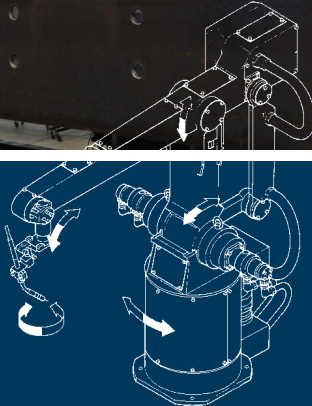


National Robotic Welding Conference & Exhibition 2017

Tuesday, June 6
& Wednesday, June 7, 2017

with Bonus Tour on June 5



The Simple and Beyond

Data Driven, Flexible Manufacturing with One Robot or Many

Milwaukee, Wisconsin

This two-day event with a bonus day hosted by Miller Electric features two tours of companies utilizing robots in applications that range from the "Simple to Beyond." On Tuesday, the conference features two tours for each conference attendee. One tour will be of Kohler Power Systems, a manufacturer of large fuel tanks for power generation. The second tour will be of TelSmith Inc., an Astec Industries Company. TelSmith Inc. has been providing the global mining and aggregate industries with crushing and vibrating equipment, modular and portable plants for over 100 years. On Wednesday the conference will feature a variety of industry leaders presenting on data driven flexible manufacturing with one robot or many, and how to optimize upstream processes. Proceeds fund the John F. Hinrichs Memorial Endowment, which provides scholarships to students in welding and engineering.

For more information or to register, contact: Karen Gilgenbach (262) 613-3790, Karen.gilgenbach@airgas.com
Or download more information: <http://www.aws.org/milwaukee-NRAWC-2017>



National Robotic Welding Conference & Exhibition 2017

The Simple and Beyond Data Driven, Flexible Manufacturing with One Robot or Many.

Sponsored by the
AWS D16 Committee
American Welding Society Milwaukee Section,
Milwaukee Area Technical College
June 6th and 7th
With Bonus Tour on June 5th
Milwaukee, Wisconsin

This two-day event with a bonus day hosted by Miller Electric features two tours of companies utilizing robots in applications that range from the Simple to Beyond. On Tuesday, the conference features two tours for each conference attendee. One tour will be of Kohler Power Systems, a manufacturer of large fuel tanks for power generation. The second tour will be of Telsmith Inc, an Astec Industries Company. Telsmith Inc has been providing the global mining and aggregate industries with crushing and vibrating equipment, modular and portable plants for over 100 years. On Wednesday the conference will feature a variety of industry leaders presenting on data driven flexible manufacturing with one robot or many, and how to optimize upstream processes. Proceeds fund the John F. Hinrichs Memorial Endowment which provides scholarships to students in welding and engineering.

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HOTEL REGISTRATION:

For Reservations call 414-481-2400
Or toll free 866-481-2400.

Clarion Hotel & Conference Center
5311 South Howell Avenue
Milwaukee, WI 53207



Room Rates

King \$95
Two Queens \$95

The Clarion Hotel is easily accessible off Interstate 94/894 at the airport exit and we offer complimentary shuttle to and from the airport 24/7 on demand. Our hotel is directly across the street from the airport.

The hotel offers an on site restaurant and lounge, room service, full service gym, business center and indoor pool. All of the guest rooms have microwaves and refrigerators, coffee makers, hair dryers and ironing boards and irons. High speed wireless internet is available throughout the hotel for no charge.

The hotel is minutes from several golf courses, and is close to many popular area attractions, including the **Boerner Botanical Gardens**, the **Bradley Center** arena, **Lake Michigan**, the **Miller Brewing Company** and the **Milwaukee County Zoo**. There are a variety of restaurants and cocktail lounges located in the area. Be sure to visit the on-site **Cork 'N Cleaver Restaurant** and enjoy daily gourmet specials, a selection of wines, Friday Fish Fry and Sunday Brunch. The restaurant also provides **room service** with extensive menu selections.



Milwaukee Area Technical College's ECAM Center:



Milwaukee Area Technical College is a co-sponsor of the National Robotic Arc Welding Conference. Segments of the event will take place at the Center for Energy Conservation and Advanced Manufacturing. This new, \$9 million, 34,000 square-foot applied technology center at the MATC Oak Creek Campus is designed to



American Welding Society
D16 Committee



American Welding Society
Milwaukee Section

June 6th, 2017: Hosted by Milwaukee Area Technical College, Telsmith and the Kohler Company

7:00 – 7:30 am **Light, healthy breakfast at MATC**

7:30 – 7:50 am **Exhibit Viewing at MATC**

This is a unique opportunity to see live demonstrations, and tabletop displays of cutting edge products, while talking to industry leaders about their technologies, and how they may apply in your particular application.

7:50 – 8:00 am **Welcome from MATC- At Lecture Hall**

8:00 - 8:35 am **Using Big Data for Productivity- Synchronized Sourcing**

Jeff Adams, President, Laser Precision LLC

In keeping with the conference theme of using data to drive decisions, this presentation will focus on using data and information processing in a comprehensive way to synchronize capacity, production and decision making with changing customer needs and requirements.

8:35 - 9:10 am **Presentation from Kohler Engines in Preparation for Tour**

Ted Lake, Senior Project Analyst, Kohler Engines

Review the implementation of robotic welding for fuel tanks for Kohler industrial generators. A look at robotics in high mix/low volume production.

9:10 – 9:45 am **Presentation from Telsmith in Preparation for Tour**

Matt Haven, President, Telsmith

A leading manufacturer of mining and aggregate equipment reviews the process involved with launching a multi-process robotic welding cell for large fabrications.

9:45 – 10:10 am **Break and Open Networking**

10:10 – 10:45 am **Implementing a Robotic Laser Welding Solution for CNC-Formed Steel Engine Cooling Lines**

Adam Waldvogel, RB Royal

This presentation will focus on the process through which RB Royal of Fond Du Lac, WI implemented a robotic laser welding solution to produce cooling lines for a new water-cooled engine offered by an industry leading motorcycle manufacturer.

10:45 – 11:20 am **AWS D16 Committee on Robotic Arc Welding – Projects Review**

Darren Pape, Wolf Robotics and Karen Gilgenbach, Airgas USA, LLC

11:20 – 11:30 am **Break and Open Networking**

11:30 – 12:00 pm **Load Buses for tours.**

The conference will feature two tours. The conference attendees will be broken into two groups. One group will arrive at Telsmith first. The other group will arrive at Kohler first. Boxed Lunches will be provided on the buses.

4:30 pm **Buses will stop at MATC, and at the Clarion.**

5:45 pm **Cash Bar at the Clarion- Networking**

6:30 – 7:15 pm **Keynote Speech**

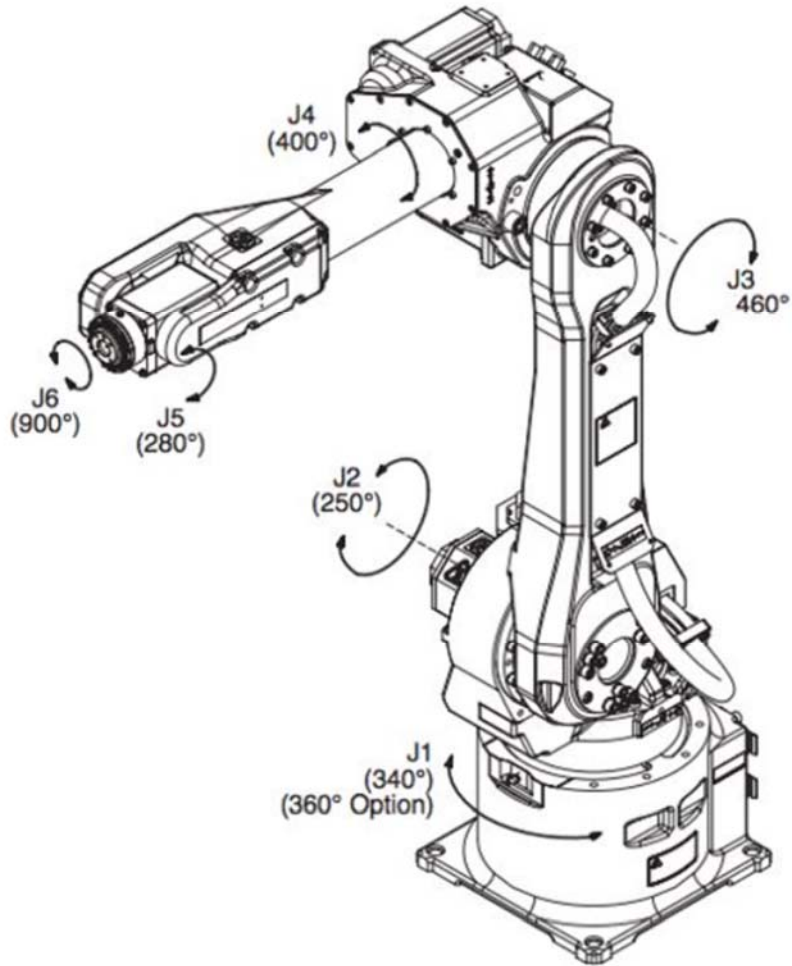
Ajita Rajendra, President and CEO, A. O. Smith Corporation

7:15 – 8:00 pm **Dinner at the Clarion Hotel**



8:00 – 8:30 pm

Awards - AWS D16 Committee Excellence in Robotics Award



June 7th, 2017: Hosted by Milwaukee Area Technical College in smaller lecture rooms for a more intimate

7:00 – 7:30 am Light, healthy breakfast at MATC

7:30 – 8:00 am Exhibit Viewing at MATC

This is a unique opportunity to see live demonstrations, and tabletop displays of cutting edge products, while talking to industry leaders about their technologies, and how they may apply in your particular application.

Room E114

Room B

8:00 - 8:35 am	<p>Production Monitoring – Data Trends in Welding The presentation discusses the effects of Big Data in manufacturing and the role welding equipment will play in providing useful actionable information.</p> <p><i>Matt Albright, The Lincoln Electric Company</i></p>	<p>Remotely Operated, Multi-Function Robotic Work Cells Adaptive Welding Robots have traditionally been employed to handle low skill, repetitive tasks. With the tools and features available today for offline programming, sensing, tool changing, and remote monitoring, systems are gaining the flexibility and reliability needed to change the dynamics of a single robot.</p> <p><i>Buck Barber, Navus</i></p>
8:35 - 9:10 am	<p>Getting Started in Robotic Welding Systems The presentation will identify and review the essential components of a Robot Based Welding System. It will include the process, challenges and the mistakes commonly made integrating robots in welding applications.</p> <p><i>Bob Rochelle, Güdel Inc</i></p>	<p>High Power Laser Hybrid Laser Arc Welding: Process Advantages and Applications for Bridge Fabrication This presentation discusses the applicability of HLAW to thick high strength steel. HLAW combines the deep weld penetration of a laser with GMAW.</p> <p><i>Alex Matteson, Thomas Hay, TechKnowServ</i></p>
9:10 am - 9:40 am Break and Exhibit Viewing		
9:40 - 10:15 am	<p>Industry 4.0 / IoT: Practical Applications for Robotic Arc Welding This presentation will show some benefits of new industry 4.0 with respect to robotic welding in productivity, quality control, and maintenance.</p> <p><i>Fabio Tiburi, SUMIG</i></p>	<p>Advancements in Robotic Gas Metal Arc Welding Technology Gas metal arc welding technology has been advancing at a very rapid pace. This presentation will go over some of the latest welding processes and data acquisition/monitoring solutions.</p> <p><i>Josh Williamson, Fronius</i></p>
10:15 - 10:50 am	<p>Welding Positioners Manufacturers of large, heavy parts must continually improve productivity, assure weld quality & safety in a low volume/high mix world. Combining Intelligent Positioners with weld monitoring and software tools provides dramatic improvements. As production levels increase, Intelligent Positioners can transition from manual to robotic decreasing automation capital requirements significantly.</p> <p><i>Terry O'Connell, Hawk Technology</i></p>	<p>Automation Strategies for a New Era of Manufacturing Creating effective solutions for automated welding and cutting applications in high-mix/low volume manufacturing environments can be challenging. See how the right mix of software, hardware and sensing technology can create viable opportunities out of once impossible challenges.</p> <p><i>Gord Attridge, PDSI</i></p>
10:50 - 11:25 am	<p>All-In-One Robotic Welding Cells All-In-One cells can also be easily configured for different workflow requirements providing a highly effective yet streamlined production solution.</p> <p><i>Larry Freeman, Gord Attridge</i></p>	<p>Truckin' with Aluminum Cases where robotics were applied to aluminum semi-trailer welding will be reviewed. Some details regarding equipment configuration, sensor application, and programming of joint details will be contrasted for differences from typical steel production.</p> <p><i>Chris Anderson, Motoman - YASKAWA</i></p>
11:25 - 12:30 pm Lunch and Exhibit Viewing		



Room E114		Room B	
12:30 - 1:05 pm	<p>Remotely Operated, Multi-Function Robotic Work Cells Adaptive Welding Robots have traditionally been employed to handle low skill, repetitive tasks. With the tools and features available today for offline programming, sensing, tool changing, and remote monitoring, systems are gaining the flexibility and reliability needed to change the dynamic of a single robot.</p> <p style="text-align: center;"><i>Buck Barber, Navus</i></p>	<p>Production Monitoring – Data Trends in Welding The presentation discusses the effects of Big Data in manufacturing and what is the role welding equipment will play in providing useful actionable information.</p> <p style="text-align: center;"><i>Matt Albright, The Lincoln Electric Company</i></p>	
1:05 - 1:40 pm	<p>High Power Laser Hybrid Laser Arc Welding Process Advantages and Applications for Bridge Fabrication. This presentation discuss the applicability of HLAW to thick high strength steel. HLAW combines the deep weld penetration with GMAW</p> <p style="text-align: center;"><i>Alex Matteson, Thomas Hay, TechKnowServ</i></p>	<p>Getting Started in Robotic Welding Systems The presentation will identify and review the essential components of a Robot Based Welding System. It will include the process, challenges and the mistakes commonly made integrating robots in welding applications.</p> <p style="text-align: center;"><i>Bob Rochelle, Güdel Inc</i></p>	
1:40 - 2:00 pm		Break and Exhibit Viewing	
2:00 - 2:35 pm	<p>Advancements in Robotic Gas Metal Arc Welding Technology Gas metal arc welding technology has been advancing at a very rapid pace. This presentation will go over some of the latest welding processes and data acquisition/monitoring solutions.</p> <p style="text-align: center;"><i>Josh Williamson, Fronius</i></p>	<p>Industry 4.0: Practical Applications for Robotic Arc Welding This presentation will show some benefits of new industry 4.0 with respect to robotic welding in productivity, quality control, and maintenance.</p> <p style="text-align: center;"><i>Fabio Tiburi, SUMIG</i></p>	
2:35 - 3:10 pm	<p>Automation Strategies for a New Era of Manufacturing Creating effective solutions for automated welding and cutting applications in high-mix/low volume manufacturing environments can be challenging. See how the right mix of software, hardware and sensing technology can create viable opportunities out of once impossible challenges.</p> <p style="text-align: center;"><i>Gord Attridge, PDSI</i></p>	<p>Welding Positioners Manufacturers of large, heavy parts must continually improve productivity, assure weld quality & safety in a low volume/high mix world. Combining Intelligent Positioners with weld monitoring and software tools provides dramatic improvements. As production levels increase, Intelligent Positioners can transition from manual to robotic decreasing automation capital requirements significantly.</p> <p style="text-align: center;"><i>Terry O'Connell, Hawk Technology</i></p>	
3:10 - 3:45 pm	<p>Truckin' with Aluminum Cases where robotics were applied to aluminum semi-trailer welding will be reviewed. Some details regarding equipment configuration, sensor application, and programming of joint details will be contrasted for differences from typical steel production.</p> <p style="text-align: center;"><i>Chris Anderson, Motoman - YASKAWA</i></p>	<p>All-In-One Robotic Welding Cells All-In-One cells can also be easily configured for different workflow requirements providing a highly effective yet streamlined production solution.</p> <p style="text-align: center;"><i>Larry Freeman, Cloos</i></p>	



National Robotic Arc Welding Conference & Exhibition 2017

Registration / Fees:

Payments may be made online at <http://sections.aws.org/milwaukee/>
or mailed in. Email to karen.gilgenbach@airgas.com

Registration / Exhibit Form:

Name: _____ Email: _____

AWS Member (y/n) _____ AWS Member Number: _____

Title: _____ Company _____

Address (bus / home?) : _____

City: _____ State: _____ Zip: _____

Daytime phone: _____ Fax: _____

Email address: _____

Type of Business: _____

Primary Job Function: _____

Technical Interests: _____

Dinner Choice (circle one): Chicken, Vegetarian, Beef

	Yes	No:
Plan to attend Miller Electric Bonus day?	_____	_____

Plan to attend Telsmith tour?	_____	_____
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Plan to attend Kohler tour?	_____	_____
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	Member:	Nonmember:	Qty:	Total:
Attendee fee	\$395	\$495	_____	_____
Exhibitor Fees	\$595	\$595	_____	_____
Student	\$50 / day	\$95 / day	_____	_____

What size T shirt would you like? _____

Total: _____

Once tours are full, attendees can register for the conference without tours for a \$100 discount (Option 2).

While we do our best to accommodate all attendees, our tour locations have to option to exclude competitors. If there is an issue with your attendance on a tour you will be contacted.

Signature: _____

Special Considerations: In accordance with the Americans with disabilities act (ADA) we strive to accommodate any additional needs. Please contact us at 1-262-613-3790 for further information or to make us aware of a possible concern

Form may be printed and mailed with payment to: AWS- Milwaukee Section C/O Karen Gilgenbach, Airgas, Inc 5120 68th Ave, Kenosha WI 53144



American Welding Society
D16 Committee



American Welding Society
Milwaukee Section

Robotic Welding Conference History:

Celebrating the conference's 34th year!



The conference was started by John Hinrichs of AO Smith Corporation through a partnership with the University of Wisconsin- Milwaukee and its Continuing Education Program in 1983. This year marks the 34th anniversary of the conference. The mission of the conference was to present new and emerging technology in the areas of welding and automation. The conference was unique in that it did not have a call for papers but instead was an invited list based on what technologies were viewed as being cutting edge at the time. The conference prospered for many years in downtown Milwaukee but in 1992 the attendance was starting to decline (can you spell Milwaukee in February?) and the decision was made to move to Florida.

This change in venue to Orlando was done in conjunction with the American Welding Society (AWS) and with the addition of Paul Ramsey (former AO Smith Welding Research Manager and AWS President) as Co-Chairman. The next few years the emphasis was placed even more on introducing very new technologies as evidenced by the first presentation in North America about Friction Stir Welding at the 1994 conference. In 1997 a partnership was formed with the AWS D16 Committee on Robotic and Automatic Arc Welding to assist in the running of the conference and highlighting the work being done by this group in the areas of standards. The name of the event was changed to the AWS 1st Robotic Arc Welding Conference and Exhibition.

In 1999 Jeffrey Noruk, D16 Chairman, joined John and Paul as a co-chairmen and continued to strengthen the relationship with the D16 committee via the presentation of educational material associated with standards on Safety, Do's and Don'ts, Qualification and Certification of Personnel and Robotic Equipment Interfacing.

In 2005 we came full circle with the conference moving back to Milwaukee, but this time in conjunction with the local AWS Milwaukee Section and the Milwaukee Area Technical College. This conference has been held every other year (the "odd years"), and is modeled after the highly successful Detroit Sheet Metal Conference which is held in "even years".

In 2012 our friend and mentor, John F Hinrichs, passed away. The proceeds from the 2005, 2007, 2009, 2011, 2013 and 2015 conferences started the John F Hinrichs Memorial Endowment through the AWS Foundation, which is currently funded to \$373,343 and provides over \$18,000 annually in the form of scholarships to students in areas of Welding and Engineering.

Profits from this conference will go towards the John F Hinrichs Memorial Endowment. The format of a conference and exhibition will be maintained as well as the close ties to the AWS D16 committee.

