OHIO FABRICATORS COMPANY

news YOU CAN use

ISSUE 17

"Unparalleled Delivery Times on Custom and Standard Filtration Products"

NEW PRODUCT FROM OHIO FABRICATORS!

Model "PS" Suction Strainer

for portable insect control misting equipment

These small suction strainers were designed and manufactured expressly for the insect control industry. Where insect annoyance and aggravation are commonplace the strainers are small and compact to fit into most portable insect control misting equipment. They are made with the same one-piece nylon connector ends as our standard model strainers, with corrosive resistant galvanized inner cores and pleated stainless steel wire cloth for maximum screen area. They are high quality with low cost. The equipment sprays a fine mist in an area to help maintain an "insect free" environment for comfortable living. Click on the link below and learn more about this new strainer from OFCO.

Model "PS" Insect Control Suction Strainers

Contamination Control TARGET #1

Should we filter or shouldn't we? This is a simple question. Is it the proper question to ask though? In today's business climate, most people in the fluid power industry should have knowledge about filtration. After all, if the process fluid gets dirty enough, the system will eventually fail. So the proper question to ask is, "what type of filtration do we need?" The most important target to keep operating properly is the pump. If the pump goes down, the system is dead. Clean fluids extend equipment life and that should be the proper focus.

With the pump being the most critical component, it needs to be protected properly. Suction strainers are a vital component to install to protect the pump. When we talk about "straining" and "filtering," we want to "strain" the fluid passing through the pump. Straining usually means any level of filtration coarser than 200 mesh (74 micron). If the filtration on the suction line is too fine, it will cause cavitation, destroying the pump. All pumps are designed to take a beating so we merely want to concentrate on larger contaminants. Along with proper filtration throughout the entire system, however, there is a level of responsibility to regularly service the system.

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PROTECTING THE PUMP

Suction Strainers

Ohio Fabricators manufactures different types of suction strainers. No matter what the application is, large or small, what mesh size to use, or what type of process fluid is being used, OFCO can help. If we don't have it, we can make it. From as small as 3/8" npt to as large as 8.1", from 3 gpm applications to 400 gpm, and available with male and female threads. OFCO has been helping customers solve problems since 1945 and will continue to help customers and future customers keep their fluids clean. To get a "closer look" at what OFCO has to offer, click on our website to navigate the many different types of suction strainers we manufacture along with our other products.

Ohio Fabricators Company Home Page

Fluid Conductors: Part 2
Steel Tubing

In Newsletter #16 we covered one option for moving fluid from one area to another; iron pipe. In this newsletter we will cover some characteristics, advantages, and disadvantages of steel tubing.

- Measured on the outside diameter.
- Is an exact measurement.
- Sized by the number of 1/16 inches, ie: #4 tubing is 4/16" or ¼" OD.
- Wall thickness is specified as a decimal inch value, such as .035" or .065" and is often stated as “oh” thirty five or “oh” sixty five.
- Connections are sealed with a heavy variety of methods including compression fittings using a ferrule (a metal ring or cap used for reinforcement), flare fittings using a 37° flare, or a variety of o-ring type fittings. These provide the best leak-proof seal.
- Automotive systems often use a 45° flare, while industrial hydraulics use a 37° flare.
- Copper tubing is not recommended, even for low pressure systems, as it hardens easily from vibration, and it cracks.
- Comers are made by bending the tubing. This provides better laminar flow, less pressure drop, and fewer leak points.
- Tubing is typically smooth on the inside, therefore causing less pressure drop than iron pipe.

Why Does Water Form in Hydraulic Oil?

Last time we looked at the three types of water that can exist in hydraulic oil. This time we will look at “why” or “how” water can enter a hydraulic system.

Oil turning milky white generally indicates that water is entering the hydraulic system. Most of the time it will enter through the reservoir. There are four primary causes of water entering a system.

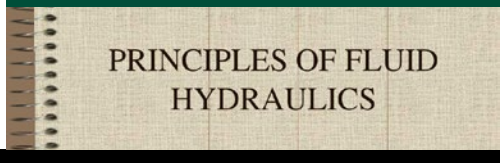
1. If the reservoir is located outside in the environment and not protected by a shelter or barrier, water can enter the system externally through worn o-rings, the breather cap, or a worn gasket or grommet.
2. The water can come from rainfall or if the reservoir is washed down by maintenance personnel, water can enter through the breather cap. There may even be the failure of a water-cooled heat exchanger which can introduce water into the system. The internal tubes can degrade over time, allowing the water to mix with the hydraulic oil.
3. Don’t forget, air is a fluid, too, and air contains moisture. Depending on the geographical location of the system, humidity will cause moisture to enter the system wherever there is even the slightest location. The presence of water in hydraulic oil will destroy both the physical and chemical properties of the oil, hindering its effectiveness.
4. New oil contamination can be detrimental to a system, too. Most everyone realizes that new oil is not always clean oil, free from particle and water contamination. Ensure you use oil from a reputable supplier and has not been in storage for a long period of time.

If a reservoir is not kept totally sealed, as well as, the connections in the entire system, this is a golden opportunity for water in some form to enter the system. That is why regular system inspection for leaks is critical. Remember, allowing water to enter the system also allows particle contamination to enter the system.

Basic Hydraulic Principles

1. _____ is the branch of science that deals with the practical application of water or other liquids at rest or in motion.
2. The weight of the atmosphere at sea level is _____ psi.
3. _____ is the force per unit area.
4. A pressure gauge reads _____ psig at normal atmospheric pressure.
5. _____ is the distance a fluid travels in a specified time.
6. _____ is the pressure lower than atmospheric pressure.

See answers to questions below



Answers
1. Hydraulics; 2. 14.7; 3. Pressure; 4. 0
5. Velocity; 6. Vacuum

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