2018

Now Offering P.E. PDHs

Eastern Gas Compression Roundtable

May 22-24, 2018
David L. Lawrence Convention Center
Pittsburgh, PA

www.EGCR.org
On behalf of the EGCR Board of Directors, we would like to welcome you to the 46th Annual Eastern Gas Compression Roundtable and thank everyone for their support.

As we’ve watched and been excited to see the EGCR grow in both attendance and offerings each year, we are equally excited to watch the growth and innovation in the industry itself. As a volunteer organization, we believe that everyone involved in the EGCR — from vendors to members and attendees — possesses the spirit to work together for our combined mutual benefit. It’s an especially exciting time thanks to improving technology and all of the energy available locally and throughout North America.

As we prepare to offer three days of unparalleled training, know that the EGCR is grateful for the continued support we receive from a vast group of great companies. We hope that you will make an opportunity to thank those companies and join them in their efforts.

The EGCR is a non-profit organization that strives to provide quality training to all facets the Natural Gas Industry. As an organization, it is our goal each year to improve the quality and variety of our training.

Over the years we have developed our own programs and topics and have evolved to become more instructional focused to aid attendees in the performance of their duties and to become a better educational tool for attendees. Additionally, many of the instructors are employees with the Natural Gas companies we serve. These individuals bring a wealth of both experience and expertise to our sessions.

Interested in getting involved? EGCR is your organization. We encourage member participation in planning the future of the EGCR and hope you will consider volunteering. Write to us or stop by the registration desk at the Roundtable for more information.

Thank you for attending the 2018 EGCR!
Schedule of Events

**MONDAY, MAY 21, 2018**

11:00am - 12:00pm  | Golf Tournament Registration
                   | Quicksilver Golf Club
12:00pm            | Shotgun Start @ Quicksilver Golf Club
6:00pm - 8:00pm    | Welcome Reception at Bill’s Bar & Burger (Everyone Welcome!)

**TUESDAY, MAY 22, 2018**

8:30am - 6:00pm    | Registration
8:30am - 11:15am  | Exhibits Open
11:15am - 11:40am | Lunch Buffet in Exhibit Hall C
                   | (Exhibit Hall Closed)
11:40am - 12:55pm | Keynote Address in Exhibit Hall C
                   | (Exhibit Hall Closed)
1:00pm - 4:10pm   | Seminars
1:00pm - 6:00pm   | Exhibits Open
                   | Reception in Exhibit Hall
6:00pm - 8:30pm   | Shuttle To/From the Carnegie Science Center
6:30pm - 8:00pm   | Reception - Carnegie Science Center

**WEDNESDAY, MAY 23, 2018**

8:00am - 4:10pm    | Seminars
11:00am - 5:30pm  | Exhibits Open / Lunch in Exhibit Hall
1:00pm - 4:00pm   | Seminars
4:00pm - 5:30pm   | Reception / Exhibit Hall

**THURSDAY, MAY 24, 2018**

8:00am - 11:10am   | Seminars

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**46TH ANNUAL EASTERN GAS COMPRESSION ROUNDTABLE**

**Annual Golf Outing**

**MONDAY, MAY 21, 2018**

The annual Golf Outing is an opportunity to join your colleagues, customers and friends for an afternoon of socializing, networking and fun. Participation is open to all, whether an industry veteran or newcomer, including vendors, buyers, friends and family members. Fees include green fees, bag handling, carts, lunch and prizes.

**Carnegie Science Center Reception**

**TUESDAY, MAY 22, 2018**

6:30PM – 8:00PM  | $15.00

Explore hands-on robotics, challenge a robot to a game of air hockey or take your picture with replicas of some of Hollywood’s most famous robots such as Gort, HAL 9000 and C-3PO. It’s the ultimate robot gathering!

Complimentary transportation will be available from the David Lawrence Convention Center to/from the Carnegie Science Center between 6:00pm-8:30pm. Tickets available for purchase at the EGCR Registration Desk.

www.EGCR.org
Keynote Address

11:40am – 12:55pm Exhibit Hall C
WHAT GOT US HERE... WILL GET US THERE!
CLIFF BAKER, SVP MIDSTREAM FIELD OPERATIONS
EQT MIDSTREAM

Like many in the industry, Cliff Baker worked his way through the ranks at EQT Corporation. During the 80s mowing grass, rebuilding compressor engines, painting... you name it, he did it! By 1991, he was elevated to Team Leader over various field assets, pipelines and compressor stations. Recognizing that education could fast track his proven leadership abilities, Baker enrolled in Duquesne University where he graduated Cum Laude in 1996 and went on to earn an MSLBE in 2004. A year later he was advanced to Manager of Gas Control and experienced a series of promotions and increased responsibility, to the position of Director of Commercial Operations then Vice President of the same division. He was then promoted to Sr. Vice President of Gas Management and Transportation. Currently he holds the position of Senior Vice President of Midstream Field Operations. It is evident Cliff gained the respect of his peers on every level but he also brings a wealth of hands-on experience and career success that inspires positive performance from his team members.

Passport and P.E. Professional Development Hours

PASSPORT will be used to record your attendance in each class session available from Tuesday - Thursday.

1. Have the Classroom Monitor stamp your Passport as you exit each class session.
2. Print your name on your Passport, add up your hours, and check the box for Certificate of Completion or PDHs.
3. Turn in your completed PASSPORT at the Registration Desk on Thursday to receive the appropriate paperwork.

* EGCR classes are typically one and a half hour in length. A 1-1/2 hour class will equate to 1.5 PDHs. A full day course (8am – 5pm with 1-hour for lunch) will equate to 8 PDHs.

Code of Conduct

Vendors, attendees and anyone associated with the EGCR are expected to conduct themselves in a professional manner at the EGCR including on the vendor hall floor, during meetings, events, classes and in any correspondence associated with EGCR business. In addition, the EGCR does not tolerate any form of harassment towards anyone male or female, including unwelcome sexual advances, requests for sexual favors, offensive comments or other types of verbal or physical harassment.

Any person associated with the EGCR, doing business with the EGCR or attending an EGCR event who engages in such activity may be removed from the event and potentially banned from future attendance. Anyone who believes he or she has been the target of harassment, sexual or otherwise, is asked to inform the offender that such behavior is not tolerated and must stop immediately. Failures to do so should be reported to the Executive Director or the Board Chairman.
Forty-six Years of Volunteer Service Dedicated to the Eastern Gas Compression Roundtable

HISTORY

On April 20, 1972, a meeting was held at the Lakeview Country Club in Morgantown, WV by a group of men representing various companies operating natural gas compressors, product manufacturers and representatives supplying the industry, and representatives of West Virginia University. This group determined that the formation of a Gas Compression Roundtable for the Eastern United States would be of value. As a matter of procedure, the group became the General Committee for the formation of such an organization and adopted the name Eastern Gas Compression Roundtable.

The General Committee concluded that the area to be serviced by the Roundtable would include principally that portion of the United States East of the Mississippi River and eastern Canada. The General Committee also voted that the Eastern Gas Compression Roundtable be hosted and held at West Virginia University.

The first Roundtable was held May 16-18, 1973 on the Evansdale Campus of West Virginia University in cooperation with the College of Mineral Energy Resources. The "roundtable" discussion format was utilized with group discussions on eleven selected topics of interest.

A member of the industry served as discussion leader in each session with manufacturing and/or service organization representatives serving as resource leaders. Attendance of 341 people representing more than 100 companies was recorded. With this base to grow on, the roundtable continues to expand and now includes lectures and hands on workshops. Attendance has exceeded 1,000 with people from all over the country and even some foreign attendees.

In 1999, the General Committee voted to move the Eastern Gas Compression Roundtable to Robert Morris University, Moon Township, PA.

PURPOSE

To provide opportunities for persons in the gas compression and related industries to add to their knowledge of the operation and maintenance of compression units and related equipment. This conference has been enhanced to offer learning opportunities for personnel in the following areas: Engineering, Purchasing, Gas Control, Automation & Controls, Management, Safety & Environmental and Human Resources.

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Chairman’s Choice Award
This annual award honors the outstanding participation of individuals and companies that have supported the EGCR.

2002 Columbia Gas Transmission Corp.
2003 Dominion Transmission, Inc.
2004 Equitable Resources
2005 National Fuel
2006 Equitable Production
2007 Columbia Gas Transmission Corp.
2008 Walter Sloan, Sloan Brothers Company
2009 Ariel Corporation
2010 David B. Kerr, Kerr Engineered Sales
2011 Keith Schafer, Columbia Gas Transmission
2012 ACI Services, Inc.
2013 Richard Lynch, Dominion | Jay Jackson, EQT
2014 Vic Campanelli, Potemkin Industries
2015 Matthew McCarthy, Sloan Lubricants
2016 Keith Sauter, Interstate-McBee
2017 Doug Kuzma, Black Box Corporation

Emeritus/Honorary Membership
Applegate, Rodney S. (Crestview Consulting)
Barr, Jim (Matthews Lubricants)
Bench, Bill
Boulden, Richard (Deceased)
Gregg, James E.
Kerr, Arthur J. (Kerr Engineered Sales Company)
Moulton, Bob
Sloan, John (Deceased) (Sloan Brothers Company)
Tillman, Jack M. (Deceased) (Tillman Technical Sales)
Walker, Bruce (Cook Compression)

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1973 Edward S. Swartz Consolidated LNG
1974 Edward S. Swartz Consolidated LNG
1975 Edward S. Swartz Consolidated LNG
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1981 James N. Schoenthal Ingersoll-Rand
1982 Don E. Gasser East Ohio Gas Co.
1983 Charles V. Clarkson Columbia Gas Transmission
1984 James E. Gregg Tennessee Gas Pipeline
1985 Glenn E. Poole Equitable Gas
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1987 Richard A. Boulden M. A. Boulden Associates
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1989 Arther J. Kerr Kerr Engineered Sales
1990 Mike Kasprzak National Fuel Gas Supply
1991 Walter R. Sloan Sloan Brothers
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1994 Bob Lersch Clark Filter Sales
1995 Gary G. Martin Dynalco Controls
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1997 Allen Laribee Turbine Specialties, Inc.
1998 John J. Harper Columbia Gas Transmission
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2004 Jeff S. Bama Columbia Gas Transmission
2005 David B. Kerr Kerr Engineered Sales Co.
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2011 Joe Reiheld ACI Services, Inc
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CSI COMPRESSCO LP®
## Class Descriptions

### Entry Level Compressor Station Operator Training

**Classroom:** 311  
$350 per student includes EGCR registration fee, meals and exhibits (12 hours)  

**Topic Chairman:** Jay Jackson, EQT  

All classes taught by Jay Jackson and Steve Hower, EQT

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<th><strong>TUESDAY</strong></th>
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| **SESSION 1** | 1:00 – 2:30  
**COMPRESSOR STATIONS AND THEIR FUNCTIONS**  
| **SESSION 2** | 2:40 – 4:10  
**COMPRESSOR STATION EQUIPMENT AND YARD PIPING**  
| **WEDNESDAY** |  
| **SESSION 3** | 8:00 – 9:30  
**AUXILIARY SYSTEMS AND Equipment**  
| **SESSION 4** | 9:40 – 11:10  
**OPERATING CHARACTERISTICS OF RECIPROCATING AND CENTRIFUGAL COMPRESSORS**  
| **SESSION 5** | 1:00 – 2:30  
**DESIGN CHARACTERISTICS OF PRIME MOVERS**  
| **SESSION 6** | 2:40 – 4:10  
**FACTORS BASIC TO RECIPROCATING COMPRESSOR OPERATION**  
| **THURSDAY** |  
| **SESSION 7** | 8:00 – 9:30  
**CHARACTERISTICS OF THE PRIMARY EQUIPMENT IN A COMPRESSOR STATION**  
| **SESSION 8** | 9:40 – 11:10  
**RECIPROCATING COMPRESSOR COMPONENTS AND CYLINDER OPERATION**

### Auxiliary Equipment/Filtration

**Classroom:** 323  
Included in Registration Price of $195  

**Topic Chairman:** Bill Couch, Parker Hannifin Corp.

<table>
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| **SESSION 1** | 1:00 – 2:30  
**STARTUP & GENERAL MAINTENANCE FOR AIR COOLED HEAT EXCHANGERS**  
Kendal Barber, Smithco Engineering  
| **SESSION 2** | 2:40 – 4:10  
**GAS HEATING EQUIPMENT DESIGN**  
Daniel Huffaker, Total Products Services  
| **WEDNESDAY** |  
| **SESSION 3** | 8:00 – 9:30  
**STARTUP & GENERAL MAINTENANCE FOR AIR COOLED HEAT EXCHANGER**  
Class will provide general startup guidelines and maintenance for air cooled heat exchangers. Kendal Barber, Smithco Engineering  
| **SESSION 4** | 9:40 – 11:10  
**KEEPING CONTAMINANTS OUT OF YOUR NATURAL GAS COMPRESSORS, PROCESSING FACILITIES, METER RUNS AND PIPELINES**  
This two session class will take a deep dive into natural gas filtration. We will first look into how natural gas contaminates have changed over time with the ever increasing coal seam gas and shale play gas mixed with the more traditional dry natural gas and associated natural gas streams. We will look at other factors affecting the movement of contaminants such as deregulation of natural gas, interstate natural gas pipeline nomination timelines, dry low NOx combustion systems, enhanced pipeline pigging and pipeline flow reversals. Next, we will investigate particulate size and types of contaminants and how they affect natural gas filtration and separation technologies. We will then discuss natural gas filtration and separation technologies upstream and downstream of compressor stations, meter runs and processing facilities. Lastly, we will look at several case studies of natural gas filtration, what worked and what didn’t work, and more importantly, why. Bill Couch, Parker Hannifin  
| **SESSION 5** | 1:00 – 2:30  
**KEEPING CONTAMINANTS OUT OF YOUR NATURAL GAS COMPRESSORS, PROCESSING FACILITIES, METER RUNS AND PIPELINES CONTINUED**
### Compressor Maintenance

**Classroom: 324**
*Included in Registration Price of $195*

**Topic Chairman:** Jacob Shackelford, Ariel Corporation

#### TUESDAY

**Session 1**
*1:00 – 2:30*
**COMPRESSOR THEORY**
This class will cover the basic theory and formulas on how reciprocating compressors work and their basic components.
*Randy Dal Molin, Hoerbiger*

**Session 2**
*2:40 – 4:10*
**RECIPIENT COMPRESSOR PACKING, VENTS AND DRAINS**
A discussion on reciprocating compressor packing design, function, and troubleshooting as well as their associated vent and drain systems on compressor packages.
*Paul Cook, Cook Compression*

#### WEDNESDAY

**Session 3**
*8:00 – 9:30*
**RECIPIENT COMPRESSORS, PROTECTION AND CONDITION MONITORING**
This course describes the sensors required for protection and condition monitoring of reciprocating compressors, and the information those sensors provide. This includes a description of the various plots used in compressor diagnostics.
*Charles ‘Chuck’ Jenkins, Bently Nevada, a BHGE Company*

**Session 4**
*9:40 – 11:10*
**TROUBLESHOOTING SCREW COMPRESSORS**
This class is for anyone that is running or working on a screw compressor. We will be learning about how the screw compressor works and how to get the best runtime with least amount of problems.
*Lee Levisay, The PROS Company*

### Electrical and Ignition Equipment

**Classroom: 325**
*Included in Registration Price of $195*

**Topic Chairman:** David Davenport, FW Murphy

#### TUESDAY

**Session 1**
*1:00 – 2:30*
**ROUNDTABLE DISCUSSION**
**IGNITION SYSTEMS**
A brief review of today’s modern ignition systems components, function and operation, followed by an open “roundtable” discussion with class participant’s questions being fielded by a panel of industry experts.
*Michael Porter, Paul McHenry, Hoerbiger/Altronic  Pat Runnels, Darrell Schmitt, FW Murphy Prod Controls  Robert Virchow, Mark Skidmore, Motortech*
SESSION 2  2:40 – 4:10
SPARK PLUGS & IGNITION ACCESSORIES
Presentation on spark plugs and ignition accessories, including proper uses of each, analysis of spark plugs and accessory components, and troubleshooting. Open discussion about spark plug and ignition accessory related issues on engines.
  Ken Blanchard, Stitt, Charles Chewning, Champion, Alain LeFloch, BG Services

WEDNESDAY
SESSION 3  8:00 – 9:30
SAFETY INSTRUMENTED SYSTEMS SOLUTIONS FOR SIL COMPLIANCE
Session will focus on the basics of SIS; sorting out the complexity of safety instrumented functions, safety integrity level and safe failure fractions. Formulating a simple solution for safety solutions in pressure and temperature.
  Scott Pierce, United Electronics Controls

SESSION 4  9:40 - 11:10
EICS - ENGINE INTEGRATED CONTROL SYSTEM
Gone are the days of the "one size fits all" approach of separate components that led to tedious setups and "dialing in" procedures. "EICS" represents a fresh, OEM-like, integrated approach to aftermarket engine control within the stationary natural gas engine market.
  Pat Runnels, Darrell Schmitt, FW Murphy Production Controls

SESSION 5  1:00 - 2:30
ELECTRICAL HAZARDOUS AREA CLASSIFICATION
Hazardous Area Classification is a method of analyzing and classifying the environment where explosive gas atmospheres may occur to allow the proper selection of electrical apparatus to be installed in that environment. The class will focus on natural gas facilities.
  George Samo, EQT

SESSION 6  2:40 – 4:10
BACK TO BASICS - RICE COMPLIANCE THROUGH BASIC MAINTENANCE
  Pat Runnels, FW Murphy Production Controls

SESSION 8  9:40 – 11:10
INSTRUMENTATION & CONTROLS TROUBLESHOOTING PART 2
Review of basic electricity, fundamentals of troubleshooting, familiarization with documentation, effective troubleshooting practices, hazardous area Information, troubleshooting controllers and control panels.
  Raymond Carr, FW Murphy Production Controls

Environmental Health and Safety

Classroom: 326
Included in Registration Price of $195

Topic Chairman: Larry Guess, PIC Appalachia

TUESDAY
SESSION 1  1:00 – 2:30
HAZARDS WITH STORAGE TANKS / SAFE SOLUTIONS IN OPERATIONS
This seminar presents information on oil and gas storage tanks and the hazards posed to the environment and human health. The content includes the most recent field data captured by the National Institute of Occupational Safety and Health (NIOSH) as found in the oil and gas shale locally and nationally over the past decade. The class is designed to show real world hazards and present engineering solutions to reduce or eliminate exposure. Engineering solutions include Tank level sensors, Enardo ventilation equipment, and vapor recovery units.
  Brandon Bajek, ECI

SESSION 2  2:40 – 4:10
AIR PERMITTING–COMPRESSOR STATIONS/WELL PADS USING AVAILABLE GENERAL PERMITS IN PA, OH, WV
Update and background on gas turbine air permitting requirements for NE USA. Also will summarize technical aspects of SoLoNox (DLE) combustion technology.
  Patty Centofanti, Trinity Consultants

WEDNESDAY
SESSION 3  8:00 – 9:30
NO SESSION

SESSION 4  9:40 - 11:10
HAZARDS WITH STORAGE TANKS / SAFE SOLUTIONS IN OPERATIONS
  Brandon Bajek, ECI
Session 5
1:00 - 2:30
WHAT TO EXPECT WHEN YOU'RE INSPECTED
Tips and strategies for successfully navigating air quality audits and inspections at industrial facilities. How do I prepare for audits or inspections? What records should be available for review? What areas of focus should I expect from the auditor/inspector? Seminar topics include Regulatory Background – Air Quality Highlights; Pre-Inspection Activities; Inspection Steps (Arrival & Entry, Site Walk Through, Records Review, Closing Meeting); Post-Inspection Activities; and Enforcement Trends (National and State/Local).
  Patty Centofanti, Trinity Consultants

Session 6
2:40 – 4:10
UPDATE/BACKGROUND ON GAS TURBINE AIR PERMITTING REQUIREMENTS FOR NE USA
Update and background on gas turbine air permitting requirements for NE USA. Also will summarize technical aspects of SoLoNOx (DLE) combustion technology.
  Anthony Pocengal, Solar Turbines

Thursday
Session 7
8:00-9:30
NO SESSION

Session 8
9:40 – 11:10
NO SESSION

Gas Engine Maintenance

Classroom: 327
Included in Registration Price of $195

Topic Chairman: Frank Parker, EQT

Tuesday
Session 1
1:00 – 2:30
GAS ENGINE PRINCIPLES; BASICS OF COMBUSTION; BASIC EXHAUST EMISSIONS
  Bill Wirz, Dresser-Rand Company

Session 2
2:40 – 4:10
TURBO, BLOWERS, SCAVENGING/EMISSION TECHNOLOGY
  • Turbochargers – Blowers overview
  • Slow Speed applications
  • High Speed applications
  • Operation – Monitoring – Maintenance
  • Why turbos fail – Mitigation – Corrective Action
  Mitch Opat, Archrock, Greg Adams, GE Oil & Gas

Wednesday
Session 3
8:00 – 9:30
ROUNDTABLE DISCUSSION
MAJOR COMPONENTS EVALUATION AND MAINTENANCE
Topics will include: Power Cylinder, Power Pistons and Rings, Crankshafts, Connecting Rods, Frames, Bearings & Governors.
  Dusty Smith, Andy Zimmerman, Bryan Beachy; EQT,
  Greg Adams, GE, Mitch Opat, Archrock, Bill Wirz, Dresser-Rand

Session 4
9:40 – 11:10
ROUNDTABLE DISCUSSION CONTINUED
MAJOR COMPONENTS EVALUATION AND MAINTENANCE
See previous

Session 5
1:00 – 2:30
GAS VALVES & ENGINE BALANCING
An in-depth discussion of the effects of engine balancing on engine performance. Types of balancing equipment and types of combustion will be discussed.
  Scott Fletcher, TransCanada

Session 6
2:40 – 4:10
FOUNDATIONS & GROUT
  Scott Vercoe, Energy Tech Systems; Jay Greer, Iron Horse

Thursday
Session 7
8:00 – 9:30
PREVENTATIVE/PREDICTIVE MAINTENANCE
An overview of maintenance philosophies, programs & techniques for problem identification/resolution.
  Keith Schafer, TransCanada

Session 8
9:40 – 11:10
JOURNAL BEARINGS
  Greg Bone, MIBA Bearing Group
# Eastern Gas Compression Roundtable

## Gas Processing

**Classroom: 328**  
**Included in Registration Price of $195**  

**Topic Chairman: Terry Nelson, WPI**

### TUESDAY

**SESSION 1**  
**1:00 – 2:30**  
**FLARES AND THERMAL OXIDIZERS**  
This class covers the History of Flares and Thermal Oxidizer design; Current design requirements for flares and Thermal Oxidizers; Detail review of Natural Gas Plant environmental equipment Designs and requirements; Detail review of Ignition system and control systems and how they relate to Flares and Thermal Oxidizers; and a Review of safety equipment and how it is used in combustion systems  
  *Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)*

**SESSION 2**  
**2:40 – 4:10**  
**PASSIVE/ROBOTIC INSPECTIONS OF FIRETUBES**  
Passive inspection of fire tubes using SLOFEC technology paired with a tethered robotic ILI platform.  
  *Jamie Gauthier, GE Inspection Services*

### WEDNESDAY

**SESSION 3**  
**8:00 – 9:30**  
**ROUNDTABLE DISCUSSION**  
**GAS PROCESSING SYSTEMS: TYPES OF EQUIPMENT, OPERATION & SUGGESTED MAINTENANCE**  
  *Terry Nelson, WPI, Mike Riddell, RMS Engineers*

**SESSION 4**  
**9:40 – 11:10**  
**GAS DEHYDRATION PART I**  
Process flow for dehydration of natural gas, operations and maintenance.  
  *Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)*

**SESSION 5**  
**1:00 – 2:30**  
**GAS DEHYDRATION PART II**  
  *Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)*

**SESSION 6**  
**2:40 – 4:10**  
**GAS DEHYDRATION PART III**  
  *Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)*

### THURSDAY

**SESSION 7**  
**8:00 – 9:30**  
**GAS FILTERS/SEPARATION**  
Process flow for filtration and separation, operations and maintenance.  
  *Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)*

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## Gas Turbines & Centrifugal Compressor

**Classroom: 329**  
**Included in Registration Price of $195**  

**Topic Chairman: Glenn Mastmann, Iroquois Pipeline**

### TUESDAY

**SESSION 1**  
**1:00 – 2:30**  
**TROUBLESHOOTING GAS TURBINE & CENTRIFUGAL GAS COMPRESSORS**  
Roundtable type discussion on typical troubleshooting and field problems on Gas Turbines/Centrifugal Compressors.  
  *Gary Corbello, Ethos Energy*

**SESSION 2**  
**2:40 – 4:10**  
**FIRE AND GAS DETECTION FOR TURBINE AND COMPRESSOR SETS**  
  *Ken Salmen, Salmen Tech Co.*

### WEDNESDAY

**SESSION 3**  
**8:00 – 9:30**  
**ROSEMOUNT PRESSURE AND TEMPERATURE TRANSMITTERS**  
  *Greg Wentzel, Emerson*

**SESSION 4**  
**9:40 – 11:10**  
**HART COMMUNICATIONS HANDS ON CLASS**  
  *Greg Wentzel, Emerson*

**SESSION 5**  
**1:00 – 2:30**  
**TURBINE RECYCLE VALVE OPERATION, MAINTENANCE**  
This session will discuss the function of a compressor recirculation valve, styles of various valve types, installation, start-up and tuning. Particular designs to be discussed include Fisher pneumatic controllers, globe valves and ball valves.  
  *Jim Neville, ECI*

**SESSION 6**  
**2:40 – 4:10**  
**MICRO MOTION FLOW METERS**  
  *Emerson*
**General Interest I**

*Classroom: 330*

*Included in Registration Price of $195*

*Topic Chairman: Stephen Wright, CSI Compressco*

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**TUESDAY**

**SESSION 1**

1:00 – 2:30

**COMPRESSOR ALIGNMENT: SHAFT AND FLATNESS IN COMPLIANCE WITH ARIEL ER-82 SPECIFICATION**

Jay Richardson, LUDECA Inc.

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**SESSION 2**

2:40 – 4:10

**ASCO - 2, 3 AND 4-WAY SOLENOID VALVES**

We will discuss the proper selection, application and operation of 2-way, 3-way and 4-way solenoid operated valves, and our Low Power and Low Ambient Temperature Series solenoid valves. The ASCO solenoid operated valves are currently used in many shale gas applications, including piloting larger control valves at the well heads, compression stations and distribution/processing/separation centers all across the country. We will cover our innovative Low Power series valves which operate on as low as 0.55 Watts and are ideal for shale sites without generated power, using minimal power from solar panels and battery systems for operation. Topics will include Low Ambient Temperature valves with valve constructions rated for service at -50°C ambient, to meet the harsh winter conditions in our region. We will also discuss and demonstrate our New Low Power Spool Valves. These spool valves are ideal for valve automation for the oil and gas market. They have a reliable and robust design with high flow performance, are Corrosion Resistant, are rated for air, inert gas and sweet dry natural gas, and are SIL 3 Certified.

Frank Farina, Emerson ASCO

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**WEDNESDAY**

**SESSION 3**

8:00 – 9:30

**NO SESSION**

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**SESSION 4**

9:40 – 11:10

**ZERO EMISSION BLOWDOWN**

*Thomas Kerr, Kerr Engineered Sales*

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**SESSION 5**

1:00 – 2:30

**PROPER TENSIONING AND TORQUEING**

*Mike Mutich, Boltech Mannings*

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**SESSION 6**

2:40 – 4:10

**RECIROCATING COMPRESSOR PERFORMANCE SOFTWARE**

Overview of creating and understanding reciprocating compressor performance reports generated by various OEM and commercial software.

*Joe Wilson, Dwayne Hickman, ACI Services, Inc.*

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**TUESDAY**

**SESSION 1**

1:00 – 2:30

**RECIPROCATING COMPRESSOR FLEET RELIABILITY: PART 1**

This short course will share experience and provide insights into the design considerations and industry best practices for reciprocating compressor installations, to maximize system integrity and avoid costly repairs.

*Alex Sosnowski, Jiten Mistry, Wood*

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**SESSION 2**

2:40 – 4:10

**RECIPROCATING COMPRESSOR FLEET RELIABILITY: PART 2**

See above

*Alex Sosnowski, Jiten Mistry, Wood*
### Wednesday

**Session 3** 8:00 – 9:30

**Managing Small-Bore Piping Vibration - The Leading Cause of Fatigue Failures**

While vibration related to rotating equipment is well understood as a reliability risk, there are other vibration sources in the piping system that can compromise its integrity. This session will talk about piping vibration sources; small-bore piping risks; risk evaluation methods; and how to reduce piping vibration risks and avoid small-bore piping failures.

*Alex Sosnowski, Wood*

**Session 4** 9:40 – 11:10

**Considerations for a Flexibility Analysis of Piping Systems in Vibration Applications**

Compared to non-vibrating piping, there are fundamental differences in performing a flexibility analysis for piping systems subject to vibration. This session will discuss the special considerations and techniques required to account for the unique characteristics of vibrating piping and to fulfill the code requirements for a flexibility analysis.

*Gary Maxwell, Wood*

**Session 5** 1:00 – 2:30

**Back to Basics Vibration Problem Solving**

The use of advanced analysis tools is not a substitute for careful examination of basic factors that might cause high vibration levels. In many cases, basic observations and analysis can lead to the identification of causes without having to resort to more costly field measurements or advanced analyses. Sometimes a "back-to-basics" analysis approach is all that is required to solve a problem.

*Jiten Mistry, Wood*

**Session 6** 2:40 – 4:10

**Introduction to Reciprocating and Centrifugal Pumps**

A brief introduction to reciprocating and centrifugal pump vibration design and its impact on operations includes reciprocating pumps; centrifugal pumps; key differences between each type; and overview of typical analysis standards applied to each type of pump.

*Gary Maxwell, Wood*

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### General Interest III

**Classroom: 334**

*Included in Registration Price of $195*

**Topic Chairman: Stephen Wright, CSI Compressorco**

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### Tuesday

**Session 1** 1:00 – 2:30

**Performance Control Devices Short Course Part I**

Various types of capacity control and unloading devices for reciprocating compressors are presented, including a variety of devices for: end deactivation, clearance modification, pressure regulation, synched valve-closing, stroke variation, bore variation, speed variation, and dynamic internal pressure variation. Unbiased pros and cons for each class of devices are reviewed, specifically in regards to hardware, operations, maintenance, and installation. Additionally, the effects those devices have on the compression event are discussed to better know how those devices specifically affect flow and load. Attendees will be empowered with the knowledge to fundamentally understand the various types of unloading and capacity control devices, the ability to decipher product claims, and the skills to identify methods and equipment used to modify unit performance. Additional information provided includes: diagrams, pictures and schematics; product advantages and disadvantages; performance considerations; operational limitations; and practical applicability of devices.

*Tyler Clark, Dwayne Hickman, ACI Services, Inc.*

**Session 2** 2:40 – 4:10

**Performance Control Devices Short Course Part II**

See above

*Tyler Clark, Dwayne Hickman, ACI Services, Inc.*

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### Wednesday

**Session 3** 8:00 – 9:30

**Corrosion Protection for Compression Facilities**

*William Hudak, P.E., Tim Quetsch, E.I.T*

**Session 4** 9:40 – 11:10

**Empirical HP Curves**

*Bob Webber, Siemens*

**Session 5** 1:00 – 2:30

**Roundtable Discussion Users Group - High Speed Recip Engine & Compressors**

*Frank Parker, EQT*
GE WAUKESHA PRODUCT UPDATE
With the current challenges in the O&G market, we know you need lower operating costs to be successful. Attend this session to see how you can get more out of your Waukesha fleet. What you’ll learn:

- How to upgrade your existing Waukesha engines
- How to reduce your operating costs and/or site emissions
- How to generate more revenue and improve overall Waukesha asset availability

Chris Kipp, GE Power

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Lubrication and Filtration

Classroom: 338

*Included in Registration Price of $195*

Topic Chairman: Matt McCarthy, Sloan Lubrication

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**TUESDAY**

**SESSION 1**

1:00 – 2:30

**BASICS OF LUBRICANTS - WHAT ARE THE 5 GROUPS?**

We will review the basics of lubrication and the different base stocks so that attendees can understand the difference and why it is important.

Chad George, Summit

**SESSION 2**

2:40 – 4:10

**ROUNDTABLE DISCUSSION FORCE FEED LUBRICATION SYSTEM COMPONENTS AND FLOW RATES**

Matt McCarthy - Sloan Lubrication; Bill Pullin - Reynolds French

---

**WEDNESDAY**

**SESSION 3**

8:00 – 9:30

NO SESSION

**SESSION 4**

9:40 – 11:10

NO SESSION

---

**THURSDAY**

**SESSION 7**

8:00 – 9:30

NO SESSION

**SESSION 8**

9:40 – 11:10

NO SESSION

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**Pipeline Valve & Actuation Maintenance**

Classroom: 335

*Included in Registration Price of $195*

Topic Chairman: Richard Askin, Mid-Atlantic, Inc.

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**TUESDAY**

**SESSION 1**

1:00 – 2:30

**BALL VALVE BASICS**

A general overview of common ball valve components and characteristics including seat designs. Beginning with the different body designs (welded body, two-piece, and three piece) for side entry and top entry ball valves. Floating Seat Design discussions - what is a self-relieving seat (SRS) and what is a Double-Piston-Effect seat DPE, how they differ and advantages to each. What is a rotating seat and how does it work. Detailed conversations on double block and bleed procedure (DBB) and how to perform safely. What are the common fittings found, what they are used for and a
conversation about on sealant injection system? Classroom valve cutaways with hand-on demonstrations.

Tim Northrup, Walt Elmquist, Northrup Equipment

SESSION 2
2:40 – 4:10
PLUG VALVE BASICS
Discussions of the common plug valve components, characteristics, and its unique design. An overview of the most common designs (top entry – bottom entry) and how the stem designs differ and their effect on troubleshooting. A detailed discussion on the plug movement and how the evolution of the dynamic balanced/pressure balanced design has impacted the plug valves operation. Great detail to be given to the pros and cons of “adjusting the plug”.

Chad Nienser, CSN Solutions

WEDNESDAY

SESSION 3
8:00 – 9:30
ROUNDTABLE DISCUSSION
BALL VALVE MAINTENANCE AND FIELD PRACTICAL TROUBLESHOOTING
Best practices and recommended troubleshooting techniques for handling maintenance issues focusing on a field practical approach. The importance of the valve tag reviewed. A broad ranged topic stimulated by class participation from why valves leak to repairing techniques in line under pressure.

Chad Nienser - CSN Solutions; Tim Northrup; Walt Elmquist - Northrup Equipment

SESSION 4
9:40 - 11:10
VALVE MAINTENANCE INJECTION EQUIPMENT
A review of the most common equipment and a review of safe operations of each. An extensive explanation of the proper use and troubleshooting techniques for each.

Ward Hzuza, Sealweld USA

SESSION 5
1:00 – 2:30
ROTARY VANE ACTUATOR
Detailed discussions centering on the rotary vane actuator; their principles of operation, sizing considerations and application. Hands on demonstrations including setting stops and troubleshooting will be examined.

Robbie Broussard, TransCanada CPG

SESSION 6
2:40 – 4:10
SCOTCH YOKE ACTUATORS
Fundamental overview of operations, design, key components and the application of scotch yoke actuators. A review of the principles of operation along with sizing considerations will be discussed. A detailed review of both the full stroke test and partial stroke test.

John Brown, TQT (Texas Quarter Turn)

THURSDAY

SESSION 7
8:00 – 9:30
ACTUATOR MAINTENANCE AND TROUBLESHOOTING
Hands on demonstrations including setting stops and troubleshooting will be examined. The review of potential causes for erratic movements, short stroking, and lack of torques discussed along with field practical solutions.

Robbie Broussard, TransCanada - CPG; John Brown, TQT

SESSION 8
9:40 – 11:10
ROUNDTABLE DISCUSSION
VALVE COMMISSIONING
Purpose, aspects and group think on the commissioning process from initial receipt of valve (handling) to storage and/or installation. A focus on inspection, preparation for storage and the “how to” of a reverse low pressure test. Additional points for discussion will address riser pipe inspection, fitting identification and inspection, gear box (manual) and actuator inspection. Class involvement and participation encouraged.

Tim Northrup; Walt Elmquist - Northrup Equipment; Ward Hzuza - Sealweld USA; Chad Nienser - CSN Solutions

Technical & Engineering

Classroom: 336
Included in Registration Price of $195

Topic Chairman: Mitch Mazaher, Basic Systems, Inc.

TUESDAY

SESSION 1
1:00 – 2:30
ELECTRICAL HAZARDOUS AREA CLASSIFICATION
Overview of hazardous area classification for gas compressor stations and electrical equipment and installation techniques required.

George Samo and Andrew Manski, EQT

SESSION 2
2:40 – 4:10
COMPRESSOR STATION CONTROL SYSTEM DESIGN
In a landscape of ever-evolving regulatory guidelines, design standards, and electronics technology, project engineers and managers must pay particular attention to their compressor stations’ control system implementation. Many design decisions, even early ones, may affect or be affected by a station’s control system, control philosophy, and/or operational philosophy. This course will walk through the details involved with design and implementation of compressor station control systems, citing recommended considerations and potential pitfalls. Although every compressor station is unique in many ways, we will focus the discussion around a high level view of a well-instrumented engine-drive recip station, while paying mention to electric-drive and centrifugal applications as well.

Chuck Huizenga & Ryan Fitzgerald, Basic Systems, Inc.

www.EGCR.org
Wednesday

Session 3 8:00 – 9:30
COMRESSOR STATION DESIGN PROCESS PART 1 - FACILITY ENGINEERING
We will walk through a compressor station design from concept to the beginning of construction and explore the role of the engineer and the development of the engineering drawing package. We will discuss the basic station systems such as Main Gas, Fuel Gas, Lube Oil, Cooling Water, Waste Fluids, etc. We'll identify the major pieces of equipment that make up each system and how they function. We'll explore the design information required by the design engineer in order for him to properly size the equipment in these systems. We'll discuss the design drawings - how they are developed, taking a closer look at the information needed to develop the design drawings. We'll discuss the different types of drawings and how they're used to provide information in the design drawing package.
Mitch Mazaher, PE, Basic Systems Inc.

Session 4 9:40 – 11:10
COMRESSOR STATION DESIGN PROCESS PART 2 - CONTROL SYSTEMS
In a landscape of ever-evolving regulatory requirements, security concerns, design standards, and electronics technology, project engineers and managers must pay particular attention to their compressor stations' control system implementation. Many design decisions, even early ones, may affect or be affected by a station's control system, control philosophy, and/or operational philosophy. This course will walk through the details involved with design and implementation of compressor station control systems, citing recommended considerations and potential pitfalls. Although every compressor station is unique in many ways, we will focus the discussion around a high level view of a well-instrumented engine-drive recip station, while paying attention to electric-drive and centrifugal applications as well.
Mitch Mazaher, PE, Basic Systems, Inc.

Session 5 1:00 – 2:30
COST REDUCTION AND RELIABILITY IMPROVEMENTS FOR RECIPROCATING COMPRESSORS IN SHALE GAS APPLICATIONS
Randy Dal Molin, Hoerbiger Compressor Technology

Session 6 2:40 – 4:10
ENGINEERING EFFICIENCY INTO YOUR COMPRESSION FACILITY
This informative course begins with compressor design & operation fundamental theories, then expands to show other gas cleaning and gas conditioning equipment and how to arrange, or rearrange the equipment parts to optimize electric power and natural gas fuel usage.
Howard Murphy, EarthRes

Thursday

Session 7 8:00 – 9:30
ENGINEERING EFFICIENCY INTO YOUR COMPRESSION FACILITY
This informative course begins with compressor design & operation fundamental theories, then expands to show other gas cleaning and gas conditioning equipment and how to arrange, or rearrange the equipment parts to optimize electric power and natural gas fuel usage.
Howard Murphy, EarthRes

Session 8 9:40 -11:10
NO SESSION

Original Equipment Manufacturers (OEM) Solar Turbines
Classroom: 307
Included in Registration Price of $195
Topic Chairman: Christopher Stroble, Solar Turbines

Tuesday

Session 1 1:00 – 2:30
OEM SOLAR TURBINES #1
Mike Baltz and Evan Sharbrough, Solar Turbines

Session 2 2:40 – 4:10
OEM SOLAR TURBINES #2
Mike Baltz and Evan Sharbrough, Solar Turbines

Wednesday

Session 3 8:00 – 9:30
OEM SOLAR TURBINES #3
Mike Baltz and Evan Sharbrough, Solar Turbines

Session 4 9:40 – 11:10
OEM SOLAR TURBINES #4
Mike Baltz and Evan Sharbrough, Solar Turbines

Session 5 1:00 – 2:30
OEM SOLAR TURBINES #5
Mike Baltz and Evan Sharbrough, Solar Turbines

Session 6 2:40 – 4:10
OEM SOLAR TURBINES #6
Mike Baltz and Evan Sharbrough, Solar Turbines
**EASTERN GAS COMPRESSION ROUNDTABLE**

**THURSDAY**

**SESSION 7**  
8:00 – 9:30  
**OEM SOLAR TURBINES #7**  
Mike Baltz and Evan Sharbrough, Solar Turbines

**SESSION 8**  
9:40 – 11:10  
**OEM SOLAR TURBINES #8**  
Mike Baltz and Evan Sharbrough, Solar Turbines

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**OEM BHGE HSR**

**Classroom: 309**  
Included in Registration Price of $195

**Topic Chairman: Joseph Mares, GE Oil & Gas**

**TUESDAY**

**SESSION 1**  
1:00 – 2:30  
**GE WAUKESHA ENGINE CONVERSIONS, MODIFICATIONS AND UPGRADES**  
Discuss new unit offerings for the Waukesha gas engine line, featuring the new 1500 hp 7042GSI S5 and 1900 hp 7044GSI S5. Provide a fleet update for the 12V275GL+ (3750 hp) and 16V275GL+ (5000 hp) engines. Discuss VGF SE models (F18 - 400 hp and H24 - 530 hp) featuring ESM controls and EPA stationary and mobile certifications.

**SESSION 2**  
2:40 – 4:10  
**GE WAUKESHA ESM1, ESM2 OVERVIEW / TROUBLESHOOTING**  
Discuss the core functionality of Waukesha’s ESM1 and ESM2 control systems, with an emphasis on E-Help troubleshooting to minimize downtime and maximize throughput.  
Ryan Rudnitzki, GE Power

**WEDNESDAY**

**SESSION 3**  
8:00 – 9:30  
**PRODUCT OVERVIEW MODELS/FRAMES**  
Joseph Mares, Baker Hughes a GE Company

**SESSION 4**  
9:40 – 11:10  
**GAS COMPRESSION FUNDAMENTALS**  
Joseph Mares, Baker Hughes a GE Company

**SESSION 5**  
1:00 – 2:30  
**LUBRICATION REQUIREMENTS**  
Joseph Mares, Baker Hughes a GE Company

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**SESSION 6**  
2:40 – 4:10  
**GENERAL MAINTENANCE**  
Joseph Mares, Baker Hughes a GE Company

*Also see General Interest III, Session 6*

**GE WAUKESHA PRODUCT UPDATE**  
With the current challenges in the O&G market, we know you need lower operating costs to be successful. Attend this session to see how you can get more out of your Waukesha fleet. What you’ll learn:

- How to upgrade your existing Waukesha engines
- How to reduce your operating costs and/or site emissions
- How to generate more revenue and improve overall Waukesha asset availability

Chris Kipp, GE Power

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**THURSDAY**

**SESSION 7**  
8:00 – 9:30  
**TROUBLE SHOOTING**  
Joseph Mares, Baker Hughes a GE Company

**SESSION 8**  
9:40 – 11:10  
**COMMISSIONING & START UP/EVALS**  
Joseph Mares, Baker Hughes a GE Company

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**OEM Caterpillar**

**Classroom: 310**  
Included in Registration Price of $195

**Topic Chairman: Scott Double, Cleveland Brothers**

**TUESDAY**

**SESSION 1**  
1:00 – 2:30  
**CAT ENGINE ELECTRONICS**  
Matt Curry

**SESSION 2**  
2:40 – 4:10  
**CAT G3600 A4 INTRODUCTION**  
Scott Double

**WEDNESDAY**

**SESSION 3**  
8:00 – 9:30  
**G3600 / G3500 GAS COMPRESSION OPEN FORUM**  
Scott Double & Matt Curry

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www.EGCR.org
SESSION 4 9:40 – 11:10
CAT G3600 A4 INTRODUCTION
Scott Double

SESSION 5 1:00 – 2:30
CAT GERP
Matt Curry

SESSION 6 2:40 – 4:10
CAT G3600A3 / A4TUNING
Scott Double

THURSDAY

SESSION 7 8:00 – 9:30
CAT ENGINE INSTALLATION / COOLING SYSTEM
Scott Double

SESSION 8 9:40 – 11:10
G3500 / G3600 OPEN FORUM
Scott Double & Matt Curry

Exhibitor List

A. BLAIR POWELL 620, 622
5409 Enterprise Boulevard
Bethel Park PA 15102
(412) 347-0446
abpowell.com

ACI SERVICES, INC. 414
125 Steubenville Ave.
Cambridge OH 43725
(740) 435-0240
www.aciservicesinc.com

ADVANCED GAS ENGINE SOLUTIONS INC 207
616-B Beatty Rd
Monroeville PA 15146
(412) 956-6320
www.agesinc.us

AKRON ELECTRIC INC. 422
1025 Eagon Street
Barberton OH 44203
(330) 745-8891
www.akronelectric.com

ALLIED VALVE, INC. 426
1019 W Grand Ave.
Chicago IL 60642
(312) 520-0235
www.alliedvalveinc.com

APPLIED PIPELINE, INC. 520, 522
PO Box 124
Knox PA 16232
(814) 938-1079
www.appliedpipeline.com

ARCHROCK 210
1404 Mohawk Road
McPherson KS 67460
(620) 241-8740

ARIEL CORPORATION 701
35 Blackjack Road
Mount Vernon OH 43050
(740) 397-0311
www.arielcorp.com

ARKOS FIELD SERVICES 730
1010 Lamar Street, Suite 1700
Houston TX 77002
(985) 209-3129
www.arkos.com
<table>
<thead>
<tr>
<th><strong>Company</strong></th>
<th><strong>Location</strong></th>
<th><strong>Contact Information</strong></th>
<th><strong>Website</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Audubon Field Solutions</td>
<td>404 Stonecliff Lane, Butler PA 16001</td>
<td>(814) 882-9532, <a href="http://www.auduboncompanies.com">www.auduboncompanies.com</a></td>
<td></td>
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<tr>
<td>Auma Actuators, Inc.</td>
<td>100 Southpointe Blvd, Canonsburg PA 15317</td>
<td>(724) 743-2862, <a href="http://www.auma.com">www.auma.com</a></td>
<td></td>
</tr>
<tr>
<td>Basic Systems, Inc.</td>
<td>9255 Cadiz Road, Cambridge OH 43725</td>
<td>(740) 432-7223, <a href="http://www.basic-systems.com">www.basic-systems.com</a></td>
<td></td>
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<tr>
<td>BCMJ Controls, Inc.</td>
<td>PO Box 1273, Coraopolis PA 15108</td>
<td>(412) 264-5434, <a href="http://www.bcmjcontrols.com">www.bcmjcontrols.com</a></td>
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<tr>
<td>Bolting Systems &amp; Services Inc.</td>
<td>121 Schoonmaker Ave, Monessen PA 15062</td>
<td>(724) 942-3654, <a href="http://www.boltingco.com">www.boltingco.com</a></td>
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<tr>
<td>Ceco Compressor Engineering</td>
<td>5440 Alder Dr, Houston TX 77081</td>
<td>(713) 663-1885, tryceco.com</td>
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<tr>
<td>Ceco Peerless</td>
<td>14651 North Dallas Parkway, Suite 500 Dallas TX 75254</td>
<td>(214) 272-5312, <a href="http://www.cecomoenviro.com/peerless">www.cecomoenviro.com/peerless</a></td>
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<tr>
<td>Charbonneau Industries, Inc.</td>
<td>1619 E Richey Road, Houston TX 77073</td>
<td>(281) 209-3800, <a href="http://www.ciaction.com">www.ciaction.com</a></td>
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<tr>
<td>Circor</td>
<td>945 Bunker Hill, Suite 650, Houston TX 77024</td>
<td>(713) 400-2241, <a href="http://www.circorenergy.com">www.circorenergy.com</a></td>
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<tr>
<td>Cleveland Brothers</td>
<td>4565 William Penn Highway, Murrysville PA 15668</td>
<td>(724) 327-1300, <a href="http://www.clevelandbrothers.com">www.clevelandbrothers.com</a></td>
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<tr>
<td>Compressor Products Intl. (CPI)</td>
<td>4410 Greenbriar Dr, Stafford TX 77477</td>
<td>(281) 207-4619, <a href="http://www.cpcompression.com">www.cpcompression.com</a></td>
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<tr>
<td>Compresortechn2</td>
<td>20855 Watertown Road #220, Waukesha WI 53186</td>
<td>(262) 754-7100, <a href="http://www.khl.com">www.khl.com</a></td>
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<tr>
<td>Cook Compression</td>
<td>2445 Technology Forest Blvd, The Woodlands TX 77381</td>
<td>(616) 826-8246, CookCompression.com</td>
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<tr>
<td>Csd Solutions/Pro1One Industrial Lubricants</td>
<td>5257 Buckeyestown Pike #183, Frederick MD 21704</td>
<td>240-440-8471, <a href="http://www.pro-one.us">www.pro-one.us</a></td>
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<tr>
<td>Csi Compressco LP</td>
<td>24010 Oak Bend Dr, Luther OK 73054</td>
<td>(405) 229-1625, <a href="http://www.csicompressco.com">www.csicompressco.com</a></td>
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<tr>
<td>Dcl America</td>
<td>27603 Commerce Oaks Drive, Oak Ridge North TX 77385</td>
<td>(281) 253-3091, <a href="http://WWW.DCL-INC.COM">WWW.DCL-INC.COM</a></td>
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<tr>
<td>Dft Inc.</td>
<td>2177 Spinningwheel Lane, Cincinnati OH 45244</td>
<td>(513) 446-3583,</td>
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<td>Easy Foam, Incorporated</td>
<td>1881 Emma Road, Basalt CO 81621</td>
<td>(405) 830-3000, <a href="http://www.easyfoam.net">www.easyfoam.net</a></td>
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<tr>
<td>700</td>
<td>Ellwood Crankshaft Group</td>
<td>2727 Freedland Road, Hermitage PA 16148</td>
<td>(724) 308-4048</td>
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<td>327</td>
<td>Emerson</td>
<td>19200 Northwest Freeway, Houston TX 77065</td>
<td>(284) 477-4156</td>
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<td>201</td>
<td>Emerson ASCO</td>
<td>343 Rocky Ridge Road, Bethel Park PA 15102</td>
<td>(412) 848-1492</td>
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<td>719</td>
<td>Energy Tech Systems, Inc.</td>
<td>300 National Road, Suite 100, Exton PA 19341</td>
<td>(800) 880-2150</td>
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<td>303</td>
<td>Epic International - Energy Division</td>
<td>21227 Hufsmith Kohrville Road, Tomball TX 77375</td>
<td>(713) 937-1000</td>
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<td>731</td>
<td>Ethosenergy Light Turbines</td>
<td>6225 W. Sam Houston, Houston TX 77041</td>
<td>(713) 849-8802</td>
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<td>424</td>
<td>Filtech Inc</td>
<td>221 W. 8th Ave, West Homestead PA 15120</td>
<td>(412) 742-9328</td>
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<td>313</td>
<td>Flow-Data</td>
<td>119 ICMI Rd., Building 3, Dunbar PA 15401</td>
<td>(724) 317-9589</td>
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<td>519</td>
<td>FLSMidth Inc</td>
<td>2040 Avenue C, Bethlehem PA 18017</td>
<td>(610) 266-4415</td>
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<td>700</td>
<td>Frewerick Logan Company Inc</td>
<td>140 Commonwealth Drive, Warrendale PA 15086</td>
<td>(724) 776-9300</td>
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<td>531</td>
<td>FW Murphy Production Controls</td>
<td>5417 S. 122nd E. Ave., Tulsa OK 74146</td>
<td>(918) 346-7513</td>
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<td>711</td>
<td>Gas Compression Magazine</td>
<td>15814 Champion Forest Drive, Suite 419, Houston TX 77379</td>
<td>(832) 271-7380</td>
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<td>Gilson Engineering</td>
<td>535 Rochester Road, Pittsburgh PA 15237</td>
<td>(412) 651-0579</td>
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<td>325</td>
<td>Glycol Technologies Inc</td>
<td>140 Commonwealth Drive, Warrendale PA 15086</td>
<td>(724) 776-3554</td>
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<td>418</td>
<td>Heath Consultants Incorporated</td>
<td>9030 Monroe Rd, Houston TX 77061</td>
<td>(713) 844-1300</td>
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<td>319</td>
<td>HFW Industries</td>
<td>196 Philadelphia St, Buffalo NY 14207</td>
<td>(716) 875-3380</td>
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<tr>
<td>401, 500</td>
<td>Hi-Tech Compressor &amp; Pump Products, Inc.</td>
<td>1113 Branagan Drive, Tullytown PA 19007</td>
<td>(215) 547-8800</td>
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<td>307</td>
<td>Hoerbiger Compression Technology</td>
<td>1358 W. Newport Center Dr., Deerfield Beach FL 33442</td>
<td>(954) 246-1352</td>
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<tr>
<td>618</td>
<td>Hotstart</td>
<td>5723 E Alki, Spokane WA 99212</td>
<td>(509) 534-6171</td>
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<tr>
<td>INDUSTRIAL CONTROLS &amp; EQUIPMENT 603</td>
<td>M&amp;J VALVE SERVICES 502</td>
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<tr>
<td>2 Park Dr Lawrence PA 15055 (724) 746-3705 ice-vip.com</td>
<td>110 Gill Drive Lafayette LA 70507 (337) 769-9260 mjvalve.com</td>
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<td>INTERSTATE CHEMICAL COMPANY INC. 521</td>
<td>MATTHEWS LUBRICANTS 423</td>
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<tr>
<td>2797 Freedlend Rd Hermitage PA 16148 (724) 981-3771 <a href="http://www.interstatechemical.com">www.interstatechemical.com</a></td>
<td>17 RT 50 West Clarksburg WV 26301 (304) 623-3361 matthewslubricants.com</td>
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<td>INTERSTATE MCBEE 301</td>
<td>MAXIM SILENCERS 714</td>
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<tr>
<td>5300 Lakeside Ave Cleveland OH 44133 (412) 889-0486 <a href="http://www.interstate-mcbee.com">www.interstate-mcbee.com</a></td>
<td>10635 Brighton Lane Stafford TX 77477 (832) 554-0980 <a href="http://www.MaximSilencers.com">www.MaximSilencers.com</a></td>
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<td>JOHN HOPKINS UNLIMITED, INC. 220</td>
<td>MID ATLANTIC INC 300</td>
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<tr>
<td>510 Country Ln San Antonio TX 78209 (361) 813-7362</td>
<td>1 Dollar Avenue, PO Box 409 Scottsdale PA 15683 (724) 366-9178</td>
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<tr>
<td>JONES PETROLEUM SERVICES 621</td>
<td>MILLENNIUM TORQUE &amp; TENSIONING, INC. 228</td>
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<tr>
<td>67 Lonesome Cedar Lane Pikeville KY 41501 (606) 432-5724 jonespetroleum.com</td>
<td>1886 Route 136 Eighty Four PA 15330 (724) 229-5020 <a href="http://www.milltorc.com">www.milltorc.com</a></td>
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<td>KAMS, INC. 219</td>
<td>MIRATECH GROUP 221, 320</td>
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<tr>
<td>1831 N.W. 4th Dr. Oklahoma City OK 73106 (405) 232-2636 <a href="http://www.kamsinc.com">www.kamsinc.com</a></td>
<td>420 S 145th E Avenue, #A Tulsa OK 74108 (918) 442-2413 <a href="http://www.miratechcorp.com">www.miratechcorp.com</a></td>
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<td>KENCO ENGINEERING 518</td>
<td>MOBIL INDUSTRIAL LUBRICANTS 312</td>
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<tr>
<td>10001 E. 54th Street Tulsa OK 74146 (918) 663-4406 kenco-eng.com</td>
<td>303 Thornberry Lane Ellamore WV 26267 (304) 614-4329 <a href="http://www.mobilindustrial.com">www.mobilindustrial.com</a></td>
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<tr>
<td>KERR ENGINEERED SALES COMPANY 408</td>
<td>MONICO INC. 527</td>
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<td>LIMITORQUE - FCX PERFORMANCE 321</td>
<td>NATIONAL HEAT EXCHANGE 609</td>
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<td>1409 Smoketree Drive Forest VA 24551 (434) 258-6718 <a href="http://www.flowserve.com">www.flowserve.com</a></td>
<td>8397 Southern Blvd Youngstown OH 44512 (330) 482-0893 nationalheatexchange.com</td>
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<td>LUDECA, INC. 715</td>
<td>NORTHEAST ONG 213</td>
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<tr>
<td>1425 NW 88th Avenue Doral FL 33172 (305) 591-8935 <a href="http://www.ludeca.com">www.ludeca.com</a></td>
<td>PO Box 1001 Youngwood PA 15697 (724) 787-4451 <a href="http://www.ongmarketplace.com">www.ongmarketplace.com</a></td>
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<td>Company Name</td>
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<tr>
<td>OHIO VALLEY INDUSTRIAL SERVICES</td>
<td>308</td>
<td>530 Moon Clinton Rd, Unit B Moon Township PA 15108 (412) 269-0020</td>
<td><a href="http://www.ovisinc.com">www.ovisinc.com</a></td>
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<tr>
<td>PARKER HANNIFIN (PECO)</td>
<td>206, 208</td>
<td>PO Box 640 Mineral Wells TX 76067 (940) 327-6247 <a href="http://www.parker.com">www.parker.com</a></td>
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<tr>
<td>PEAKER SERVICES</td>
<td>215</td>
<td>8080 Kensington Brighton MI 48116 (248) 437-4174 <a href="http://www.peaker.com">www.peaker.com</a></td>
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<tr>
<td>PENN-OHIO SALES</td>
<td>410</td>
<td>2107 Sheffield Rd. Aliquippa PA 15001 (412) 977-2424</td>
<td><a href="http://www.hytorcpennohio.com">www.hytorcpennohio.com</a></td>
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<tr>
<td>PHILLIPS 66 LUBRICANTS</td>
<td>523</td>
<td>P.O. Box 421959 Houston TX 77242-1959 (724) 931-3810</td>
<td><a href="http://www.Phillips66Lubricants.com">www.Phillips66Lubricants.com</a></td>
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<tr>
<td>PIC APPALACHIA</td>
<td>608, 507</td>
<td>210 Riverview Drive Monessen PA 15062 (724) 684-5117</td>
<td><a href="http://www.pilotthomas.com">www.pilotthomas.com</a></td>
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<tr>
<td>PILOT THOMAS LOGISTICS</td>
<td>226</td>
<td>494 4H Camp Road Morgantown WV 26508 (304) 619-5796</td>
<td><a href="http://www.pilotthomas.com">www.pilotthomas.com</a></td>
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<tr>
<td>POTEMKIN INDUSTRIES, INC.</td>
<td>611, 613</td>
<td>8043 Columbus Road Mount Vernon OH 43050 (740) 397-4888</td>
<td>potemkinindustries.com</td>
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<tr>
<td>POWER PARTS SUPPLY</td>
<td>610</td>
<td>353 Keystone Dr. Charleston WV 25311 (304) 342-0600</td>
<td>powerpartssupply.com</td>
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<tr>
<td>POWERSMITH GROUP</td>
<td>614</td>
<td>6774 Salerno St NW Canton OH 44718 (330) 714-4339</td>
<td><a href="http://www.powersmithgroup.com">www.powersmithgroup.com</a></td>
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<tr>
<td>POWERTHERM</td>
<td>615</td>
<td>7420 Wright Rd Houston TX 77041 (713) 682-6777 <a href="http://www.Powertherm.com">www.Powertherm.com</a></td>
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<tr>
<td>PPC LUBRICANTS</td>
<td>725</td>
<td>150 Bonnie Dr. Butler PA 16002 (724) 831-9564 <a href="http://www.ppc">www.ppc</a> lubricants.com</td>
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<tr>
<td>PROFIKE ENERGY</td>
<td>310</td>
<td>321 South, 1250 West Suite 1 Lindon UT 84042 (801) 851-0828 <a href="http://www.profiereenergy.com">www.profiereenergy.com</a></td>
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<tr>
<td>RAVAN AIR</td>
<td>200, 202</td>
<td>13116 Hwy 18 Conneaut Lake PA 16316 (814) 853-5127 Ravanair.com</td>
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<tr>
<td>RECIROCATING TECHNOLOGY SERVICES</td>
<td>314</td>
<td>9848 Windfern Road Houston TX 77064 (407) 947-2860 <a href="http://www.recipotech.com">www.recipotech.com</a></td>
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<tr>
<td>RUSSELL F CLARK CO</td>
<td>720</td>
<td>1105 Rochester Rd Pittsburgh PA 15237 (412) 635-9500 <a href="http://www.rfclark.com">www.rfclark.com</a></td>
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<tr>
<td>S2W CONTRACTING LLC</td>
<td>626</td>
<td>PO Box 422 Clarks Summit PA 18411 (940) 745-1421 <a href="http://www.s2wcontracting.com">www.s2wcontracting.com</a></td>
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<tr>
<td>SAMCO ENTERPRISES, INC.</td>
<td>402</td>
<td>1172 Industrial Park Drive Mt. Braddock SD 15465 (724) 277-1011 <a href="http://www.Samcoenterprises.com">www.Samcoenterprises.com</a></td>
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<tr>
<td>SHALEPRO ENERGY SERVICES</td>
<td>311</td>
<td>17 Lane Drive Clarksburg WV 26301 (304) 709-7100 <a href="http://www.shalepro.com">www.shalepro.com</a></td>
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<tr>
<td>SIEMENS</td>
<td>612</td>
<td>4400 Alafaya Trail Orlando FL 32826 (407) 455-4364 siemens.com</td>
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<tr>
<td>Company Name</td>
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<tr>
<td>SINOR ENGINE</td>
<td>224</td>
<td>1100 Georgia Ave, Deer Park TX 77536</td>
<td>(832) 527-8486</td>
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<tr>
<td>SLOAN LUBRICATION SYSTEMS</td>
<td>600, 501, 503, 602</td>
<td>168 Armstrong Drive, Freeport PA 16229</td>
<td>(412) 828-2420</td>
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<tr>
<td>SOLAR TURBINES INCORPORATED</td>
<td>407, 409, 508</td>
<td>2200 Georgetowne Drive, Sewickley PA 15143</td>
<td>(724) 759-7800</td>
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<tr>
<td>SOR MEASUREMENT &amp; CONTROL</td>
<td>525</td>
<td>14685 West 105th Street, Lenexa KS 66215</td>
<td>(913) 888-2630</td>
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<tr>
<td>SUMMIT</td>
<td>420</td>
<td>9010 CR 2120, Tyler TX 75707</td>
<td>(903) 534-8021</td>
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<tr>
<td>THE BG SERVICE COMPANY</td>
<td>515</td>
<td>1400 Alabama Ave, #15, West Palm Beach FL 33401</td>
<td>(561) 659-1471</td>
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<tr>
<td>TM FILTRATION/FLUID ENGINEERING</td>
<td>513</td>
<td>1432 Walnut Street, Erie PA 16502</td>
<td>(814) 453-5014</td>
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<tr>
<td>TORCUP INDUSTRIAL BOLTING TOOLS</td>
<td>330</td>
<td>3530 Tuscarawas Road, Beaver PA 15009</td>
<td>(610) 250-5800</td>
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<tr>
<td>UE SYSTEMS INCORPORATED</td>
<td>315</td>
<td>14 Hayes Street, Elmsford NY 10523</td>
<td>(800) 223-1325</td>
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<tr>
<td>UNITED ELECTRIC CONTROLS CO.</td>
<td>400</td>
<td>5829 Grazing Court, Mason OH 45040</td>
<td>(513) 535-5486</td>
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<td>VANEC INDUSTRIAL SILENCERS</td>
<td>511</td>
<td>3374 Benzing Rd, Orchard Park NY 14127</td>
<td>(716) 827-4959</td>
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<tr>
<td>VIZAAR INDUSTRIAL IMAGING</td>
<td>318</td>
<td>4533 Gibsonia Rd, Gibsonia PA 15044</td>
<td>(724) 449-3270</td>
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<tr>
<td>W.M. WILSON CO., INC.</td>
<td>723</td>
<td>2579 Center Road, Hinckley OH 44233</td>
<td>(330) 225-0663</td>
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<tr>
<td>WESCO VALVE &amp; SAFETY SEAL PISTON RING CO.</td>
<td>721</td>
<td>4000 Airport Rd, Marshall TX 75672</td>
<td>(817) 271-3074</td>
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<tr>
<td>WINDROCK, INC.</td>
<td>708</td>
<td>1832 Midpark Rd, Suite 102, Knoxville TN 37921</td>
<td>(865) 330-1100</td>
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<tr>
<td>WOOD</td>
<td>727</td>
<td>17325 Park Row Drive, Houston TX 77084</td>
<td>(281) 920-4441</td>
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<tr>
<td>WPI</td>
<td>302</td>
<td>203 Freedom Drive, Lawrence PA 15055</td>
<td>(724) 288-8085</td>
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## EASTERN GAS COMPRESSION ROUNDTABLE

**Room 323**

### Tuesday
- 1:00 - 2:30
  - Startup & General Maintenance for Air Cooled Heat Exchangers
  - Kendal Barber, Smithco Engineering
- 2:40 - 4:10
  - Gas Heating Equipment Design
  - Daniel Huffaker, Total Products Services

### Wednesday
- 8:00 - 9:30
  - Startup & General Maintenance for Air Cooled Heat Exchangers
  - Kendal Barber, Smithco Engineering
- 9:40 - 11:10
  - Keeping Contaminants Out of Compressors, Facilities & Pipelines Part 1
  - Bill Couch, Parker Hannifin

### Thursday
- 8:00 - 9:30
  - - No Session -

### Room 324

### Tuesday
- 1:00 - 2:30
  - Compressor Theory
  - Randy Dal Molin, Hoerbiger

### Room 325

### Tuesday
- 1:00 - 2:30
  - Ignition Systems ROUNDTABLE DISCUSSION
    - Michael Porter, Paul McHenry, Hoerbiger/Altronic
    - Pat Runnels, Darrell Schmitt, FW Murphy Prod Controls
    - Robert Virchow, Mark Skidmore, Motortech

### Room 325

### Tuesday
- 1:00 - 2:30
  - Spark Plugs & Ignition Accessories
    - Ken Blanchard, Stitt, Charles Cheuning, Champion,
    - Alain LeFloch, BG Services

### Room 325

### Tuesday
- 1:00 - 2:30
  - EICS - Engine Integrated Control System
    - Pat Runnels, Darrel Schmitt, FW Murphy Production Controls

### Room 325

### Tuesday
- 1:00 - 2:30
  - Electrical Hazardous Area Classification
    - George Samo, EQT

### Room 325

### Tuesday
- 1:00 - 2:30
  - Instrumentation & Controls Troubleshooting: Part 1
    - Raymond Carr, FW Murphy Production Controls

### Room 325

### Thursday
- 9:40 - 11:10
  - Compressor Value Short Course Part 2
    - Patrick Taylor, Hoerbiger, Steve Chaykosky, Dresser-Rand/Siemens

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<table>
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<th>Room 326</th>
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<td><strong>Tuesday</strong></td>
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<td>1:00 - 2:30</td>
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<tr>
<td>Hazards with Storage Tanks / Safe Solutions in Operations</td>
<td>Gas Engine Principles; Basics of Combustion; Basic Exhaust Emissions</td>
<td>Flares / Thermal Oxidizers</td>
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<tr>
<td>Brandon Bajek, ECI</td>
<td>Bill Wirz, Dresser-Rand Company</td>
<td>Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)</td>
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<tr>
<td>2:40 - 4:10</td>
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<td>Air Permitting–Comp. Stations /Well Pads Using Available Gen’l Permits in PA, OH, WV</td>
<td>Turbo, Blowers, Scavenging/Emissions Technology</td>
<td>Passive/ Robotic Inspections of Firetubes</td>
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<tr>
<td>Patty Centofanti, Trinity Consultants</td>
<td>Mitch Opat, Archrock, Greg Adams, GE Oil &amp; Gas</td>
<td>Jamie Gauthier, GE Inspection Services</td>
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<td>- No Session -</td>
<td>Major Components: Evaluation and Maintenance ROUNDTABLE DISCUSSION</td>
<td>Gas Dehydration Part I</td>
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<td>Dusty Smith, Andy Zimmerman, Bryan Beachy; EQT, Greg Adams, GE, Mitch Opat, Archrock, Bill Wirz, Dresser-Rand</td>
<td>Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)</td>
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<tr>
<td>Hazards with Storage Tanks / Safe Solutions in Operations</td>
<td>Major Components: Evaluation and Maintenance ROUNDTABLE DISCUSSION</td>
<td>Gas Dehydration Part II</td>
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<tr>
<td>Brandon Bajek, ECI</td>
<td>Dusty Smith, Andy Zimmerman, Bryan Beachy; EQT, Greg Adams, GE, Mitch Opat, Archrock, Bill Wirz, Dresser-Rand</td>
<td>Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)</td>
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<tr>
<td>What to Expect When You’re Inspected</td>
<td>Gas Valves &amp; Engine Balancing</td>
<td>Gas Dehydration Part III</td>
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<td>Patty Centofanti, Trinity Consultants</td>
<td>Scott Fletcher, TransCanada</td>
<td>Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)</td>
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<tr>
<td>Update/Background on Gas Turbine Air Permitting Requirements for NE USA</td>
<td>Foundations and Grout</td>
<td>Gas Filters / Separation</td>
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<td><strong>Thursday</strong></td>
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<td>Preventative/Predictive Maintenance</td>
<td>Gas Filters / Separation</td>
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<td>Keith Schafer, TransCanada</td>
<td>Terry Nelson, Tony Brown, Waukesha-Pearce Industries (WPI)</td>
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<td>- No Session -</td>
<td>Journal Bearings</td>
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<td>Greg Bone, MIBA Bearing Group</td>
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<tr>
<td>Troubleshooting Gas Turbine and Centrifugal Gas Compressors</td>
<td>Compressor Alignment: Shaft and Flatness in Compliance with Ariel ER-82 Specification</td>
<td>Reciprocating Compressor Fleet Reliability: Part 1</td>
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<td>Gary Corbello, Ethos Energy</td>
<td>Jay Richardson, LUDECA Inc.</td>
<td>Alex Sosnowski, Jiten Mistry, Wood</td>
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<tr>
<td>Fire and Gas Detection for Turbine and Compressor Sets</td>
<td>ASCO - 2, 3 and 4-way Solenoid Valves</td>
<td>Reciprocating Compressor Fleet Reliability: Part 2</td>
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<td>Ken Salmen, Salmen Tech Co.</td>
<td>Frank Farina, Emerson ASCO</td>
<td>Alex Sosnowski, Jiten Mistry, Wood</td>
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<tr>
<td>Rosemount Pressure and Temperature Transmitters</td>
<td>- No Session -</td>
<td>Managing Small-Bore Piping Vibration - the Leading Cause of Fatigue Failures</td>
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<td>Greg Wentzel, Emerson</td>
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<td>Alex Sosnowski, Wood</td>
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<td>9:40 - 11:10</td>
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<td>Hart Communications Hands on Class</td>
<td>Zero Emission Blowdown</td>
<td>Considerations for a Flexibility Analysis of Piping Systems in Vibration Applications</td>
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<td>Greg Wentzel, Emerson</td>
<td>Thomas Kerr, Kerr Engineered Sales</td>
<td>Gary Maxwell, Wood</td>
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<tr>
<td>Turbine Recycle Valve Operation, Maintenance</td>
<td>Proper Tensioning and Torqueing</td>
<td>Back to Basics Vibration Problem Solving</td>
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<td>Jim Neville, ECI</td>
<td>Mike Mutich, Bolttech</td>
<td>Jiten Mistry, Wood</td>
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<td>2:40 - 4:10</td>
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<tr>
<td>Micro Motion Flow Meters</td>
<td>Reciprocating Compressor Performance Software</td>
<td>Introduction to Reciprocating and Centrifugal Pumps</td>
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<td>Joe Wilson, Dwayne Hickman, ACI Services, Inc.</td>
<td>Gary Maxwell, Wood</td>
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<td>8:00 - 9:30</td>
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<tr>
<td>Testing/Setting Turbine Control/Differential Pressure Switches</td>
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<td>Glenn Mastmann, Iroquois Gas</td>
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<tr>
<td>Performance Control Devices Short Course, Part 1</td>
<td>Basics of Lubricants - What Are the 5 Groups?</td>
<td>Ball Valve Basics</td>
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<tr>
<td>Tyler Clark, Dwayne Hickman, ACI Services, Inc.</td>
<td>Chad George, Summit</td>
<td>Tim Northrup; Walt Elmquist - Northrup Equipment</td>
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<td>2:40 - 4:10</td>
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<td>Performance Control Devices Short Course, Part 2</td>
<td>Force Feed Lubrication System Comp &amp; Flow Rates Roundtable</td>
<td>Plug Valve Basics</td>
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<td>Tyler Clark, Dwayne Hickman, ACI Services, Inc.</td>
<td>Matt McCarthy - Sloan Lubrication; Bill Pullin - Reynolds French</td>
<td>Chad Nienser - CSN Solutions</td>
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<tr>
<td>Corrosion Protection for Compression Facilities</td>
<td>- No Session -</td>
<td>Ball Valve Maintenance and Field Troubleshooting Roundtable</td>
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<td>William Hudak, P.E., Tim Quetsch, E.I.T.</td>
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<td>Empirical HP Curves</td>
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<td>Valve Maintenance Injection Equipment</td>
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<td>Bob Webber, Siemens</td>
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<td>Ward Hzuza - Sealweld USA</td>
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<tr>
<td>Frank Parker, EQT</td>
<td>Matt McCarthy - Sloan Lubrication; Bill Pullin - Reynolds French</td>
<td>Robbie Broussard - TransCanada - CPG</td>
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<td>2:40 - 4:10</td>
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<tr>
<td>GE Waukesha Product Update</td>
<td>- No Session -</td>
<td>Scotch Yoke Actuators</td>
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<td>Chris Kipp, GE Power</td>
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<td>John Brown - TQT</td>
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<td>Actuator Maintenance and Troubleshooting</td>
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<td>Robbie Broussard - TransCanada - CPG; John Brown - TQT</td>
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<td>Valve Commissioning Roundtable Discussion</td>
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<td>Tim Northrup; Walt Elmquist - Northrup Equipment; Ward Hzuza - Sealweld USA;</td>
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<tr>
<td>TECHNICAL AND ENGINEERING</td>
<td>ENTRY LEVEL COMPRESSOR STATION OPERATOR TRAINING - $350</td>
<td>OEM SOLAR TURBINES</td>
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<td><strong>Room 336</strong></td>
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<td>Electrical Hazardous Area Classification</td>
<td>Compressor Stations and Their Functions</td>
<td>OEM Solar Turbines #1</td>
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<td>George Samo and Andrew Manski, EQT</td>
<td>Jay Jackson and Steve Hower, EQT</td>
<td>Mike Baltz and Evan Sharbrough, Solar Turbines</td>
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<td>Compressor Station Control System Design</td>
<td>Compressor Station Equipment and Yard Piping</td>
<td>OEM Solar Turbines #2</td>
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<td>Chuck Huizenga, Ryan Fitzgerald, Basic Systems, Inc.</td>
<td>Jay Jackson and Steve Hower, EQT</td>
<td>Mike Baltz and Evan Sharbrough, Solar Turbines</td>
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<td>Compressor Station Design Process Part 1</td>
<td>Auxiliary Systems and Equipment</td>
<td>OEM Solar Turbines #3</td>
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<td>Mitch Mazaher, PE, Basic Systems, Inc.</td>
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<td>Mike Baltz and Evan Sharbrough, Solar Turbines</td>
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<tr>
<td>Compressor Station Design Process Part 2</td>
<td>Operating Characteristics of Reciprocating and Centrifugal Compressors</td>
<td>OEM Solar Turbines #4</td>
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<td>Mitch Mazaher, PE, Basic Systems, Inc.</td>
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<tr>
<td>Cost Reduction and Reliability Improvements for Reciprocating Compressors in Shale Gas</td>
<td>Design Characteristics of Prime Movers</td>
<td>OEM Solar Turbines #5</td>
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<tr>
<td>Randy Dal Molin, Hoerbiger Compressor Technology</td>
<td>Jay Jackson and Steve Hower, EQT</td>
<td>Mike Baltz and Evan Sharbrough, Solar Turbines</td>
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<tr>
<td>Engineering Efficiency Into Your Compression Facility</td>
<td>Factors Basic to Reciprocating Compr. Operation</td>
<td>OEM Solar Turbines #6</td>
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<tr>
<td>Howard Murphy, EarthRes</td>
<td>Jay Jackson and Steve Hower, EQT</td>
<td>Mike Baltz and Evan Sharbrough, Solar Turbines</td>
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<tr>
<td>Engineering Efficiency Into Your Compression Facility</td>
<td>Characteristics of the Primary Equipment in a Compressor Station</td>
<td>OEM Solar Turbines #7</td>
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<td>Howard Murphy, EarthRes</td>
<td>Jay Jackson and Steve Hower, EQT</td>
<td>Mike Baltz and Evan Sharbrough, Solar Turbines</td>
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<tr>
<td>Reciprocating Compressor Comp &amp; Cylinder Operation</td>
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<td>OEM Solar Turbines #8</td>
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<td>Jay Jackson and Steve Hower, EQT</td>
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<td>Mike Baltz and Evan Sharbrough, Solar Turbines</td>
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# EASTERN GAS COMPRESSION ROUNDTABLE

<table>
<thead>
<tr>
<th>Room 309</th>
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<tbody>
<tr>
<td><strong>Tuesday</strong></td>
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<tr>
<td>1:00 - 2:30</td>
<td>1:00 - 2:30</td>
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<tr>
<td>GE Waukesha Engine Conversions, Modifications and Upgrades</td>
<td>CAT Engine Electronics</td>
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<tr>
<td>Matt Curry</td>
<td>Matt Curry</td>
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<td>2:40 - 4:10</td>
<td>2:40 - 4:10</td>
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<tr>
<td>GE Waukesha ESM1, ESM2 Overview / Troubleshooting</td>
<td>CAT G3600 A4 Introduction</td>
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<tr>
<td>Ryan Rudnitzki, GE Power</td>
<td>Scott Double</td>
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<td><strong>Wednesday</strong></td>
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<tr>
<td>8:00 - 9:30</td>
<td>8:00 - 9:30</td>
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<tr>
<td>Product Overview Models/frames</td>
<td>G3600 / G3500 Gas Compression Open forum</td>
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<tr>
<td>Joseph Mares, Baker Hughes a GE Company</td>
<td>Scott Double &amp; Matt Curry</td>
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<td>9:40 - 11:10</td>
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<tr>
<td>Gas Compression Fundamentals</td>
<td>CAT G3600 A4 Introduction</td>
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<tr>
<td>Joseph Mares, Baker Hughes a GE Company</td>
<td>Scott Double</td>
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<td>1:00 - 2:30</td>
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<tr>
<td>Lubrication Requirements</td>
<td>CAT GERP</td>
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<tr>
<td>Joseph Mares, Baker Hughes a GE Co.</td>
<td>Matt Curry</td>
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<td>2:40 - 4:10</td>
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<tr>
<td>General Maintenance / Joseph Mares, Baker Hughes</td>
<td>CAT G3600A3 / A4Tuning</td>
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<td>*Also see General Interest III, 2:40pm GE Waukesha Product Update</td>
<td>Scott Double</td>
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<td>8:00 - 9:30</td>
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<tr>
<td>Trouble Shooting</td>
<td>CAT Engine Installation / Cooling System</td>
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<tr>
<td>Joseph Mares, Baker Hughes a GE Company</td>
<td>Scott Double</td>
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<td>9:40 - 11:10</td>
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<tr>
<td>Commissioning &amp; Start up/Evals</td>
<td>G3500 / G3600 Open Forum</td>
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<tr>
<td>Joseph Mares, Baker Hughes a GE Company</td>
<td>Scott Double &amp; Matt Curry</td>
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</table>
Classroom Layout
Mark Your Calendar
for Next Year
May 21-23, 2019

Eastern Gas Compression Roundtable
PO Box 922
Monroeville, PA 15146
412-372-4301

www.EGCR.org