

Gas Machinery Research Council

Year End Report to Members - December 2016

Your [Gas Machinery Research Council](#) enjoyed a successful year in 2016. This report provides a summary of 2016 and a look ahead to 2017.

OVER-VIEW

- Annual operating budget of \$2 million
- Healthy reserve balance of \$3.2 million
- Invested \$2.5 million in research projects over the past six years

RESEARCH PROJECTS – 2016

- Centrifugal Compressor Surge Forces: Measurement and Predictions
- Wet Gas Formation and Carryover in Suction Equipment
- Wet Gas Compressor Performance Measurements and Correlation
- Revision / Update to High Speed Package Guideline
- Oil Dilution Project

PRCI Joint Co-Funded Programs:

- Effect of Variability in Fuel on Ops and Reliability of Turbines
- Portable Analyzer Lab Tests to Support Simplified Test Method
- Effect of Variability in Fuel on Ops and Reliability of Turbines
- Portable Analyzer Lab Tests to Support Simplified Test Method
- GHG Database to Support Emission Factor Improvement – “Methane Data and Super Emitters”
- Control of Fugitive Methane Emissions from Compressor Stations through Combustion of Compressor and Engine Crankcase Emissions
- Methane Reduction Data Analysis for 2-Stroke Lean Burn Natural Gas Engines

2016 spend = \$336,760

RESEARCH PROJECTS – 2017

- High Speed Package Guideline for Gathering Compression
- Dry Gas Seal Reliability (co-funded with PRCI)
- Guideline for the Selection of Suction Gas Filtration Equipment
- Pulsation Bottle Liquid Dropout Design Study
- Guideline for Successful Installation of Pipe to Minimize Piping Vibration, Strain, and Fatigue Failures
- Direct Gas Physical Property Enthalpy Rise Measurement
- Scrubber Level Controls Optimization Guideline

2017 spend = \$544,445

TRAINING – 2016

- Applied Principles of Engines & Compressors
- Factors in Compressor Station Design
- High Speed Package Design
- Foundation Design & Repair
- Introduction to Gas Turbines and Centrifugal Compressors
- Compressor Station Vibration and the Impact on Performance, Cost & Reliability
- Combustion Characteristics
- Engine Analyzer & Reliability
- [Gas Machinery Conference](#)
 - [Highlight Video](#)
 - Chairman: Hans Mathews, Hoerbiger Services Inc.

Total Attendance: 1,058

MEMBERSHIP

- Operating Company Members = 21
- Engineering & Fabricating Members = 12
- Associate Members = 44

FINANCIALS (summary)

- Income
 - Membership dues, research co-funding 336,000
 - Training (Net) 409,000
 - Other 4,300
 - Total 749,300
- Expense
 - Total 829,000
- Deficiency of Income to Expenses (79,700)
- Research Expenditures 404,000
- Research Reserve 3,200,000

LEADERSHIP

- Board of Directors – 2016
 - Michael Smith, CSI Compressco LP –Chairman of the Board
 - Kary Saleeby, ExxonMobil Production – Vice Chairman of the Board
 - Doug Bird, Dresser-Rand – Treasurer
 - Quince Och, Spectra Energy – Secretary
 - Craig Linn, Williams (retired) – Past Chairman of the Board
 - Martin Habel, Solar Turbines Incorporated
 - Kriss McDonald, Ariel Corporation
 - Don York, HOERBIGER Services
 - Marlan Jarzombek, Atmos Energy
 - Frank Antoine, Enable Midstream

- Scott Schubring, Williams – Project Supervisory Committee Chairman
- Orin Flanigan, Adobe Enterprises
- Mike Grubb, President & CEO
- Jane Butler, GMRC Staff Executive

- Project Supervisory Committee - 2016
 - Scott Schubring, Williams – Chair
 - Josh Shaver, Atmos – Vice Chair
 - Kary Saleeby, ExxonMobil
 - Richard Fink, Spectra
 - Everette Johnson, GE Oil & Gas
 - David Krenek, CAT
 - Rainer Kurz, Solar
 - Clint Lingel, Ariel
 - Michael Matheidas, ExxonMobil
 - Christine Scrivner, Kinder Morgan
 - Gary Bourn, Anadarko
 - Scott Delmotte, Dresser-Rand
 - Jane Butler, GMRC Staff Executive

- Gas Machinery Conference Committee - 2016
 - Hans Mathews, HOERBIGER Engineering Services – Chair
 - Manny Angulo The Williams Companies
 - David J. Atwood, Siemens
 - Bill Couch, PecoFacet
 - Michael Duffy, Advanced Gas Engine Solutions
 - Brenna Geswein, Caterpillar
 - Rainer Kurz, Solar Turbines Incorporated
 - Kenneth Langlois, DCP Midstream
 - Greg Lortie, Ariel Corp.
 - Reagan Mayces, Spectra Energy
 - Marybeth McBain, Beta Machinery
 - Keith W. Schafer, Columbia Pipeline Group
 - Scott Schubring, The Williams Companies
 - Sarah Simons, Southwest Research Institute
 - Oscar Smith, EQT Midstream
 - Donna Sterrick, Black & Veatch
 - Jon Tice, DCP Midstream
 - James Trent, Kinder Morgan
 - Mary Beth Whitfield, The Williams Companies
 - Ted Wojcik, CMS Energy
 - Jane Butler, GMRC Staff Executive

DISTINGUISHED SERVICE AWARD

Congratulations to Jim Buchwald, Founder of Ariel Corp., who received the Distinguished Service (Edward N. Henderson) Award, at the Gas Machinery Conference in October. This award is presented for outstanding service not only to GMRC but to the industry. [Read more.](#)

COMMENTS FROM YOUR CHAIRMAN – MICHAEL SMITH

2016 has been another successful year for GMRC. Even in these uncertain times in our industry, our premier training event, the Gas Machinery Conference (GMC), chaired by Mr. Hans Mathews, had 938 attendees with 61 short courses and technical presentations. In addition, the Project Supervisory Committee (PSC), a group of industry experts led by Mr. Scott Schubring, selected and guided over \$300,000 in GMRC funded research in 2016 with more than \$540,000 in research planned for 2017. Some of this research has been performed in conjunction with other industry committees such as

PRCI and GCA. These numbers are a testament to the importance and viability of the GMC and GMRC as viewed by the gas industry and our members.

GMRC continues to find itself in a strong financial situation. This is because of the careful guidance of an enthusiastic and dedicated Board, a PSC of devoted technical experts who remove corporate “hats” and work together for the good of the industry and the GMC Planning Committee - more volunteers who spend valuable time to insure the integrity and technical value of the GMC is maintained, year after year. And, of course, the GMRC/SGA staff who keep us all pointed in the right direction. Of course, none of this would be possible without the support and guidance of our member companies. The GMRC Board, The PSC, The GMC Planning Committee and the GMRC/SGA staff wish to extend a heartfelt thank you to the membership for your support in this challenging year and we look forward to another successful year in 2017.

In 2017, GMRC will say goodbye to an avid fan and advocate of our group, Mike Grubb. Words in this short write-up cannot begin to define the positive effect Mike has had on GMRC and the GMRC Board. Mike has been a great influencer, mentor and friend to many within the organization and he will be sorely missed. But we know he will leave us in capable hands. We wish Amber and Mike all the happiness and relaxation they can tolerate in their retirement.

*Michael A. Smith, P.E.
VP, Engineering, CSI Compressco*

COMMENTS FROM YOUR PRESIDENT & CEO

It has been my great pleasure serving as your President & CEO these past 8 years. I announced my retirement from SGA/GMRC in late 2015 and with January 31 my target end date, my time grows short.

The GMRC is a well-managed organization with passionate and talented industry professionals listed under the Board and Committees above. GMRC is member-driven which keeps the organization relevant. Our members drive the Council’s agenda and it is exciting to provide support to such a dynamic organization.

I want to thank an engaged Board of Directors for their support. Thank you to all the volunteers serving on the PSC and GMC Planning Committees - your work drives innovation within our member companies making them more efficient and effective. And I want to thank the 3 gentlemen I had the privilege of working for – Bob Bahnick, Southern Star Central, Craig Linn, Williams, and Michael Smith, CSI Compressco. All of this success has happened under your leadership. I have enjoyed that leadership, and your valued friendship.

I am excited to have Bill Cantrell, a seasoned and passionate gas industry professional, take my place effective January 1. [Read more about Bill.](#)

*Mike Grubb CAE
President & CEO, Gas Machinery Research Council*

PHOTO GALLERY

<https://gmrc.smugmug.com/GMC-2016-Conference-Denver>

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