



GAS MACHINERY CONFERENCE: OCTOBER 1-4, 2023 IN PHOENIX, AZ

Sunday: October 1st, 2023 Registration 2:00 PM - 6:00 PM
PHOENIX Convention Center - Registration Desk for Badge pick up

5:30 PM - 7:30 PM	Opening Reception sponsored by WOOD.	 Presents the opening reception @ Hyatt Hotel Atrium
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Monday: October 2nd, 2023

Time / Room Location	Company	Author/s	Paper Title	Track
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7 AM Breakfast - Session Room Pre-Function Area, Main Floor of the Phoenix Convention Center

8 AM - 11 AM Short Courses | 9:15AM Refreshment Break

8-11am / Room 101C	Gas Compression Magazine	Ms. Mary Savalle	Introduction to Combustion Engines	Reciprocating Compressors
8-11am / Room 106A	Southwest Research Institute	Mr. Ben White, Mr. Eugene Broerman & Mrs. Sarah Simons	Advanced Topics in Acoustics and Vibrations	Vibration/Pulsation
8-11am / Room 102ABC	Solar Turbines Incorporated	Mr. Avneet Singh & Dr. Rainer Kurz	Industrial Gas Turbines and Electric Motor Drives for Centrifugal Compressors	Gas Turbines
8-11am / Room 105ABC	SoCalGas, Cooper Machinery Services	Mr. Gregg Arney, Mr. Hans Mathews, & Mr. Dan Ott	Lessons Learned Applying Selective Catalytic NOx Reduction Systems (SCR) to Natural Gas Pipeline Compressor Drivers with Focus on Integral Reciprocating Compressor Engines	Reciprocating Compressors
Mini SC 8-9:30am / Room 101AB	ACI Services Inc.; Vapor Motive Co.; National Fuel Gas; Williams	Mr. W.Norm Shade, Mr.Matt Janssen, Mr. Terry Kreuz, & Mr. Scott Schubring	A Study of Gas Turbine Waste Heat Recovery Used for Steam-Driving Existing Integral Gas Engine-Compressors	Emissions
Mini SC 9:30-11am / Room 106BC	Elliott Group & Siemens Energy	Mr. Roshan Joseph, Dr. Klaus Brun, Mr. Gautam Chhibber, Mr. Lukas Biyikli	CO2 compression technology options for pipeline applications	Emissions


11:00 AM - 1:00 PM

Conference Kick-off Keynote and Luncheon, Robert Bryce
Phoenix Convention Center - 301 Ballroom, Upper Floor

1:15 PM - 2:15 PM Technical Papers | Monday: October 2nd, 2023

1:15-2:15pm / Room 101AB	Hoerbiger Wien GmbH	Mr. Guido Pratelli	The road to zero emissions in compression - Practical strategies to achieve net-zero goals	Reciprocating Compressors
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1:15-2:15pm / Room 101C	SwRI, Kinder Morgan, & ACI Services	Mr. Eugene L. Broerman, Mrs. Christine Scrivner, & Mr. W Norm Shade	A GMRC Technology: Field Testing an Improved Device Design - The Virtual Orifice	Research
1:15-2:15pm / Room 106BC	Ariel	Mr. Thomas J. Stephens & Mr. Jared Collier	High Frequency Vibration Mitigation through Cylinder Design for Reciprocating Compressors	Vibration/Pulsation
1:15-2:15pm / Room 102ABC	Gas Compression Magazine & Marathon Petroleum	Ms. Mary Savalle & Mr. Ronnie Walker	Extend the Life-Cycle Invest in the Subsystems!	Auxiliary Systems
1:15-2:15pm / Room 105ABC	Innio Waukesha Engine	Mr. Chris Kipp	Compressor Package Overhauls: Improve ESG Metrics and Futureproof Against the Inflation Reduction Act - Methane Fee Charge	Emissions
1:15- 4:15pm / Room 106A	Southwest Research Institute & Solar Turbines Incorporated	Mr. Nathan Poerner, Dr. Rainer Kurz, & Mr. Avneet Singh	Site Performance Testing of Centrifugal Compressors	Centrifugal Compressors
2:15 PM - 2:30 PM Networking Break				
2:30 PM - 3:30 PM Technical Papers Monday: October 2nd, 2023				
2:30-3:30pm / Room 101AB	Elliott Group	Mr. Frank Shoup, Mr. Brian Pettinato, Mr. Manish Thorat, & Mr. Derrick Bouer	Aluminum Centrifugal Compressor Impellers; Enablers and Challenges	Centrifugal Compressors
2:30-3:30pm / Room 101C	Wood - VDN	Mr. Jeff B. Barss, Mr. Wally W. Bratek, Mr. Austin D. Way, Mr. Jose Quevedo, & Mr. Garth T. Sanders	Data Driven Methods to Analyze Compressor Station Vibration	Vibration/Pulsation
2:30-3:30pm / Room 102ABC	Energy Transfer, Ariel, & Engineering Dynamics Incorporated	Mr. Jafet Lopez, Mr. Tom Stephens, Mr. Josh Zeplin, & Mr. Troy Feese	Dampers for Controlling Vibration in Reciprocating Compressor Systems	Reciprocating Compressors
2:30-3:30pm / Room 105ABC	Waukesha/Innio & Occidental Petroleum	Mr. Ryan Rudnitzki & Marcos Sandoval	Field experience using a four-stroke Miller cycle, stoichiometric burn natural gas engine in gas lift applications in the Permian basin	Emissions
2:30-3:30pm / Room 106BC	Southwest Research Institute	Late Dr. Jordan Nielson, Mr. Jason Bensmiller, & Mr. Scott Delmotte	Reciprocating Compressor Cylinder Lubrication Optimization: Experimental Study Phase 3 - A GMRC Project	Auxiliary Systems
1:15- 4:15pm / Room 106A	Southwest Research Institute & Solar Turbines Incorporated	Mr. Nathan Poerner, Dr. Rainer Kurz, & Mr. Avneet Singh	Field Performance Testing and Instrumentation of Centrifugal Compressors	Centrifugal Compressors
3:30 PM - 3:45 PM Refreshment Break				
3:45 PM - 4:45 PM Technical Papers Monday: October 2nd, 2023				

3:45-4:45pm / Room 101AB	Southwest Research Institute	Mr. Mark Anguiano, Mr. Aaron Rimpel, & Dr. Rainer Kurz	Dry Gas Seal Reliability: A Study of the Effects of Liquid Contamination on Seal Performance, Phase 5	Vibration/Pulsation
3:45-4:45pm / Room 101C	Solar Turbines Incorporated	Mr. Michael Clay	Comparison of Methods to Reduce Venting of Centrifugal Compressors	Centrifugal Compressors
3:45-4:45pm / Room 102ABC	Radical Combustion Technologies	Mr. Michael J. Manfredi, Mr. James J. McCoy, & Mr. Michael P. Whelan	Two for One: Cost-Effective NOx and Methane Reduction for 2-Stroke Lean Burn Pipeline Compressor Engines	Emissions
3:45-4:45pm / 106BC	Wood - VDN	Mr. Wally Bratek	Root Cause Analysis of Reciprocating Compressor Main Bearing Failure	Reciprocating Compressors
3:45-4:45pm / Room 105ABC	RPower	Mr. Tony Mente	Monetizing Standby Assets How to Turn you Emergency Standby Generator from and Insurance Policy into a Revenue Generator	Energy Transition
1:15- 4:15pm/ Room 106A	Southwest Research Institute & Solar Turbines Incorporated	Mr. Nathan Poerner, Dr. Rainer Kurz, & Mr. Avneet Singh	Field Performance Testing and Instrumentation of Centrifugal Compressors	Centrifugal Compressors
5:30 PM - 7:30 PM	Reception Sponsored by Ariel	 Warehouse 215 215 E Grant St, Phoenix, AZ		
Tuesday: October 3rd, 2023				
6:30 AM - 8:00 AM	Breakfast Reception by Hoerbiger	 Ballroom 301		
Time / Room Location	Company	Main Author	Paper Title	Track
8 AM - 11 AM Short Courses				
8-11am / Room 101C	Ariel Corporation	Mr. Greg Phillippi	Basic Thermodynamics of Reciprocating Compression	Reciprocating Compressors
8-11am / Room 102ABC	SwRI, SoCalGas, NFG, Williams, NYSEARCH	Mr. Brandon Ridens, Mrs. Sarah Simons, Mr. Amado Galaviz, Mr. Darren Drew, Mr. Terry Kreuz, & Mr. Eugene Broerman	H2 Blending Panel and Research Summary	Energy Transition

8-11am / Room 105ABC	Williams Gas Pipeline, Kinder Morgan, SoCal Gas, Axip with NFG, Southwest Research Institute	Mr. Scott Schubring, Mr. James Trent, Mr Gregg Arney, Mr. John Guyones, Mr. Gary Pritchard, Mr. Terry Kreuz & Mr. Eugene 'Buddy' Broerman	Emissions Reduction Panel Session	Emissions
Mini SC 8-9:30am / Room 101AB	Sloan Lubrication Systems	Mr. Matt McCarthy	Force Feed Compressor Lubrication - Operation, Maintenance, Troubleshooting and Optimization	Auxiliary Systems
Mini SC 8-9:30am / Room 106BC	Wood & ADNOC	Mr. Juan Torres, Mr. Colin McIlwraith, Mr. Khaled AlKhoujah, & Mr. Zachary Dobberthien	Constrained layer damping: A non-intrusive vibration control solution	Vibration/Pulsation
Mini SC 9:30-11am / Room 101AB	TC Energy & Gas Compression Magazine	Mr. Seth Johnson & Ms. Mary Savalle	Mass Balance Case Study – A Look at Integral Unit Reciprocating Forces	Reciprocating Engines
Mini SC 9:30-11:00am / Room 106BC	Southwest Research Institute	Mr. Justin Hollingsworth & Mr. John Macha	An Introduction to Root Cause Failure Analysis for Industrial Machinery	Other

11:15 AM - Exhibit Hall Ribbon Cutting & Opening

**11:15 AM - 1:00 PM
Lunch with Exhibitors**

1:00 PM - 2:15 PM Tech Updates (8 Tech Updates) | Tuesday: October 3rd, 2023

8 min	AXIP Energy Services, NFG, SWRI	Mr. John Guoynes	New Exhaust Capture Technology to Lower Carbon Emissions From Natural Gas Compression	Emissions
8 min	Innio/Waukesha	Mr. Greg Polkus	Technical Update: What's New - Waukesha's VHP Series Five	Reciprocating Engines
8 min	Elliott	Mr. Stephen Todd Omatick	Elliott Technology for Pipeline Industry	Centrifugal Compressors
8 min	Monico	Mr. Doyle Taylor	Monico Technology Update	Other
8 min	Solar Turbines Incorporated	Mr. Avneet Singh	Solar Turbines - Tech Update	Other
8 min	Cooper Machinery Services	Mr. Patrick Gillespie	Cooper Machinery Services investment in technology for Good Neighbor	Emissions
8 min	Wood PLC	Starr Dalton	Clamp wars: A new hope for vibration control and piping flexibility	Vibration/Pulsation
8 min	Caterpillar	Hassan Khalid	Low Emissions Solutions to Modernize Your Gas Compression Operation	Emissions

2:15 PM Refreshment Break sponsored by ACI Services Inc.

2:30 PM - 3:30 PM Technical Papers | Tuesday: October 3rd, 2023

2:30-3:30pm / Room 101AB	Southwest Research Institute	Mrs. Kelsi M. Katcher, Mr. David Coker, Mr. Jeff L. Lutke	Using a Dual Drive Compressor as an Energy Management Tool to Generate Revenue and Maintain Pipeline Reliability	Emissions
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2:30-3:30pm / Room 101C	Wood PLC	Mr. Zachary Dobberthien & Mr. Juan Torres	Engine Pedestal Vibration: A New Solution Approach using a Tuned-Mass Damper	Vibration/Pulsation
2:30-3:30pm / Room 102ABC	Baker Hughes & TC Energy	Ms. Federica Furcas, Mr. Muhammad Saleem, Mr. Antonio Mavino, Mr. Brad Downie, Mr. Nicola Tammaro	Challenges and benefits of electrifying a pipeline gas compression station	Emissions
2:30-4:00pm / Room 105ABC	ACI Services, Inc.	Mr. Dwayne A Hickman & Mr. Aaron Schwartz	Performance Control of Reciprocating Compressors: Devices and Methods for Controlling Flow and Load	Reciprocating Engines
2:30-3:30pm / Room 106A	National Fuel Gas & Southwest Research Institute	Mr. Jared Heschke, Mr. Eugene (Buddy) L. Broerman, & Mr. Fernando Karg Bulnes	Can an Acoustic Filter be Hidden Underground and Still Protect Station Flow Meters?	Vibration/Pulsation
2:30-3:30pm / Room 106BC	Hoerbiger Corporation of America	Mr. Patrick Taylor, Dr. Jeet Sengupta & Mr. Jonathan Brates	Mechanical Forces On Compressor Valves	Reciprocating Compressors

3:45 PM- 4:45 PM Technical Papers | Tuesday: October 3rd, 2023

3:45-4:45pm / Room 101AB	Cooper Machinery Services	Mr. Hans Mathews	Using Trapped Equivalence Ratio for NOx Parametric Emissions Monitoring	Emissions
3:45-4:45pm / Room 101C	Wood VDN	Mr. Jaehee Chae	Structural Design Requirements and Specification for Reciprocating Compressor Skid & Foundation	Reciprocating Compressors
3:45-4:45pm / Room 106A	BlackRock Resources	Mr. Keith W. Schafer	Electric Motor Vibration Analysis - Early Detection of Rotor Bar Failure	Vibration/Pulsation
2:30-4:00pm / Room 105ABC	ACI Services, Inc.	Mr. Dwayne A Hickman & Mr. Aaron Schwartz	Performance Control of Reciprocating Compressors: Devices and Methods for Controlling Flow and Load (cont)	Reciprocating Engines
3:45-4:45pm / Room 102ABC	Step2Compliance	Mrs. Marybeth Clifford	Past, Present and Future: The Role of Fugitive Emissions Monitoring	Emissions
3:45-4:45pm / Room 106BC	Wood & Air Products	Mr. Sagar Kamat, Mr. Jason Maskinas, & Mr. Wally Bratek	Solutions to Vibration and Pulsation Problems in a Hydrogen Facility	Vibration/Pulsation

4:45 PM- 6:00 PM

**Exhibitor Hall and Reception - Sip and Savor the Southwest
Phoenix Convention Center - Exhibit Hall**

Wednesday: October 4th, 2023

Time / Room Location	Company		Paper Title	Track
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6:30 AM - 8:00 AM Breakfast with Exhibitors

8:00 AM - 9:00 AM Technical Papers

8-9 am / Room 105ABC	Wood VDN	Mr. Kelly Eberle, Mr. Steve Watson, & Mr. Michael Gaca	Case Study of Trouble-shooting Noise From a New Reciprocating Compressor Package	Reciprocating Compressors
8-9 am / Room 101AB	Axip Energy Services, ACI Services, Inc. & Cooper Machinery Services	Mr. Dwayne A.Hickman, Mr. Paul Snow, & Mr Kyle Sembra	Identifying Flow Modeling Issues of a 3-stage, Gas Lift, 1800 rpm VFD, Reciprocating Compressor Package	Reciprocating Compressors
8-9 am / Room 101C	Ariel Corporation	Mr. Mark Schreck	Ensuring Robust Bolt Performance: A Review of Bolt Design and Processing on Fatigue Life Based on Destructive Testing	Reciprocating Compressors
8-9 am / Room 106BC	Southwest Research Institute	Mr. Evan Judice, Mr. Ryan Gentry, Mrs. Kelsi M. Katcher, Mr. Mike Wasson, & Mr. Levi Maurer	Methane Mitigation on Natural Gas Compressors	Emissions
8-9 am / Room 102ABC	Altronic	Mr. David Bell, Mr. David Lepley, & Mr. Matthew Traina	Development, Validation, and, Deployment of advanced Combustion assurance and performance diagnostic technologies in large natural gas engine ignition systems	Reciprocating Engines

9:15 AM - 10:15 AM Technical Papers | Wednesday: October 4th, 2023

9:15-10:15am / Room 101AB	Shell	Mr. Chris Knapp	Developing a Tactical Plan for Turbine Lubrication Lifecycle Management – A Sustainable Solution to Turbine Lubrication and Operation	Gas Turbines
9:15-10:15pm / Room 105ABC	Solar Turbines	Dr. Rainer Kurz, Mr. Anand Srinivasan, Mr. Matt Lubomirsky, Mr. Roman Zamotorin, & Mr. Avneet Singh	Performance Maps for Centrifugal Compressors	Centrifugal Compressors
9:15-10:15am / Room 106BC	Energy Transfer	Mr. David Clinton Stanfield, Mr. Thomas E. Burtsfield, & Mr. Richard Allan Nutt	A Practical Approach to Developing a Reciprocating Compressor Valve Health Model using Common Compressor Analyzing Instruments	Reciprocating Compressors
9:15-10:15am / Room 102ABC	Step2Compliance	Mr. Brian Kromer	M3, The Management, Measurement & Monetization of Methane Preparing for the Impact of a Carbon Constrained Energy Market	Emissions
9:15-10:15am / Room 101C	Hoerbiger Service	Mr. Ethan Robisch	Establishing Allowable Wear Limits for Compressor Valve Guard and Guide Elements	Reciprocating Compressors

10:15 AM Refreshment Break sponsored by Sloan Lubrication

10:30 AM - 11:45 AM Tech Updates (8 Tech Updates) | Wednesday: October 4th, 2023

8 min	Caterpillar	Dr. Mohamed Toema, Ph.D	Scalable Carbon Capture Methods for Distributed Power	Emissions
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8 min	Patton Lubricator Products	Mr. Curtis Roys	Differential Pressure In Force Feed Systems Reduces Oil Injected Into Rings, Rods, Packing & Cylinders	
8 min	Ariel Corporation	Mr. Greg Lortie	Ariel Products Update	Reciprocating Compressors
8 min	Resonance systems	Mr. Ed Flanagan	New Resonance Systems Solutions	Reliability
8 min	Hoerbiger Service	Mr. Benjamin Kluding	New sealing system & emission recovery units	Reciprocating Compressors
8 min	Baker Hughes	Mr. Gianluca Bartolini & Mr. Luca Petruzzi	An example of plant integration for reciprocating compressors: the fuel gas booster in gas turbines application	Other
8 min	Innio/Waukesha	Mr. Dylan Abel & Mr. Chris Heisler	Delivering Next-Level Engine and Compressor Monitoring and Optimization Capabilities	Reciprocating Compressors
8 min	Siemens Energy	Mr. Kevin Davies	Customized solutions for 'Good Neighbor	Reciprocating Engines
8 min	Altronic	Mr. David Bell	New Technology Session	Other

**11:45 AM - 1:00 PM
Exhibit Hall Lunch**

1:15 pm - 4:15 pm Short Courses | Wednesday: October 4th, 2023

1:15-4:15pm / Room 105ABC	IES	Mr. Jim McCarthy	Air Regulatory Update	Emissions
1:15-4:15pm / Room 101C	Wood - VDN	Mr. Alasdair Robinson & Mr. Garth Sanders	Introduction to Pulsation & Vibration on Reciprocating Compressors	Reciprocating Compressors
Mini SC 1:15-2:45pm / Room 102ABC	CSU	Mr. Greg Vieira, Ms. Rachel Lorenzen, Mr. Matthew Archer, Dr. Mark Patterson, Dr. Daniel Olsen, & Mr. Nicholas Paul Katsampes	The Impact of Hydrogen Blending on Industrial Natural Gas Engines	Energy Transition
Mini SC 2:45-4:15pm / Room 106BC	Sloan Lubrication Systems	Mr. Eric Sloan	Stabilize Revenue and Develop Resilience by Implementing ESG - Real World Experience from a Small Business	Other
Mini SC 2:45-4:15pm / Room 101AB	Cooper Machinery Services	Mr. Randy Lane Anderson	Integrate Operational Excellence	Data Analytics

**GMRC Annual Membership Meeting - 4:15 PM - 5:00 PM
Hyatt Hotel in the Ellis Room**

5:30 PM - 6:30 PM	GMC Closing Reception sponsored by Shell	 Hyatt Hotel Atrium - Phoenix	
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