


GAS MACHINERY CONFERENCE: OCTOBER 2-5, 2022 IN FORT WORTH, TEXAS
Sunday: October 2, 2022 Registration 3:00 PM - 6:00 PM

5:30 PM - 7:30 PM	Reception
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Monday: October 3, 2022

Time / Room Location	Company	Main Author	Paper Title	Track
8 AM - 11 AM Short Courses				
8-11am	Ariel Corporation	Mr. Greg Phillippi	Basic Thermodynamics of Reciprocating Compression	Reciprocating Compressors
8-11am	Solar Turbines	Dr. Rainer Kurz	Centrifugal Compressors: Principles, Design and Control	Centrifugal Compressors
8-11am	Wood - Vibration, Dynamics and Noise	Mr. Alasdair Robinson, P.Eng	Introduction to Pulsation & Vibration on Reciprocating Compressors	Reciprocating Compressors
8-11am	NFG, Southern Star, Williams, Cooper Machinery Services, Waukesha	Dr. Nasr Alkadi, Mr. Hans Mathews, Mr. Jacob Saletsky	Discussions of Varying Hydrogen Blends on Integral, Low-Speed Natural Gas Engines	Reciprocating Engines, and Emissions
11:00 AM - 11:30 AM Break				
11:30 PM - 1:00 PM Conference Kick-off Keynote from TBD, Luncheon				
1:15 PM - 2:15 PM Technical Papers				
1:15-2:15pm	Kinder Morgan	Mr. Angel Rivera	Estimating Compressor Station Blowdown Time, Forces, and Temperatures: How Close Can You Get?	Other
1:15-2:15pm	Zahroof Valves Inc., Energy Transfer Partners, Southwest Research Institute	Mr. Zahroof Mohamed	Performance Measurement of Low-speed Pipeline Transmission Compressors with Radial Modular Reed Valves	Reciprocating Compressors

1:15-2:15pm	Southwest Research Institute	Mr. Eugene "Buddy" Broerman , III	A GMRC Technology: Improved Reciprocating Compressor Efficiency via Improved Pulsation Control	Research
1:15-2:15pm	Williams, Ariel Corp., IDC Engineering	Mr. Ramiro Martin Leon	Torsional Vibration Issues - What you don't know, may hurt you...!	Vibrations & Pulsations
1:15-2:15pm	Altronic LLC	Mr. Keith Brooks	Optimizing Hydrogen Fueled Spark Ignited Engine Output & Emissions Through Advanced Ignition & Passive Prechamber Design	Reciprocating Engines

2:30 PM - 3:30 PM Technical Papers

2:30-3:30pm	Ariel Corporation	Ms. Kaley R. Coss	Hydrogen Blending in Natural Gas Pipelines with Reciprocating Compressors	Reciprocating Compressors
2:30-3:30pm	Southwest Research Institute	Mr. Brandon Lee Ridens	GMRC Project: Improvements in Elemental Sulfur Test Methods for Natural Gas	Research
2:30-3:30pm	Wood PLC	Mr. Chris Bibby	Solving flow-induced pulsation problems in piping system , three case studies	Vibrations & Pulsations
2:30-3:30pm	HOERBIGER	Mr. Matthias Richtig	Reciprocating compressor greenhouse gas emission footprint assessment and mitigation potential	Reciprocating Compressors
2:30-3:30pm	Solar Turbines	Dr. Rainer Kurz	Pipeline Simulations and Optimization for reducing carbon intensity	Energy Transition

3:45 PM - 4:45 PM Technical Papers

3:45-4:45pm	ACI Services Inc. & Berkshire Hathaway Energy GT&S	Mr. W. Norm Shade, PE	Cumulative Lifetime Assembly-Induced Low Cycle Fatigue in Legacy Compressor Cylinders	Reciprocating Compressors
3:45-4:45pm	Southwest Research Institute	Mr. Aaron Rimpel	Dry Gas Seal Reliability: A Study of the Effects of Liquid Contamination on Seal Performance, Phase 4	Research

3:45-4:45pm	Wood, Boardwalk Pipeline Partners	Mr. Wally Bratek , P.Eng.	Compressor Station Modifications , Analysis Guidance and Lessons Learned	Vibrations & Pulsations
3:45-4:45pm	Sloan Lubrication Systems	Mr. CJ Sloan	The High Cost of Over Lubrication: Quantifying the Negative Impacts of Excessive Power and Compressor Cylinder Lubrication on Natural Gas Pipeline Operations	Reciprocating Compressors
3:45-4:45pm	Monico Monitoring	Mr. David Krenek	You're Ready to Analyze Your Machine Data , But Is Your Data Ready?	Data Analytics

5:30 PM - 7:30 PM	Reception Sponsored by Ariel	 		
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Tuesday: October 4, 2022

6:00 AM - 8:00 AM	Breakfast Reception by Hoerbiger			
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Time / Room Location	Company	Main Author	Paper Title	Track
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8 AM - 11 AM Short Courses				
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8-11am	Southwest Research Institute, Solar Turbines Incorporated, Kinder Morgan Natural Gas	Mr. Hector Alejandro Delgado	Field Performance and Instrumentation of Centrifugal Compressors	Centrifugal Compressors
8-11am	Southwest Research Institute	Mr. Nathan Poerner	Have Sensors, Will Travel	Vibrations & Pulsations
Mini SC 8-9:30am	Kinder Morgan	Mrs. MaryBeth McBain	Operator Perspectives on Hydrogen Blending	Energy Transition
Mini SC 8-9:30am	Southwest Research Institute	Mr. Benjamin A. White	Analyses Not Addressed by API Standards: AIV/FIT/FIV/Small Bore Piping	Vibrations & Pulsations
Mini SC 9:30-11am	Wood Vibration, dynamics, and noise	Mr. Zachary Dobberthien , EIT	Shake, rattle and grow 2 , pipe support classification for vibratory and thermal growth applications	Vibrations & Pulsations

Mini SC 9:30-11am	Siemens Energy and TC Energy	Mr. Kevin Davies	The Perfect Storm.... Who moved our Knowledge	Other
8-11am	TBD	TBD	TBD	TBD
11:00 AM - 1:00 PM				
Lunch with Exhibitors				
1:00 PM - 2:15 PM Tech Updates (8 Tech Updates)				
8 min	INNIO Waukesha Gas Engines	TBD	INNIO Waukesha Gas Engines New Unit Technology Update	Reciprocating Engines
8 min	Ariel Corporation	TBD	Ariel KBC, KBD, and KBF Product Release	Reciprocating Compressors
8 min	National Institute of Standards and Technology	TBD	High Pressure Vapor Liquid Equilibrium Measurements of binary hydrocarbon and water mixtures using Nuclear Magnetic Resonance (NMR) Spectroscopy	Research
8 min	Windrock, Inc.	TBD	Tech Update: Windrock's Expanding Product Portfolio	Other
8 min	Solar Turbines	TBD	Gas Turbine Emissions and Regulatory Update	Emissions
8 min	STASSKOL GmbH	TBD	CNGS / Piston Rod Packing Solutions for Reduced Emissions We did hand in the paper 2020,	Reciprocating Compressors
8 min	Elliott Group	TBD	Elliott Technology for Pipeline Industry	Centrifugal Compressors
8 min	Caterpillar Inc.	TBD	Caterpillar Low Carbon Solutions for Gas Compression Applications	Emissions

8 min	Monico Monitoring Inc	TBD	Update of Monico Products and Services	Data Analytics
2:30 PM - 3:30 PM Technical Papers				
2:30-3:30pm	Southwest Research Institute, Hanwha Power Systems America, PwrCor, Williams	Dr. Timothy Allison	Comparative Performance Analysis of Waste Heat Recovery Systems for Multiple Compressor Station Heat Sources	Auxiliary Systems
2:30-3:30pm	Wood	Mr. Mike Cyca, P.Eng.	Centrifugal Dynamic Surge Design - Balance of Competing Philosophies	Centrifugal Compressors
2:30-3:30pm	Windrock, Inc.	Mrs. Mary Margaret Chapman	Learning more about reciprocating machinery health through increased data collection frequency	Data Analytics
2:30-3:30pm	Solar Turbines Inc. and Montrose Air Quality Services	Mr. Ivan Carlos	Formaldehyde of Emissions Measurements from Dry Low Emissions Industrial Gas Turbines	Emissions
2:30-3:30pm	Southern California Gas Company	Mr. Joseandres Sanchez, PE	California Regulatory Implications for Reciprocating Compressor Rod Packing	Reciprocating Compressors
3:45 PM- 4:45 PM Technical Papers				
3:45-4:45pm	Southwest Research Institute	TBD	Development of an Ultrasonic Sensor to Detect Liquid in Gas Process Piping and Equipment	Auxiliary Systems
3:45-4:45pm	Solar turbines/Caterpillar	Mr. Michael Clay	Emissions Reductions and Efficiency Gains while Increasing Capacity on Legacy Turbomachinery Equipment	Centrifugal Compressors
3:45-4:45pm	Southwest Research Institute	Dr. Jordan Nielson	Measuring Lube Oil Thickness of Reciprocating Compressors	Reciprocating Compressors
3:45-4:45pm	Baker Hughes	Mr. Sergio Cipriani	Hydrocarbons Emission Recovery in Turbo-Compressor Units	Emissions

3:45-4:45pm	ACI Services Inc.	Mr. W. Norm Shade, PE	Compressor Pulsation Control & Capacity Maintenance With Variable (0 to >20%) Hydrogen Content	Reciprocating Compressors
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Exhibitor Hall and Reception by TBD				
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Wednesday: October 5, 2022				
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Time / Room Location	Company		Paper Title	Track
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8:00 AM - 9:00 AM Technical Papers				
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8-9 am	Shell Oil Products	Dr. Cesar Lizcano	Considerations for the use of high performance PAG based gas compressor oils	Other
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8-9 am	Southwest Research Institute, GE Global Research	Mr. Joshua Dean Neveu	The Effects of CO2 Impurities on Compressor Performance for Carbon Capture Systems	Centrifugal Compressors
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8-9 am	Kinder Morgan	Mr. Angel Rivera	Will It Shake: Real-World Comparison of Pipe Support Effectiveness on Vibration	Vibrations & Pulsations
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8-9 am	Colorado State University	Ms. Brenna King	Test Method Evaluation and VOC Exhaust Species for Natural Gas-Fired Reciprocating Engines	Emissions
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8-9 am	TC Energy	Mr. Seth Johnson	Comparison of Control and Alarm Strategies of Auto-balance and Fuel Injection Systems for Reciprocating Engines.	Reciprocating Engines
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9:15 AM - 10:15 AM Technical Papers				
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9:15-10:15am	ACI Services, Inc.; AXIP Energy Services; Cooper Machinery Services	Mr. Dwayne A. Hickman	Identifying Flow Modeling Issues of a 3-stage, Gas Lift, 1800 rpm VFD, Reciprocating Compressor Package	Reciprocating Compressors
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9:15-10:15am	Radical Combustion Technologies	Mr. Michael J. Manfredi	The Next Generation of NOx Retrofit Technologies for Pipeline Compressor Engines	Reciprocating Engines
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9:15-10:15am	Wood	Mr. Wally Bratek, P.Eng.	Station-Wide Vibration/Pulsation Analysis , Best Practices for Data Collection and Post- Processing	Vibrations & Pulsations
9:15-10:15am	Hoerbiger Corporation of America	Mr. Patrick Taylor	Case Study on Finger Unloader Pulldown Failures	Reciprocating Compressors
9:15-10:15am	Southwest Research Institute	Mr. Eugene "Buddy" Broerman, III	A GMRC Research Project: Hydrogen Blending in Natural Gas Compression Facilities	Research

10:30 AM - 11:45 PM Tech Updates (8 Tech Updates)

8 min	Cooper Machinery Services	TBD	Cooper Machinery Services update	Reciprocating Engines
8 min	Siemens Energy	TBD	Case Study: Application of Automated Clearance Pocket Unloader in Boil-off Gas Service	Reciprocating Compressors
8 min	Southwest Research Institute	TBD	R&D Facilities Supporting Gas Machinery Decarbonization	Research
8 min	Baker Hughes	TBD	Gas turbine engine development for high hydrogen blends with wide fuel-flex combustion system	Other
8 min	Radical Combustion Technologies	TBD	Methane Reduction from Pump-Scavenged Pipeline Compressor Engines	Emissions
8 min	Zahroof Valves Inc.	TBD	Zahroof Valves Inc. - Tech Update - New modular reed valve technology to improve performance of slow-speed reciprocating compressors in pipeline transmission applications.	Reciprocating Compressors
8 min	Wood	TBD	One clamp to rule them all , part V	Vibration/Pulsation

8 min	Kodiak Gas Services	TBD	EcoView and gas compression, evolution to provide responsibly sourced natural gas and its steps to address the ever evolving regulatory environment	Emissions
8 min	Altronic	TBD	Altronic NGI-5000 Air Fuel Ratio Control	Emissions

11:45 AM - 1:00 PM

Exhibit Hall Lunch

1:15 pm - 4:15 pm Short Courses

1:15-4:15pm	IES	Mr. Jim McCarthy	Air Regulatory Update	Emissions
1:15-4:15pm	Southwest Research Institute	Mr. Benjamin A. White	Advanced Topics in Acoustics and Vibrations	Vibrations & Pulsations
Mini SC 1:15-2:45pm	Southwest Research Institute	Mr. Adrian Alvarado	Compressor Station Transient Modeling	Centrifugal Compressors
Mini SC 1:15-2:45pm	ACI Services, Inc.	Mr. Dwayne A. Hickman	Reciprocating Compressor Performance -- Know What You Are Really Buying	Reciprocating Compressors
Mini SC 2:45-4:15pm	Hoerbiger Service	Mr. John Ladd	Impact of Increased Hydrogen on Natural Gas Reciprocating Compressors	Reciprocating Compressors
Mini SC 2:45-4:15pm	Sloan Lubrication Systems	Mr. Bryan Boarts	Divider Block Lubrication Systems for Reciprocating Gas Compressors: Design, Operation, Maintenance & Troubleshooting	Other

GMRC Annual Membership Meeting - XXXXX (Omni) 4:15 PM - 5:00 PM

XXXXX (Omni) Hotel Closing Reception 5:30 PM - 6:30 PM