

Tuesday, June 9

Hydraulic Basics & System Troubleshooting, Part 1

10:15 to 12:15

Thomas Wanke, CFPE, Milwaukee School of Engineering

• After reviewing the basics of fluid power components, circuits, and schematics, this session outlines techniques for identifying the causes of malfunctions in hydraulic systems so they can be corrected.

Servo & Proportional Valve Installation & Service

1:15 to 2:15

Randy Wildner, Attica Hydraulic Exchange

• Guidelines for proper installation and service of servo and proportional directional flow controls. Covering contamination control, torque requirements and adjustments to tune valves to systems.

Filtration & Hydraulic System Options in Waste Mgmt. Applications

1:15 to 2:15

Armin Geist, Argo-Hytos

• This session explores the importance of hydraulic filters and filtration tools for startup and maintenance of hydraulic systems. System design options that offer benefits in the operation, service, and operating costs of waste management systems will also be covered.

Hydraulic System Failure Analysis & Diagnostics

2:30 to 3:30

Thomas Wanke, CFPE, Sponsored by Webster Instruments

• Assessing the health of a hydraulic system involves measuring pressure, flow and temperature, not only to diagnose the cause of erratic operation and malfunctions, but to identify and correct small problems before they become big ones.

Wednesday, June 10

Ductile Iron as a Steel Alternative

10:15 to 11:15

Bob O'Rourke, Dura-Bar

• Switching materials can cut the cost of making hydraulic manifolds, pumps, cylinders and valves in half. Learn how continuous cast ductile iron has all of the strength properties of carbon steel but can be machined at speeds as much as 2-3 times faster. Increased machining speed equates to less time and money to produce the part. Learn about continuous casting of gray and ductile iron bar stock, the grades and properties that are available, machining characteristics, and how you can save money on your components.

Servo & Proportional Valve Installation & Service

10:15 to 11:15

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Improve Your Systems with Accumulators

11:30 to 12:15

Jim Tobul, Tobul Accumulator Inc.

• Accumulators provide multiple benefits to hydraulic systems. They can save energy, help machines run quieter, faster, and more reliably, and even serve as a standby power source when the prime mover is off line. This session explores the many ways accumulators can improve the speed, efficiency, operation, and reliability of your equipment.

Safer, Cleaner Cylinders from Today's Technology

11:30 to 12:15

Dave Ogden, Hydratech

• Attendees of this session will learn of the latest techniques to reduce shock, extend cylinder life, and improve safety by using check and counterbalance valves, and learn how to make systems more compatible with the environment. Attendees will also learn of common types of field failures (seals, barrel, rod, mounts, etc), and how today's materials and manufacturing technologies can make these failures a thing of the past.

Hydraulic System Troubleshooting, Part 2

1:30 to 3:30

Thomas Wanke, CFPE, Milwaukee School of Engineering

• After a quick review of Part 1, attendees will evaluate sample circuits, learn of a malfunction, and follow a systematic approach to identify possible causes of the malfunction so they can be corrected — thereby avoiding costly and unreliable trial-and-error component replacement methods.

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