



# Rotating Review

## Strength in Union

With R&S Maintenance and Repair Services GP Ltd. in full swing and in pursuit of business in virtually every province in Canada, it is becoming very apparent as to the strength of the millwright union. Having been in the millwright field service business in the United States for almost 25 years in both power generation and petroleum/chemical heavy industrial markets, Shawn Cotter and companies have a strong understanding of the importance of trained, qualified field technicians. Having access to

a two million plus square feet training facility in Las Vegas has given the millwright work force in general a



strong dose of competence and efficiency while increasing the awareness and utilization of safe practices across the board at project sites.

Having spent the last 10 years focused on a highly budget minded

US marketplace, the mix of union versus non-union labor seems to be ever changing. The millwright union has spent an incredible amount of money on its members in the form of training and skill building in an effort to give the  
*(cont'd page 4)*

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## Using New Technology in an Old Building

The building is a Power Plant, one of a handful of buildings on the National Register of Historic Places, and the technology is a 3D laser measurement device from Faro Technologies nicknamed "R2". The Power Plant was built in the summer of 1945. The use of this equipment



is as revolutionary as much as the original construction of the power plant. The new power plant made it possible to change from direct current to alternating current thus changing life for the surrounding area.

*Photos- Hoisting of the shell- (left) and leaving the building for the first time in 70 years (right)*

S.T. Cotter's Faro Laser Tracker used a spherically Mounted Retroreflector (SMR) to record extremely precise measurements across the surfaces of the lower half turbine shell. Once the measurements are recorded for reference, the lower half shell was removed for repair.



Mike Cotter  
Project Manager

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Special points of interest:

- > R&S Maintenance and Repair— Strength in Union
- > Faro Tracker—New Technology in an Old Building
- > NCSRC— Aging Workforce
- > STG Users Group Conference—Save the Date!
- > S.T. Cotter -Due Diligence
- > A Note From Shawn's Desk- Technology
- > Do it right the first time

Thank you!  
We appreciate your business!

### Inside this issue:

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## Pursue the MSA

ST Cotter Turbine Services has been fortunate enough over the years to ink and maintain many Master Service Agreements. Such contracts require a lot of diligence and quality to engage and successfully fulfill. However, we find their value to greatly outweigh the initial investment for both owner and service provider.

MSAs can range from turbine only to turbine generator to complete plant for services and/or parts. Our clients go through an extensive evaluation process to award the contract. However, the call as needed system, without a bidding requirement, has proven cost effective and time efficient for the Owner. So much, we have been

fortunate to have extension options exercised in most cases. If your company is considering the process on one, two, or a whole fleet of machines, ST Cotter would appreciate your consideration to include us in the process. With our extensive background on all types, makes, and models of rotating equipment, you will find us ready for

the task. We have a large staff of highly trained and competent union millwrights awaiting your call.

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## Challenges of an Aging Workforce



As we look towards the future, age attrition stares us right in our face. During the next 5 -7 years, 40 percent of our workforce will be retired or will only be able to work a minimum of hours. We will be losing decades of experience and leaving a huge gap in our millwright membership that needs to be filled. Unfortunately, a lot of this experience can't be taught through an apprenticeship program or journeymen upgrade classes.

The *time is now* for all of us to do our part to mentor our new and current workforce. A true mentor has to *want* to mentor. This doesn't mean calling a new apprentice or journeyman every once in a while; this means taking one or more under your wing and truly teaching them what you know and letting them know that their success is as important to you as it is to them.

This is important for a couple of reasons: if they know as much as you know, your job and their job will be safer and more productive which directly correlates to more money in everyone's pockets. The other reason is our benefits funds (Health

and Pension) are calculated off of work hours, so as our workforce retires those hours need to continue in order for our benefits to survive.

As you can see, we are faced with some challenges — hours for our benefits funds and attracting and keeping a skilled workforce that needs to gain as much knowledge and experience from our current membership as they can before the experienced members take part in their much deserved retirement benefits.

ST Cotter is doing its part by taking on as many apprentices as it can. Shawn Cotter sits on our Joint

Apprenticeship Committee as well as some of our benefit trust funds, so he understands the challenges before us. It takes time out of his busy schedule to be a part of these committees and his commitment is much appreciated. Again, please take the time to mentor a new apprentice or journeyman. *It's important for all of us!*

In Solidarity,  
Wayne Nordin  
Senior Manager/Director of Millwright Agents  
North Central States  
Regional Council of Carpenters

## Do it right the first time

We all know that it is important to complete a job right the first time, but do you know why? Some think it is all about cost and time; there is a much more important reason, **Safety**. A lot of the equipment that we work on in refineries can compress or pump highly

volatile chemicals; so if one clearance is set wrong or one bolt is not tight, it could be the start to a bad day. The picture (left) is of a pump that failed, potentially due to improper torque on an impeller lock nut. This is a small miss that caused a massive fire lasting for

hours. It could have been worse, it could have caused **injuries or deaths**. We all know how easy it can be to forget to torque something or bend a lock tab, be sure to take your time and follow all procedures and double check yourself. Ask for help



when unsure and help us all prevent bad days like this by doing it right the first time.

Gary Clay  
S.T. Cotter Project Manager

## Technology

It's all around us, phones, Smart TV's, WIFI gadgets... It's hard to make it through your day without using it for something. As I write this article, I am using two computer screens, an iPad, and returning text messages to Project Managers on my cell phone while listening to the old fashion terrestrial radio, as the Millennials call it.



The Faro Laser Tracker

Technology can make our jobs safer and easier, like with the hydraulic wrench and induction bolt heater. It can also help us get to the next level of service as a provider; like with our new Runway CT generator field removal deck. This state-of-the-art deck allows us to remove a generator field in 6 minutes and never use a crane. Without a lift, there is less risk; as if our safety record at .73 was not low enough, we have found a way to do something safer and easier.

The Faro is another tool



The Runway System

that literally came from the space program and screams technology. This device measures in less than 0.0006 and is capable of doing much more than we put it through on our refinery and power own-

ers' sites. Truly a tool that has no boundaries... The true master of our times is one that can manage their people by putting their needs first and making sure the they are doing the best they can, while providing them with the best technology available to do their job.

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## 2017 Steam Turbine and Generator Users Group

The Steering Committee for the Steam Turbine and Generator Users Group Conference met in January to select presenters for the 2017 Conference. A great line-up of presenters and session topics (listed below) has been chosen for this year's conference.

Last year, Union representation and additional presenters joined our conference. This year, there are a few new presenters and local utility owners have joined

the Steering Committee and will present at the conference. With this successful conference growing each year, it's proving to be an exciting year for the STG Users Group Conference.

Details and contact information are listed in the box to the left .



*"Very Good sessions – Keep it up!"*  
 An Attendee

### Steam Turbine and Generator Users Group Conference 2017

- **August 1st – 3rd**  
 Best Western Ramkota, Bismarck, ND
- **August 1st**  
 Golf at Bully Pulpit
- **August 2nd**  
 Reception on the Louis and Clark Riverboat after the day's sessions end

For more information contact:  
 Missy at [missy.pemberton@stcorterturbine.com](mailto:missy.pemberton@stcorterturbine.com)  
 Nichole at [Nichole.cotter@stcorterturbine.com](mailto:Nichole.cotter@stcorterturbine.com)

*One of the best User Groups I've Been to. Ottetail Power*

*It's a great opportunity to connect with likeminded Business Professionals in a relaxed setting. "*  
 An Attendee

## Save the Date!

### Presenters:

- Applied Technical Services
- The Progress Group, Inc.
- Illinois Electric Works
- Minnkota
- Full Spectrum Diagnostics, PLLC
- Ottetail and Minnkota
- S.T. Cotter Turbine Services, Inc.
- Brush GMS
- Faro

### Topics:

- NDE Discussions
- Turbine Components
- HIT Skid
- Flux Probe
- Case Histories
- Case History Comparison
- Project Review
- Excitation and Generator Maintenance
- Alignment Technology

## Strength in Union *(Continued from page 1)*

union labor pool an edge in a competitive market. Now having crossed borders with the birth of R&S, it is a breath of fresh air to be in a market that places a very high value on the union advantage. With the millwright union's very strong presence across the country of Canada, R&S can focus on promoting the strength and value of our company over the competition. With over 200 years of combined experience in our management team alone, our expertise is working on rotating equipment - plant wide. R&S is not restricted by OEM,

size of components, terms and conditions of a contract, or site requirements. Our people have been carefully selected over the past 25 years based on experience, job site practices, safety, and overall competence. Being part of a performance based union allows R&S to carefully select and prequalify every technician we put on a job site. We take our job seriously; we respect our customers, their equipment, and their outage schedule. Having highly trained millwrights in our selection pool to work with our permanent management team

gives R&S a competitive edge and the ability to staff up as needed. Please give us a chance to bid your next outage. We take pride in getting projects done on time safely and correctly with an emphasis on decreasing costs to you - the owner operator. With the ability to meet all site specific labor requirements (safety, training, personnel, etc.) we are confident you will appreciate R&S Maintenance and Repair Services' strength in union.

Rodney Johnson

## Due Diligence

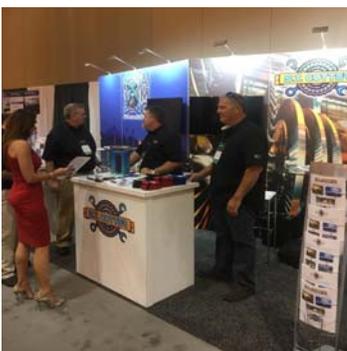
No matter how big or small the project, *Due Diligence* is a key to our success. A great example is a contract where S.T. Cotter Turbine recently performed a major inspection on one of our customer's turbines. We found that not only was the turbine condensing, it had contributed to a lot of rust build up and erosion in part of the steam path. The condition

also caused two of the discs to crack and increased wear on the blading. S.T. Cotter notified the customer a decision was made to replace the two discs and have new blading installed. We were asked to put together an inspection format to monitor any future changes to their turbine. Not only did our team fix their machine,

we brought some corrective actions to the table for the daily operations at the plant. We thank our vendor, Progress Group, for their fast turnaround on this project.

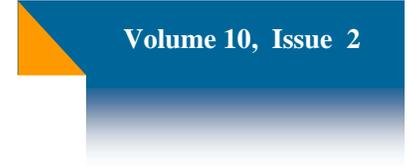
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## Axis Mechanical and S.T. Cotter Turbine Services exhibited at the 2017 AFPM Conference in New Orleans.



S.T. Cotter Turbine and Axis Mechanical recently exhibited at the AFPM Conference in New Orleans. Corey Dezeeuw and Eric Duchnowski of Flint Hills Resources visited our booth and were registered for our drawing of an Amazon Echo. Congratulations, Eric, winner of the Echo! We had a great time at AFPM in New Orleans this

week! We are looking forward to doing business with all of our new friends and clients! We feel very blessed and look forward to the new Opportunities unveiled at the show. We know the show will contribute to our continued success at Axis Mechanical Group and S.T. Cotter Turbine!



### Word Search

Industry related terms are in all directions. Have fun and good luck!

S	C	P	V	B	U	C	K	E	T	S	L
C	I	B	A	O	T	A	I	O	S	E	A
H	N	L	V	P	U	M	P	W	C	S	B
E	S	D	L	E	R	P	K	N	O	E	O
D	P	A	E	N	N	X	A	E	N	R	R
U	E	I	S	K	K	N	E	R	T	V	E
L	C	L	O	S	E	N	D	E	R	I	P
E	T	Y	Y	T	Y	J	R	F	A	C	A
G	A	S	N	E	P	O	C	S	C	E	I
A	U	I	M	A	S	A	F	E	T	Y	R
N	A	L	Q	M	Q	A	Q	C	O	T	O
M	M	O	T	O	R	O	T	O	R	I	C

- |          |             |
|----------|-------------|
| SCHEDULE | SERVICE     |
| STEAM    | PUMP        |
| GAS      | MAINTENANCE |
| VALVES   | ROTOR       |
| NDE      | OWNER       |
| INSPECT  | CONTRACTOR  |
| OPEN     | BOP         |
| CLOSE    | SCOPE       |
| SAFETY   | LABOR       |
| BUCKETS  | REPAIR      |
| TURNKEY  | QAQC        |
| DAILY    |             |



Above: Janice Gilbert of Axis Mechanical with Eric Duchnowski and Corey Dezeeuw of Flint Hills Resources,

Janice Gilbert  
Sales, Axis Mechanical Group  
713-540-9688

**We're on the web!**

[www.stcotterturbine.com](http://www.stcotterturbine.com)

and

**Facebook**

<https://www.facebook.com/pages/ST-Cotter-Turbine-Services-Inc/34768126859153>

## **S.T. Cotter Turbine Services, Inc.**

A complete turnkey services provider with a focus on steam turbine, gas turbines and precision rotating equipment in refineries, power plants, paper mills, ethanol plants, and other heavy industrial facilities. We provide service for planned maintenance, emergent outages and balance of plant work.

Our field technicians staff has over with 75 years of project management. Our Workforce has over 200 years of combined experience in the field. **Our Current EMR is .73**

**With us, Safety and Quality are Number 1!**

Volume 10, Issue 2

Your complete turnkey service provider.



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The Provider for your turnkey solutions.



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## **Axis Mechanical Group, Inc.**

A union millwright company that provides turnkey solutions for installation, maintenance, repair, overhaul, and upgrade of industrial rotating and reciprocating equipment for the petrochemical industry.

AMG's combination of experienced professionals and the latest technology ensures the safest and highest quality work—making us the reliable choice.

At AMG, we know one key factor to a seamless execution of any petrochemical project turnaround starts with planning. Our experienced technical field supervisors will work with you and become an integral part of your facilities TA and BOP planning process. In addition to planning, AMG has the tooling and equipment needed to handle any size job.

**Our current EMR is .73**

**Check us out on the web!**

[www.axismechgrp.com](http://www.axismechgrp.com)

and

**Facebook**

<https://www.facebook.com/Axis-Mechanical-Group-1603857769890345/>

**For more information go to our web page!**

[www.RSMRService.com](http://www.RSMRService.com)



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Provider for International Turnkey Services.

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