NDT Lab Tour + Welding Career Discussion with Industry Experts

Thursday, October 8, 2015

Time: 5:30 pm registration, 6:00 PM Dinner, followed by Industry expert discussion + NDT Lab Tour

Location: Monroe County Community College
1555 S. Raisinville Road, Monroe, MI. 48161, Career Technology Center.
(Park in Lot 2)

“Welding Career—Diversified Force, Determined to Succeed”

Panel of speakers will discuss the welding careers today and the future of welding careers from their respective fields. Participants from the audience will have opportunities to ask questions and network with organizations.

Speakers: • Professor Dr. Roop.S. Chandel, Monroe County Community College, Monroe, MI (Education)
• Frank Beaker II, Ventower Industries, Monroe, MI (Manufacturing)
• Glover Donohoe, Ventower Industries, Monroe, MI (Manufacturing)
• Ross Reynolds, ASNT Detroit Section (NDT)
• Marc Lopez, Miller Electric (Welding Products)
• Robert Wilcox, AWS District 11 Director (AWS)
• More special speakers to join this event and will be announced later.

Facilitator: Viji Kuruvilla, AWS Detroit Section

Cost: $10.00 for dinner. All proceeds go towards AWS scholarship funds. Free for college faculty and AWS Detroit section scholarship award recipients.

Event: AWS Detroit section promotes welding industry by investing in students, collaborating with industry leaders from various educational facilities, manufacturing sectors, welding product supply sectors, testing companies, research and development groups and trade associations, creating

continued on page 3
October 2015
This Issue of the Bulletin can be viewed on the web at awsrdetroit.org

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SAVE the DATE!

Christmas Party
Western Golf and Country Club
Redford Michigan
Friday, December 11th 6:30 pm

Wesley Doneth
Chairman’s Message

I would like to thank everyone who worked hard to put on another successful Student Night at Schoolcraft College. We were glad to have Dave Landon, AWS President, visit us. His presentation, “Triple Pass of the Torch – Technology, Heroism and Mentorship” was very inspiring. He challenged us to make a strong effort to seek out youth and engage them to create the next generation of talented welders, engineers and tradesmen. Our organization is all volunteer and the people working behind the scenes to provide a top notch section with activities like Sheet Metal Welding Conference, Technical Meetings, Education Series, High School Welding Competition and many other great section sanctioned events can’t do it without your help.

Everyone reading this bulletin has had a mentor, whether it was a teacher, a co-worker, a grand-parent or anyone who has helped you develop professionally or personally. I have several mentors whose experiences have helped shape me as a person and I am grateful for their advice and help when I needed it. The world seems to move faster than ever with smart phones, an app for that and social media. We are all very busy with our daily activities and there never seems time, but stop and ask yourself –Who am I passing my experiences to? Am I taking what I have learned and helping a young person as I was helped by others over the years? I would like to continue Dave Landon’s challenge and ask you to bring a student to an AWS function or activity, maybe consider buying them a student membership or sharing your Welding Journal.

My father is a retired Boilermaker from Local 169, my grandfather worked for Chicago Bridge and Iron building flat bottom tanks and water towers all over the mid-west. Even though my mom threatened me with my life (Sorry Mom) - I found myself in an exciting career as a Welding Engineer - thanks to some great mentors! Have a great month and Happy Halloween!

Wes
awareness of welding advancement. Welding industry is one of the most exciting, and aggressively advancing industry where you can find work in good times and bad times. We invite you to come and participate in the live interviews and network with your peers.

It will be a great event and we are expecting a sold out crowd. So please RSVP as soon as possible.

Sponsors: All sponsors will receive recognition during the event.

RSVP: John Sutter- johnsutter@comcast.net or Viji Kuruvilla, viji@genesisqs.com

“Welding Career–Diversified Force, Determined to Succeed”

continued from page 1

Coming Events

AWS Technical Night at Monroe Community College
October 8, 2015

Precision Metalforming Association Conference
October 14 -15, 2015
Detroit MI

AWS CWI Seminar and Exam
Seminar October 18-23
Exam October 24
Four Points Sheraton Romulus, MI

FABTECH 2015
November 9-12
McCormack Place
Chicago IL

Patron’s Fund

The time is coming soon again this year to ask you for your generosity in contributing to the 2015-2016 Patron’s Fund. I will be sending e-mails to all of last year’s patrons as well as reaching out to new businesses and individuals starting in October. That does not mean that contributions can’t start sooner.

In addition to our traditional mail campaign, we’ve added a “Pay Now” button to our website as a convenient way to contribute. Just visit our website at www.awsdetroit.org and click on the “PATRONS” tab. That’s where you’ll find the “Pay Now” button, and as always, we contribute 100% of these funds directly towards scholarships for students who are pursuing careers in Welding Engineering and Welding Technology.

Each year the American Welding Society Detroit Section sponsors many students with these funds, and because this is such an important part of giving back to the industry that supports us, we hope you can help us by being a proud supporter in this effort. Last year through your efforts we were able to raise $10,755. This year I would like to set our sights on $15,000. Although that may seem a bit ambitious, I’m sure that most everyone reading this has had some personal experience where you realized that our next generation workforce of welding professionals could use a boost in their career training and education, and that’s what this fund is all about.

To be a Patron of the American Welding Society Detroit Section, all it takes is a minimum $100 contribution. Patrons are made known to the membership in the monthly technical bulletin, on the AWS website, and are further acknowledged by listing them in the annual Ladies Night Program. You can either contribute on our website or mail a check to my attention at the address below and again, I will be sending formal invitations to contribute in October.

If you are a Patron, we thank you for your support, and ask you to please consider increasing your contribution. Whether a longtime Patron or a first time Patron, your help will assist us to bring about an educated future workforce, and please know that your kind consideration is greatly appreciated.

Warmest regards,

Eric Lichtfusz
AWS-Patron’s Committee, Chair
12068 Market St. Livonia, MI, 48150 734.466.6504 eric.lichtfusz@roush.com
Nathan D. Miller
Welding Engineer, CWI
Rochester Welding Co., Inc
Nmiller@RochesterWelding.com

Nate Miller, an FSU ’08 alum and CWI ’10 has a passion for arc welding and heavy fabrications. He spent his internship and post-grad 4.5 years working for Oil and Gas Contractor, McDermott International, Inc. Here he was able to learn and aid in the world of plate rolling, Girder Fabrication, Process Piping, and TKY connections using the five (5) most common arc welding processes. "JRay" McDermott had a rich 60 year history as the sole pioneer of some of the largest floating, fixed platforms, and subsea systems ever (Steel) fabricated. The magnitude in size and weight and the skill of the Craftsmen and Fabrication teams was awe-inspiring every day.

After making the decision to move back Home in 2012, Nate had a great run with R&E Automated, Systems working in the offshore arena as well as for military contractors. Recently he has taken more permanent roles in automotive manufacturing and equipment and assembly contractors like Comau, Inc. Last August, Nate has joined Rochester Welding Co., Inc. of Metamora, MI. “Here I wear many hats” – like we all must do in today’s economy. Building and establishing the Welding Quality Management System and overseeing the welding-relating processing and manufacturing and supervision of all Welders falls under his umbrella.

Without the foundation of FSU curriculum and professors and without the financial support and generosity of the AWS Chapters, I would not have been able to excel so seamlessly in this “wonderful world of welding” that we are all so fortunate to be part of.

Mitch Dupon
Mitch is a Welding Engineering Technologist, graduated from Conestoga College out of Kitchener, Ontario in Canada.

Mitch comes to us with 9 years of experience at Panasonic Factory Automation, 5 years of experience with KUKA Robotics in Canada, and 1 year of experience at KUKA Robotics USA.

He has over 16 years’ experience in Tier 1 automotive, general industry, and pre-engineered cell sales, service, and engineering.

To quote Mitch, “I have a deep love for automating the welding process, a love for people and to see the manufacture of quality products.”

To be featured in our future “Meet Our Members” column, please contact Daniel Galiher galiher.daniel@towerinternational.com. We love to hear from our members.
We have a resistance spot welding application that due to various process constraints may benefit from the use of a current stepper. But, we are having trouble finding a method to create one. Any suggestions would be helpful?

A bit of background will help to answer your question. Specifically, one must first understand what would occur if we were to resistance spot weld (RSW) and did not have a current stepper boost feature on our weld control. As each weld is made, it physically degrades the condition of the electrode contact face. Some in the industry refer to this as “mushrooming.” The most common method of compensation for this degradation is to add secondary current.

The current stepper was created as a means to help increase the number of welds between electrode maintenance cycles. It accomplishes this by adjusting the secondary current so that the value increases in a methodical manner. The early weld controls typically permitted for the addition of current at discrete intervals and a plot of their profile over time looked like a set of steps, hence the name. The more modern controls permit for a customized profile plot (e.g. boost of 1 amp/weld). However, despite the fact that the profile no longer necessarily resembles a set of stairs, the name has stuck.

Finally, a discussion on steppers cannot take place unless all other aspects of the RSW process are correct for the application. Items like part presentation, electrode alignment, electrical thermal and current capability, cooling, plus the actual weld schedule itself, must be suitable for the application. If this were not the case, we would not be able to correctly evaluate the application for electrode wear and weld performance over the course of a production run.

But, back to the question at hand - How does one create a stepper (also called a current boost profile) for RSW? The first thing that must be done is that a robust starting point must be established. This is really half the battle. From here you can utilize a generic stepper profile (see examples below) and see how it reacts. This will require some increased level of quality inspection on your part to make sure that you do not program a too aggressive or mild approach (e.g. expulsion or cold welds that appear over time). If either of these conditions develop, the profile will need to be changed to address it. The sample profile below is also broken down by electrode face type. This takes into account the different face growth characteristics with the different geometries. You will also need to consider the electrode wear for the application: Heavier gauge coated materials will wear the electrodes more aggressively, and may require either shorter weld counts, or higher boost values. The opposite is also true: Thinner gauge uncoated materials will wear the electrodes less aggressively, and may require either longer weld counts or lower boost values. Finally, there will always be a limit where, regardless of the boost profile, the electrode’s face is no longer able to support the weld and requires maintenance, either in the form of dressing or replacement.

If you have more questions about this topic, Don can be reached at:

**Send your questions to Don Maatz at dmaatz@reautomated.com – subject line: ‘Ask the Welding Engineer’**

Donald F. Maatz, Jr., Welding Engineer / Lab Manager
RoMan Engineering Services
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Direct: (734) 793-2304 Fax: (586) 585-5577 www.reautomated.com

**References:**
1) AWS C1.1M/C1.1:2012, Recommended Practices for Resistance Welding

**GENERIC STEPPER**

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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Amps/Weld A/E-Nose*</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1.5</td>
<td>2</td>
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*Please see the Mar-2014 ATWE column for a discussion on electrode geometry*
Editor’s Notes
Hello readers! Happy October! The seasons are changing, school is back in session, and I think most of us have gotten back into the fall routine by now.

This month is a bit sparse for articles, but I’ve been promised more next month. I hope you enjoy reading through the e-bulletin and seeing the events, past, present and future that you are invited to.

Next month is “FABTECH” in Chicago, so we will not have a technical meeting. November’s issue will have information on the December Christmas/Holiday party which is always a fun event.

Have a great fall, enjoy the “frost on the pumpkin”, and til next month....

Keep on Welding!

Robin Michon
e-bulletin editor

October Hotline

Job Posting
Position: Commodity Supplier Quality Engineer specializing in GMAW Welded chassis structure
Primarily: front and rear subframes
Location: preferred Duncan SC or Tuscaloosa AL, but Northville MI may be considered.
Starting: immediately
Must know the following:
1. welding processes
2. capable of reading and understanding welding drawings
3. some experience in automotive stamped and welded product
4. capable of working directly with supplier plants and personnel
5. understanding of weld schedules
6. understanding of destructive testing of GMAW and MAG welded product (MACRO etching)
7. understanding of visual inspection of GMAW and MAG welded product
8. capable of written communication and reports of supplier activity.

Vacancy Index: C-V-JJ-101-15
Contact: ZF Chassis Systems Human Resources
Janet Johnson
191 Parkway West
29334-9498 Duncan, SC
Phone: +1 (864) 486 3861
janet.johnson@zf.com

Obituary
Doug Juhl – AWS member of both the Detroit and Minneapolis sections passed away this past March. http://www.startribune.com/obituaries/detail/72046/?fullname=douglas-h-juhl

District and Section Matching Funds: Deadline - 12/31/15
The AWS Finance Committee and AWS Foundation Board recommended to the AWS Board of Directors at the meeting held May 18, 2015 that all existing District and Section Named Scholarship endowments be increased 50% by a transfer of funds from AWS to support this proposal. The AWS Board of Directors unanimously approved this action.

The goal of the action is to both increase the annual awards made and to increase the number of scholarships awarded. This action was done as of June 1, 2015 and the additional 5% based on the 50% increase will be available to be awarded next year for the 2016-2017 school term.

Funds added to existing Section scholarships, or new Section scholarships created, will also be matched 150%. This extremely generous matching program will end December 31, 2015. Please contact Sam Gentry or Vicki Pinsky in the Foundation office for more information.

If you wish to support the AWS Foundation for a scholarship you can work with them directly or if you have questions or wish to involve the Detroit Section with a potential matching funds scholarship you can also contact the Detroit Section Chairman – Wesley Doneth at 810-844-2800 or doneth.wesley@fronius.com

Dylan Skinner - Golightly’s AWS Detroit Section Award Recipient
The AWS Detroit Section Student night was held at Schoolcraft College September 10, 2015. The scholarship committee gave Dylan Skinner a scholarship award. Mr. Whiting, Dylan’s teacher, stated he is happy that Dylan was chosen, as he is one of his best welders. Dylan can oxyfuel gas weld (OAW), stick weld (SMAW), MIG weld (GMAW), TIG weld (GTAW), flame cut (OAW-C) and braze weld any joint in all welding positions. Dylan is the first student in the welding program at Golightly to receive a scholarship from the AWS Detroit Section. Dylan stated he became interested in welding when he went on a field trip with Mr. Whiting to a welding company. He likes to work with his hands and create and craft things. Dylan would like to thank Mr. Whiting for pushing him to apply and the AWS Detroit Scholarship Committee for giving him this award. Dylan was the American Welding Society Student Chapter Secretary for his class at Golightly where he was able to learn more about AWS Detroit Section. Dylan will use the award as he is attending Macomb Community College taking general studies with welding electives. He plans to continue his education and become a welding engineer. Dylan likes to draw, read and play video games in his spare time.
OPEN HOUSE Invitation!

Exciting things are happening at RAM Solutions Inc., and we want to share some important news with you. Loyalty from our customers and principals has fueled continued growth, making a move to a new facility necessary. Our new address is 6620 Cobb Drive, Sterling Heights MI 48312. Our telephone (248) 299-0525 and fax (248) 299-0528 numbers remain the same. You can always visit us on our website at www.ramsolutions.net.

We invite you to our open house and vendor display on Friday, October 9, 2015. The event will start at 10:00am and end at 5:00pm. Come celebrate with us our big move and see what new developments are in the works with the following manufacturers:

- APPLIED ROBOTICS – robotic tool changers & docking modules
- CHANGER & DRESSER – tip dressers & changers | electrode management solutions
- ESG-USA VALVES – shuttle valves | AIRTECH MAC air actuating valves
- GORBEL – overhead lifting solutions
- PROTEUS – weldsaver™ flow switches
- UNIVER – pneumatic/electric power clamps & power pivots | retractable locating pins, single & double rods

CenterLine (Windsor) Limited Introduces VeriFast™ LVDT

Windsor, Canada, September 17, 2015

CenterLine is pleased to introduce its newest nut weld detection product, the VeriFast™ LVDT system. This new CenterLine product is designed to provide a reliable method for monitoring the quality of the entire projection welding process. Main features include extremely accurate, real time position (up to 24 mm linear) sensing, extended mechanical life and a design that is environmentally robust enough to withstand a wide range of contaminants (i.e. water, grease, oil, etc.)

The VeriFast™ LVDT can sense:
- fastener presence and orientation at the point of weld
- piloted and non-piloted nuts
- welding stud lengths
- infinite weld pin positions (return to start, fully retracted, etc)
- measurement of projection collapse

It’s compact design allows installation and operation in confined spaces.

For more information visit our website at: www.cntrline.com under Products, Nut Weld Detection section.

CRAW

Article written and submitted by Ryan Kot.

You’ve all heard of the term welder and welding operator before, and hopefully the differences between the two are easily understood. Per AWS A3.0M/A3.0:2010, a welder is defined as “one who performs manual or semiautomatic welding”, and a welding operator is “one who operates adaptive control, automatic, mechanized, or robotic welding equipment.”

As you’re aware, the American Welding Society (AWS) offers many professional certifications to help advance your career and set yourself apart from the competition, such as their well-known Certified Welder (CW) program. However, you may not be aware that the AWS also offers professional certifications for Robotic Arc Welding - Operators and Technicians (CRAW). It’s safe to assume that the majority of you reading this article probably live in an “Automation Alley” county and are aware of the large influence that robotic arc welding has had on the manufacturing industry, specifically here in Southeast Michigan. The CRAW program allows many welding personnel employed in various welding sectors to measure themselves against standards for their occupation, as well as signifies that the CRAW Operator or Technician has demonstrated the capability of working with various codes, standards, and specifications. In addition, since proof of active practice or re-examination is required every three (3) years, certification also signifies that the CRAW Operator or Technician is current with the welding industry.

The AWS Detroit Section holds two (2) CRAW seminars/exams per year, both of which are held at ABB, Inc. in Auburn Hills, Michigan. While the first seminar/exam has passed; the second seminar is scheduled for Monday, October 26, 2015 thru Thursday, October 29, 2015, with the exam scheduled for Friday, October 30, 2015. For additional information, or to schedule your seminar/exam, please contact Mr. Keith Lloyd (ABB, Inc.) (248) 391-8421. For specific exam requirements, please visit the AWS website at www.aws.org.
Obara USA has established itself as a premier supplier of high quality welding equipment and services. With our worldwide resources for equipment, research and development, and manufacturing, Obara USA can meet any project requirements, regardless of size or scope.

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With our new hand-held Weldscope WS-100, you can easily control 3 monitoring functions and 2 selectable detection ranges from the palm of your hand. Monitor and measure welding current, cycle time and force from single phase AC, a single phase rectifier, a three-phase rectifier and MFDC welders. Plus, with the WS-100, you can easily download CSV data to any PC and print out the results.

Visit Us: Fabtech Booth #N18025
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Or Call: 440-439-8881
Ask for Paul Sheibels
Ask for Steve Andressy
Web: dengensha.com

Engineering Resistance Welding Value!
Student Night Re-cap

The AWS-Detroit section held its annual student night on September 10, 2015 at the VisTaTech Building of Schoolcraft College in Livonia, MI. This year the section was able to award 32 scholarships totaling $45,500 to students from 8 different schools. The recipients of the 2015–2016 Scholarships will be attending Schoolcraft Community College, Monroe Community College, Ferris State University, Baker College (Flint), Wayne Community College, Macomb Community College, Washtenaw Community College and Lansing Community College.

The section’s scholarships are made available to Michigan and select Canadian residents and/or students enrolled in a welding or welding related programs at a college or university in the State of Michigan. The candidates all submitted an application, including transcripts of their academic achievement, and a brief letter about their background, their goals and ambitions, and any additional factors that would help the Section Scholarship Committee determine eligibility for an award.

The Section also heard from David Landon, AWS National President. Mr. Landon delivered a talk called “Triple pass of the torch- Technology, Heroism & Mentorship” that described the importance of technology, heroes, and mentoring in today’s workplace. And we learned that David is a big fan of Ironman!