



WIKA All-Welded System (AWS) Prevents Gauge Failure in Growing Ethanol/BioDiesel Industry

The United States has seen an explosion of new Ethanol plants and many more are in development. WIKA manufactures many product configurations engineered with specific design features and gauge options for utilization in the Ethanol production.

Pressure instruments used in this industry must be rigorous and sturdy enough to withstand the harsh conditions that occur in the production processes. Mishandling, severe pulsation, vibration and harsh environmental conditions can compromise system integrity. These conditions may break the traditional diaphragm seal system, resulting in inaccurate readings or total failure.

The WIKA All-Welded System (AWS) model M93X.D1 is an integrated process gauge – diaphragm seal system. All connections and access ports are welded to ensure complete leak free design.

Because the AWS is engineered as tamper proof and leak proof with the system fill fluid leak path eliminated, the gauge/seal connection cannot be compromised. With its rugged design, this seal and gauge assembly can increase its time of service (= cost of ownership) significantly.

The premier assembly for the bio-renewable fuels is the AWS with 1.0 NPT-male process connection and Flushing Port. The AWS with

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+GF+ Signet Blind Transmitters Offer Low-Cost Options



Analog transmitters easily send process measurements from different areas in a plant to a central programmable logic controller (PLC) where process control decisions can be made based on transmitter feedback.

Analog transmitters are great cost-saving alternatives to single-point controllers. In situations where multiple sensing locations are required, single point controllers' costs can add up quickly. For OEMs measuring several parameters in their systems, transmitters feeding to a PLC are the norm. GF Piping Systems has been at the forefront of transmitter evolution with Signet instrumentation. With standard 4-20mA-only option, relay outputs, and two channel devices, the Signet line of industrial transmitters gives the OEM/end-user a wide variety of choices. Mounting options have expanded to include integral, remote, and ¼ DIN panel mount displays. For the OEM market, GF has added a Multi-Parameter Controller which provides up to six sensor inputs, four 4-20mA outputs, and relay outputs, in order to simplify and lower overall costs to the OEM.

For customers using central touch-screen displays, another way to lower measurement costs is to return to basics

with blind transmitters. The Signet 2537 sensor with 4-20mA option combines the stability and reliability of microprocessor-based transmitters along with reduced costs by eliminating unnecessary displays.

Low-cost sensing options include:

- Paddlewheel Flow
- Magnetic Flow
- pH/ORP
- Conductivity/Resistivity
- Temperature
- Pressure

Call 1-800-848-1141 for more information or to schedule a visit with a technical field representative.



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TECHNOTES

DECONTAMINATING FLUID SYSTEMS

Unwanted water, particulate and gaseous contamination in fluid systems can severely impact process efficiency and product quality.

Utilizing the principles of mass transfer and vacuum dehydration, the Pall HVP series portable oil purifiers effectively and efficiently remove 100% of the free water and 80% to 90% (or more) of the dissolved water from the fluid system. They will also remove 100% of the free and entrained gases and up to 75% of the dissolved gases.

Highly efficient particulate removal can be achieved by using a single, Pall Ultipor III style element rated at Beta X(c) = 1,000, in accordance with ISO 16889. Cleanliness levels of ISO 16/14/12 (per ISO 4406:1999) or better are typical.

The HVP employs a programmable logic controller (PLC), which monitors and sequences its operation. The PLC will automatically shut down the purifier in the event certain operating limits are exceeded and initiate the purifier diagnostic alarm and help screen. This will display all alarm conditions, probable cause of the alarm(s) and help screens that delineate corrective measures to rectify them.

An in-line temperature/water sensor is mounted at the inlet of the purifier, which continuously monitors fluid temperature and water content. It provides both local and remote monitoring capabilities and can be programmed with various alarm points for temperature and water content.

These units are very portable and easy to install. They only require an inlet and outlet connection to the fluid system and the appropriate power source - 480v/3Ph/60Hz. There are no water or compressed-air line connections required.

They will reduce system wear; improve on-line and system performance; extend fluid life; and reduce fluid disposal costs and environmental risks. Call your local RHFS service center at 925.443.9800 for more information or to schedule a visit with a field representative.

Portable Fluid Purification

Problems associated with fluid contamination can vary. Free and dissolved water can break down oil through reduced lubricity, oxidation and acid formation. Oil that is free of water has a reduced tendency to oxidize and form organic acid, even when exposed to high temperature. The presence of organic acid compounds leads to corrosion. Trapped air can damage both fluid and system components and cause poor system response due to variations in system pressure. Air can cause erosion and pump cavitation, accelerate hydraulic and lube oil oxidation and cause loss of insulation properties in dielectric fluids. Solids in your fluid system can cause premature wear of a variety of components. Wear causes numerous problems in hydraulic systems. Erosion and failure of nozzles, flappers, slide valves, etc. result from wear.

The Pall HVP Portable Fluid Purifier removes water, air and solid contaminants from hydraulic fluids. The immediate and long term benefits are reduced system wear that allows you less frequent component changes and a smaller spare parts inventory can be maintained. Another benefit is improved system performance, which translates into fewer costly operation delays and increased system reliability. You will also see improved on-line perfor-



mance, extended fluid life due to sharply reduced contamination. The HVP Fluid Purifier will also reduce fluid disposal costs and environmental risk by extending your fluid life and minimizing waste costs.

The Pall Portable Fluid Purifier extends fluid life, reduces disposal costs, minimizes waste and increases equipment uptime. Some of the key markets that use Pall Purifiers are Power Generation for main turbine lube oil, boiler feed pump turbine, transformer oil, coal pulverizer/conveyors and bulk oil storage.

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A liquid-filled case protects the instrument from mechanical vibration and pressure pulsation. A flushing port added to the lower housing of the diaphragm seal allows cleaning fluid to flush residue out of the pipe in order to prevent damage or clogging to the instrument.

For more information call 1.800.848.1141 or 925.443.9800.



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What's a Wemco Induced Gas Flotation Depurator?

Wemco Depurator is a mechanically induced air/gas flotation machine designed for secondary removal of oil and solids from either produced or process water. Motor driven rotors induce a re-circulation flow of blanket gas or air from the vessel into the process water, dispersing small bubbles throughout the tank volume. Oil droplets and solids are carried to the surface by the rising gas and removed by mechanical skimmers.

The new Wemco Depurator is a well-known mechanical induced gas flotation machine in a cylindrical package. The machine is situated in a horizontal code or non-code pressure vessel. Mechanical lip seals are used for shaft sealing. Paddle skimmers are replaced by hydraulic skimming which eliminates paddles, weir curtains and doors. The cylindrical tank design has a

higher mixing efficiency, which reduces the overall power requirement compared to the conventional design. The overall design will give you equal or improved oil removal performance to the original machines with complete off gas containment.

Wemco Dual-Cell Depurator is the new mechanical induced gas flotation machine designed specifically for pitch and roll motion applications. The machine is packaged with two flotation cells in series, in a horizontal pressure vessel. The machine has a central skimming compartment, and the discharge box is isolated from the flotation cells. Internals, as well as instrumentation and controls are designed specifically to overcome the effects of pitch and roll motion. The Dual-Cell design inherently minimizes the possibility of oil sinking and leaving in the effluent, a problem often as-

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sociated with vertical single cell flotation. Wemco Depurators are ideal for secondary removal of oil and solids from produced and process water in oil fields, refineries and gas field extraction and are unsurpassed in performance. Petreco offers the most comprehensive line of oil separation, oil removal and solids removal equipment for water clean-up in the industry. Call 925.443.9800 for more information.

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