his drawings. The simple fact is that every drawing an engineer sends to the shop should be informative, clear and accurate. At Liquid Handling Equipment every shop project has a dedicated design packet that goes directly to the shop. The packet includes a **pick ticket**, detailed general assembly drawings, and detailed dimensional drawings for fabrication. Each item in the packet has vital information in order for the shop to fully understand exactly what items are being used, how they are being used, and how to fabricate them.

A **general assembly drawing** follows the pick ticket. It demonstrates exactly where all the items fit in the project. The assembly drawing includes pump and motor placement, the coupling and hardware to be used, along with a visual of the exact size of the assembly.

General Assembly Drawing



Fabrication drawings are the last set of drawings included in the dedicated design shop packet. These include exact hole and thread sizes for the base and risers, dimensions for hole placement, and the tolerances allowed for machined parts. Liquid Handling also includes **nameplate drawings** for project identification in the field. The nameplate aids in streamlining any questions or replacements when an assembly is in service.

With every project, the shop technician and engineer should be on the same page without ever having to be face to face. The ability of the shop to fabricate the assembly without constantly consulting the engineer is a testament to a comprehensive design packet. However, the engineer should regularly communicate with the shop to check on the progress of the fabrication. An engineer takes great satisfaction in seeing his design on paper become a real-world application, particularly when there are no hiccups or mistakes thanks to his detailed design packet!

Let Liquid Handling Equipment with our thorough design and fabrication processes, design and fabricate a general assembly to seamlessly meet your fluid handling needs.



Spotlight on:
The Poly Processing SAFE-Tank
Cost-Effective Cross-Linked Polyethylene
Double-Wall Tank Systems

There is nothing more important than safely storing and handling hazardous chemicals. Preventing leaks and spills of dangerous materials that can harm employees, the general public and property is a major consideration. The key to reducing risk is a combination of following the proper procedures and relying on the proper (aka) best equipment.

Traditionally, chemical containment systems are composed of large concrete basins that surround the primary storage tank. This is an expensive option with a large footprint. If a spill occurs, the chemical will be both contaminated and unusable.

Liquid Handling Equipment is a proud distributor of Poly Processing, an industry leader in cross-linked polyethylene storage tanks. Poly Processing provides a better option that eliminates the drawbacks of concrete containment systems, which is the impressive SAFE-Tank. Its double-wall system reduces the overall footprint, as well as costs and maintenance.

Poly Processing's SAFE-Tank is a double-wall polyethylene storage tank that provides a "tank-within-a-tank" to safely store chemicals. The SAFE-Tank system provides 110% secondary containment by enclosing the primary storage tank within a well-designed outer tank. The inner tank dome overlaps the outer tank sidewall to help prevent rainwater, debris, and other containments from entering the containment area.

Advantages of the Poly Processing SAFE-Tank System

- 110% secondary containment
- Liquid equalizes in the event of a leak
- Durable Polyethylene construction
- Lower cost and maintenance
- Ideal for Sulfuric Acid and other harmful chemicals
- Excellent for outside storage

If you are looking for a storage system that provides 110% secondary containment, the Poly Processing SAFE-Tank System is the ideal solution!



4400 SAFE-Tank



SAFE-Tank Cutaway

Give your local Liquid Handling salesman a call for expert help with your chemical storage needs.

www.polyprocessing.com



A Liquid Handling Equipment Success Story

by Nick Miller



Nick Miller
Outside Sales

In the planning stages of introducing a new product to its plant, a North Carolina resin manufacturer's goal was to re-purpose an existing area of its plant. The plan was to use existing tanks, while replacing old pumps, mixers, and filtration equipment in order to be able to handle the new resin's liquid characteristics. The foremost task, in consultation with Liquid Handling Equipment, was to ensure that the area could pass and receive a Class 1 Div 1 environment classification.

The first step was to retrofit the existing tanks with explosion-proof instrumentation. Without available tank drawings, Liquid Handling worked diligently with the plant engineer and maintenance department to arrive at a detailed list of tank dimensions and existing instrumentation. Each tank was equipped with Shand & Jurs conservation vents with flame arresters and emergency manway vents. In doing so, the tanks met the explosion-proof requirements necessary to move forward. We also added new Shand & Jurs gauge boards with seals, to further ensure that the tanks were fume tight.

Once the instrumentation was handled, Liquid Handling partnered with MixMor to correctly size new agitators for each tank. MixMor carefully considered the characteristics of the liquid and tank dimensions to provide mixers with the proper shaft length and impeller diameter, as well as the necessary drive to allow the mixers to efficiently agitate the liquid. Each mixer was supplied with explosion-proof motors in keeping with the Class 1 Div 1 requirements.

The last stage of the project included sizing Roper gear pumps with explosion-proof motors. Liquid Handling Equipment built the shop mounts at our Charlotte facility, shipping them to the customer, completely ready to be put into service. We also supplied Strainrite filter housings and bag filters to meet the plant's filtration requirements.

Liquid Handling Equipment's sales team and engineers, in close collaboration with the resin manufacturer, along with our quality distributors, were able to successfully re-purpose an older part of the resin plant that was not in service. In addition, we were able to ensure that the customer could safely and efficiently store, pump, and filter a flammable liquid.

Allow Liquid Handling Equipment the privilege to consult with you on safe, efficient solutions to your storage, mixing, pumping and filtering needs. We are ready to serve!



Meeting Your Process Needs

Liquid Handling Equipment carries a full line of products to meet all of your process needs.

Tanks & Heat Exchangers

Allen Industries, LLC
Bendel Tank & Heat Exchanger
Modern Welding
Poly Processing Company
Sharpsville Container

Pumps

Boerger Pumps
Crane Pumps - Barnes / Burks / Crown / Deming / Weinman
DESMI / Rotan
Ebara
Flux Pumps
HMD Kontro / Sundyne
Iwaki-America
LC Thomsen
Price
Roper
Rotech
Walchem
Watson-Marlow / MasoSine Pump
Watson-Marlow Sanitary Process Pumps
Yamada America
Zoeller Pump Company

Agitators

MixMor Corporation

Filtration

Eaton / Hayward MFG
Harmsco
Pentair
Strainrite

Flow & Liquid Level Management

FLOWLINE
ICON Process Controls, Ltd.
Red Seal Measurement

Accessory Equipment

Blaich Fluid Products
Dixon
Garlock Sealing Technologies
Novaflex
OPW / Civacon Corp.