RWMA®
RESISTANCE WELDING MANUFACTURING ALLIANCE
A STANDING COMMITTEE OF American Welding Society

News

Winter 2011

MESSAGE FROM THE CHAIR

This is my last "FROM THE CHAIR" column as chair of the RWMA. I have enjoyed being the head of this dynamic and growing committee of the AWS for the last two years.

The RWMA fills an important place in our industry. It is through the RWMA that we have been able to bring together some of the sharpest minds in the resistance welding industry for the advancement of the process.

I am proud of the group's push to make resistance welding technicians a profession through the upcoming education and testing program (CCRW). The exam bank at AWS is going over the last questions and should have the testing program ready to administer. There is a lot of work ahead for the RWMA membership to figure out how to set up the educational programs required to train this new group of resistance welding technicians so that the testing program can be launched.

We have in the last few years produced a very professional DVD that is being circulated to young people to encourage them to check into the resistance welding field as a career. We know from experience that the only sure way to keep manufacturers from using other joining methods is to have them see success and consistency on their shop floor. It is hoped that young people coming into manufacturing with skills and knowledge will maintain the existing customer base for RW and continue to find new applications.

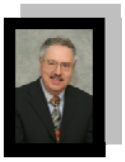
We continue to train industry people at the Emmet A. Craig Resistance Welding School. I hope that you all know our members donate their time and efforts to teach this important resistance welding course. Each class sends back to the industry people who, through knowledge, can change the resistance welding process in their factories from an "art" to a "science." This school is the most important RWMA function.

The first chair position of the RWMA (and historically the president's position) has been held by many very dynamic and knowledgable members of our industry. I will pass the baton to Wade Burnette at the end of the annual meeting in February. Wade will take over this position for the next two years. I know that he will do a great job of continuing to build this committee. I am also delighted to welcome Ed Langhenry as the new 2nd vice chair. Ed joins Mark Gramelspacher who will be moving up to the 1st vice chair position. With this team in place, I have no doubt that the RWMA will continue to grow in size and importance over the next years.

I want to thank Susan Hopkins for her really impressive work for the RWMA as the committee's administrator. It is through her daily work (and much noodging, aka nudging) that the business of the RWMA is completed so smoothly. I have watched Susan work at conventions doing whatever it took to get new members. And it is through her efforts that our annual meeting is so professional. She can be proud of her accomplishments.

Lastly I would like to thank Mike Simmons for doing all the work he has done as immediate past chair. Long range planning is important to keep the RWMA vibrant and relevant in our industry. Mike has been a master at this.

See you at the annual meeting in Florida next month.



Roger Hirsch
RWMA 2009-2010 Chair

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WALTER P. SIMMONS

It is with great sorrow that RWMA reports Walter P. Simmons passed away on Sunday, November 28, at the age of 76.

Walter started his career working for Welding Sales & Engineering Co. in Detroit, Michigan. His father, Walter H. Simmons, added another division to this company called Tuffaloy Products. The entire operation was sold to Air Reduction Corp. in New York. Walter H. then retired while Walter P. continued to operate Tuffaloy. In 1963 he negotiated to purchase Tuffaloy from Air Reduction. Walter was a key figure in the industry of Resistance Welding, and was awarded the RWMA Presidency from 1967 – 1968. In 1999, he was the recipient of the prestigious Elihu Thompson award for his work in resistance welding. Walter P. Simmons retired in 1988.

Walter P. Simmons is survived by his wife of 54 years, Carroll, and his three children; Michael, Jill and Timothy. He is predeceased by his son Patrick.

Services were held January 8, 2011, at the St. Clair Michigan First Congregational Church, in St. Clair, Michigan.

Condolences may be sent to:
Mike Simmons
c/o Tuffaloy Products, Inc.
1400 South Batesville Road
Greer, SC. 29650

Or to

Carroll B. Simmons
2351 North River Road
St. Clair, MI. 48079

Donations may be made to their church, First Congregational Church United Church of Christ
300 Adams Street
St. Clair, MI. 48079

Or to

RWMA Scholarship
c/o AWS Foundation
550 NW LeJeune Road
Miami, FL 33126
(Be sure to note that it is in honor of Walter Simmons.)

Hospice House:
Blue Water Hospice
1430 Military Street
Suite A
Port Huron, MI. 48060

If donations are made to the Hospice House, please note Walter P. Simmons' name so the money will go directly to the building fund at the family's request.

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WELCOME SELVIS MORALES

Please join me in welcoming Selvis Morales, the new AWS Director of Conventions and Meeting Services. One of Selvis' many responsibilities will be to oversee the activities of the Resistance Welding Manufacturing Alliance (RWMA). Selvis replaces John Ospina, who was recently named Executive Director of the Gases and Welding Distributors Association (GAWDA).

Selvis joined AWS in 2006, serving most recently in the Technical Department as Secretary of the D1 Structural Welding Committee. She holds a B.S. in Communications, Video/Film and English, from the University of Miami.

NEW RWMA MEMBERS

WORCO
TAKE A TIP FROM WORCO

RWMA welcomes Worco Manufacturing Company Limited as its newest member. Worco is a leading manufacturer of resistance welding consumables offering a complete line of tips, holders and accessories. Since 1963, Worton has developed its expertise as a manufacturer servicing welding markets. The latest in precision equipment allows us to process all metals with particular expertise in copper, brass, aluminum and stainless steel. "Take a tip from Worco."

Take the time to welcome Worton Mfg. Co., Ltd., and visit their website at www.worco.net to learn more about them and what they have to offer.

2010 CLASS OF COUNSELOR

DAVID BENETEAU nominated for AWS Counselor.
In 1999, the American Welding Society established the honor of Counselor to recognize individual members for a career of distinguished organizational leadership that has enhanced the image and impact of the welding industry. Election as a Counselor is based on an individual's career of outstanding accomplishment.

David Beneteau's knowledge and experience put him in the forefront of nominations for the class of 2010 Counselors. His contributions have been instrumental to the success of the Detroit AWS. The AWS national will have an expert in the welding industry at their disposal.

RWMA 2011 ANNUAL MEETING

MARK YOUR CALENDARS AND SAVE THE DATE:
February 24-26, 2011
PGA NATIONAL RESORT & SPA, Palm Beach Gardens, Florida

"Opportunities in the Energy Sector"

In the wake of the Deepwater Horizon Oil Spill, and the country's continued demand for oil and gas, America is now beginning to center its attention on natural, nuclear, and renewable energy as alternatives.

As we try to reduce our dependence on fossil fuel, the use of solar energy systems will continue to rise exponentially. Solar collectors used in this technology are efficiently joined by resistance seam welding.

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"Green" energy is the economy's focus, and many companies and organizations are shifting towards that direction. As a result, "green" jobs and technologies have led to a variety of opportunities in the welding industry.

Joining the ongoing initiatives, WEMCO and RWMA will spend three days discussing this timely matter. There will be enlightening presentations from key leaders in this sector, as well as in the welding manufacturing, and resistance welding fields. Don't miss the opportunity to attend this 3-day annual meeting where present and future trends will be examined, and ways to capitalize on opportunities that would be most beneficial to the company members and guests will be explored.

RWMA Schedule of Events

THURSDAY, FEBRUARY 24, 2011

7:00 a.m. – 8:00 a.m.	Breakfast: Governance Committee Members
7:30 a.m. – 8:00 a.m.	Registration for Meeting Attendees & Thursday Golf
8:00 a.m. – 11:30 a.m.	Governance Committee Meeting
10:00 a.m. – 5:00 p.m.	CCRW Meeting (AWS Certification)
11:30 a.m. – 12:30 p.m.	Registration for Meeting Attendees & Saturday Golf
12:00 p.m. – 1:00 p.m.	Lunch: Governance Members
12:30 p.m. – 1:30 p.m.	Golf on Champion – Tee time *(lunch provided on course)*
1:15 p.m. – 3:15 p.m.	C1 Committee (AWS Technical)
1:15 p.m. – 3:15 p.m.	Membership Committee Meeting * Membership Recruitment Subcommittee
3:15 p.m. – 3:30 p.m.	Networking Break
3:30 p.m. – 5:15 p.m.	Education Committee Meeting RWMA Bulletin C – How to Select a Resistance Welding Machine Workgroup
6:30 p.m. – 8:30 p.m.	Annual Meeting Welcome Reception Cocktails & Hors d' oeuvres

FRIDAY, FEBRUARY 25, 2011

7:00 a.m. - 8:00 a.m.	Meeting Attendee Breakfast
7:30 a.m. - 8:00 a.m.	Registration: Meeting/Saturday Golf
8:00 a.m. - 9:00 a.m.	Presentation by William J. Kroll President, Chairman and CEO Matheson Tri-Gas
9:00 a.m. - 10:00 a.m.	Presentation by Joe F. Colvin President and CEO Nuclear Energy Institute (NEI)
10:00 a.m. - 10:30 a.m.	Networking Break
10:30 a.m. - 11:30 a.m.	Presentation by Andrew Masterman President and CEO ESAB North America
11:30 p.m. – 12:30 p.m.	Meeting Attendee Lunch
1:00 p.m. - 2:30 p.m.	Marketing Committee/Subcommittee Updates * Website * Newsletter
1:00 p.m. - 2:30 p.m.	Technical Committee Meeting
2:30 p.m. - 4:30 p.m.	J1 Committee (AWS Technical)
2:30 p.m. - 4:30 p.m.	Bulletin 34 Discussion *(Manufacturer's Cross Reference of Standard Resistance Welding Electrode Numbers and Alloys)*
6:30 p.m. - 7:30 p.m.	Cocktails
7:30 p.m. - 9:30 p.m.	Passing-the-Baton Annual Ceremony & Dinner

SATURDAY, February 26, 2011

7:00 a.m. - 8:00 a.m.	Meeting Attendee Breakfast
7:30 a.m. - 8:00 a.m.	Registration: Saturday Golf
8:00 a.m. - 9:00 a.m.	Full Member Meeting & Business Exchange
9:00 a.m. - 9:30 a.m.	Networking Break
9:30 a.m. - 10:15 a.m.	Economic Presentation – Part 1 Alan Beaulieu, President & Economist, Institute for Trend Research
10:15 a.m. - 10:30 a.m.	Networking Break
10:30 a.m. - 12:00 p.m.	Economic Presentation – Part 2 Alan Beaulieu, President & Economist,
12:30 p.m. -	Golf on Palmer – Tee Time 12:30 - 1:10 p.m. *(lunch provided on the course)*

BE ADVISED THAT THIS SCHEDULE OF EVENTS IS SUBJECT TO REVISION.

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Meet our Speakers for the 2011 RWMA Annual Meeting

William J. Kroll
President, Chairman & CEO
Matheson Tri-Gas, Inc

More than 80 years of continued dedication to your comprehensive gas and equipment requirements.

Bill Kroll's experience spans more than 30 years, including 16 years of service to Matheson Tri-Gas, Inc. Kroll also served as Executive Vice President of Business Development at Emcore, where he was instrumental in taking that company public.

Kroll has penned more than 50 papers in the areas of physical and chemical vapor deposition for semiconductor technology and is a member of IEEE, SEMI, SPIE, SAE, The Electrochemical Society and MRS. He currently serves on the boards of the CGA, AeA, IOMA, Circle of Life, Matheson Tri-Gas, Inc. and Taiyo Nippon Sanso Corporation. Kroll was inducted into the NJ High Tech Hall of Fame in 2004, was named as one of the top 25 Entrepreneurs in NJ by NJ Biz in 2006, was appointed by the Governor of NJ to his Commission on Outsourcing and Off-shoring in 2007 and in October 2007 was awarded the Boy Scouts of America Distinguished Eagle Scout Award. Under Kroll's leadership, Matheson Tri-Gas, Inc. was named Large Company of the Year by the NJ Technology Council in 2006.

Joe F. Colvin
President Emeritus, Nuclear Energy Institute (NEI)
President, American Nuclear Society (ANS)

The Nuclear Energy Institute represents nearly 300 U.S. and international corporations.

Colvin assumed his current position in 1996, after serving two years as the Institute's Executive Vice President. Prior to joining NEI, Joe Colvin was President and CEO of the Nuclear Management and Resources Council (NUMARC), one of NEI's predecessor organizations.
From 1980 to 1987, he held several senior management positions with the Institute of Nuclear Power Operations (INPO) in Atlanta, Georgia. Before joining INPO, he served 20 years in the United States Navy as a nuclear submarine officer. Joe Colvin currently also serves on the board of directors of Cameco Corporation, and a number of energy-related groups. He served on the Bush Administration's Energy Transition Team.

Colvin holds a bachelor's degree in electrical engineering from the University of New Mexico, has completed advanced studies in nuclear engineering, and is a graduate of Harvard University's Advanced Management Program. He is a registered professional engineer.

Andrew Masterman
President and CEO
ESAB North America

Andrew Masterman is the President and Chief Executive Officer of ESAB North America. He is based in Florence, South Carolina, and replaced Brendan Colgan as Chairman of The ESAB Group, Inc. (North America). Masterman's responsibilities also include Operations Director for ESAB Global including India, South America, Asia Pacific and China.

Andrew Masterman's experience includes industrial engineering, manufacturing, finance and general management. Masterman was also president of Metalico's Platinum Group Metals division. Prior to that, he held the position of president with Spartan Light Metals, TI Automotive and Walbro Corporation. He has also served in a senior financial role for Intel Corporation's Server Business Unit. He has lived in Japan and led operations there, as well as other locations in Asia and in Mexico. Masterman completed his undergraduate

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studies at Colorado College. He subsequently completed graduate studies at the University of Michigan, and holds advanced degrees in Japanese Studies, Industrial Engineering and an MBA.

Alan Beaulieu
President and Economist
Institute for Trend Research (ITR)

One of the country's most respected business cycle economists.

Alan Beaulieu is one of the most popular and influential sought-after keynote speakers, appearing at 160 business conferences a year. He successfully predicted both the housing downturn and the current "Great Recession" almost three years before they occurred. His influential forecasting company, the Institute for Trend Research (ITR), has a remarkable 96% accuracy rate and 60 years of correct calls.

A rare economist who offers real action plans beyond the analysis.
Beaulieu goes beyond the numbers to help senior executives see exactly where they are in the business cycle and what they need to do to profit from emerging trends. Alan always leaves key decision makers with specific, actionable answers to today's formidable business challenges.

RWMA has been able to secure a special group rate at the PGA National Resort and Spa at $179 per night. The resort fee has also been waived. However, the room block is limited; therefore, you will want to register now, and be sure to include your arrival and departure dates.
Register online at: http://www.aws.org/w/a/registrations/conference.html?type=RCF

RWMA PROMOTIONAL DVD

RWMA (Resistance Welding Manufacturing Alliance) produced a promotional DVD on the resistance welding industry. It highlights the basics of resistance welding as a process, and its opportunities and growth potential. This DVD is now available to accredited instructors for free! It would be a terrific introduction tool for your classroom regarding all elements of resistance welding. It is fast moving and informative, with extraordinary visuals. It also promotes resistance welding as a potential career path for students. This tool will provide tips for implementing resistance welding into a school's curriculum, and includes information on occupation-specific competencies.

The DVD is available for viewing online at http://www.aws.org/rwma/videos/. If you would like your free instructor copy of this DVD, contact Susan Hopkins, RWMA Program Manager, at susan@aws.org, or 800-443-9353, ext. 295.

INTRODUCTION TO RESISTANCE WELDING DVD

RWMA also highly recommends the "Introduction to Resistance Welding" DVD. This comprehensive training video illustrates technique, control, and application. Covers spot, projection, seam, and flash/butt welding. It explains the basic principles, machine components and setup, electrodes, tooling, controls, and transformers. It is ideal for classroom and seminar use, and for introducing and training a company's personnel on resistance welding. *(Order Code: RWVID - Price $415 non-members, or $320 for members.)*

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RWMA PUBLICATIONS

RWMA publications and bulletins can be purchased through World Engineering Xchange Ltd. (WEX). Call 1-888-WELDING, or e-mail your orders to orders@awspubs.com. You can also place orders through the RWMA Web site at www.aws.org/rwma.

RWMA COMMITTEES

Join an RWMA Committee
RWMA offers its members ample opportunities to become more involved by joining one of its committees. Committee members work independently on various issues, yet collectively strive toward one common goal: to promote Resistance Welding Excellence.

The committees are divided into four active sectors that address various issues within the industry; Membership, Technical, Marketing and Education.

We have made it very easy for you to become involved. Meetings are now held through teleconferences by calling a toll-free number. Be part of keeping the resistance welding process in the forefront of the industry. Teleconference dates are below. E-mail Susan Hopkins, RWMA Manager at susan@aws.org or call 800-443-9353, ext. 295, to find out how you can be one of the members who help make a difference.

Update on RWMA Technical Committee: The RWMA Technical Committee had a meeting on December 15, 2010. Agenda items that were discussed included discussions on the CCRW Subcommittee work; Bulletin C – How to Select a Resistance Welding Machine; and Designer Guide for Resistance Welding.

An open discussion with Selvis Morales, Director of Convention and Meeting Services, regarding the RWMA Technical Committee also took place. In lieu of RWMA's recent restructuring, wherein it handed over its handbooks and technical standards to AWS Technical Committees J1 and C1, Ms. Morales proposed to the RWMA Technical Committee the possibility of redrafting the Committee's scope and mission statements. Ms. Morales suggested in order to relieve the Technical Committee of the burden of meeting quorum for teleconferences and face-to-face meetings, perhaps the RWMA Technical Committee would be better suited as a technical forum or a liaison between RWMA and AWS Technical Committees. In refocusing the mission of the RWMA Technical Committee, membership could concentrate its expertise on unexplored avenues. Examples of areas the group could consider would be to serve as a technical hub for potential new recruits to be channeled to join J1/C1/D8, allocate more time to promote resistance welding within the industry, explore the use of new media formats (i.e. Wikipedia, Facebook, general social media), or evolve in new directions to better suite new potential membership within industry.

Future meetings are scheduled for:
February 25, 2011 @ 1:00-2:30 pm

RWMA MISSION STATEMENT

The mission of the RWMA Committee of AWS is to advance resistance welding technology, broaden its use, and promote its economic benefits.

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AWS TECHNICAL COMMITTEES

J1 Committee. The AWS J1 Committee on Resistance Welding Equipment is chaired by David Beneteau from CenterLine (Windsor). Their next face-to-face meeting is scheduled for February 25, 2011, in conjunction with the RWMA annual meeting.

Individuals who are interested in participating in the development of resistance welding equipment standards can obtain additional information on the J1 Committee activities by contacting the J1 Secretary, Annette Alonso by phone (800-443-9353 x 299) or email (aalonso@aws.org).

CCRW Subcommittee. The members of the AWS Standards Council have approved the AWS-QC20:2011 "*Specification for AWS Certification of Resistance Welding Technicians"* document for publication and is currently undergoing final proofing at the typesetter.

Vice-chair Maatz was kind enough to attended the January 17th AWS-CCEB (Exam Bank) subcommittee meeting held at AWS headquarters in Miami, FL as the "Subject Expert" on resistance welding during the group's review of the (CRWT) exam questions which were submitted by CCRW subcommittee task-group members and volunteers. The CCRW task-group members will continue to work towards building the Certified Resistance Welding Technicians (CRWT) fundamentals exam by developing the necessary (200) multiple choice questions, with their correct answers and references.

The development of the CRWT exam questions will be the main focus during the group's next meeting, scheduled for February 24th, 2011 at the PGA National Golf Resort & Spa, located in Palm Beach Gardens, FL.
For more information concerning the AWS-CCRW subcommittee, please contact AWS-CCRW Secretary, Frank Lopez Del Rincon at: 1(800-443-9353 x 211), via e-mail flopez@aws.org

C1 Committee. The AWS C1 Committee on Resistance Welding will be meeting on February 24, 2011 in Palm Beach Gardens, FL, in conjunction with the RWMA annual meeting. The committee is currently working on revising the AWS C1.1M/C1.1, *Recommended Practices on Resistance Welding* and is currently seeking and reviewing comments on the next draft. There will be a virtual telephone meeting in November to discuss the latest revisions. Two other projects are also in their preliminary stages: the next edition of AWS C1.4M/C1.4, *Specification for Resistance Welding of Carbon and Low-Alloy Steels*; and a new work item entitled Designers Guide for Resistance Welding, brought forth by the RWMA Technical Committee. Nigel Scotchmer from Huys Industries chairs the committee.

If you are interested in participating on the C1 Committee or if you would like more information on their projects, please contact Annette Alonso, Secretary to C1, by email (aalonso@aws.org) or by phone (800-443-9353 Ext. 299).

RWMA BULLETIN 34

The RWMA Executive Committee formed an AdHoc Committee, with Greg Chambers appointed Chair, to verifying the current information in the antiquated information in Bulletin 34. Bulletin 34 is a cross reference of Resistance Welding consumables, primarily electrodes, shanks and adapters, by material type and manufacturer. The bulletin lists parts by the part family/category, using the RWMA part numbers as the bench mark, and includes the taper, alloy and a simple description, followed alphabetically by the manufacturers and their corresponding part number.

Bulletin 34 was last printed in 1997. Thus, the goal of the committee reviewing this bulletin is to assure that the information currently in the bulletin is accurate, and then to expand the bulletin with new information that is pertinent and relevant. Examples of new information to consider for inclusion are new manufacturers, part designs/tapers and materials.

The committee is looking for participants that can confirm the accuracy of existing information and provide information on new parts to be considered for inclusion in the next publication. The first official meeting of

this committee will be during the annual meeting in Palm Beach Gardens, Florida, on February 24 – 26, 2011. Communication prior to this meeting can be sent to Greg Chambers, Committee Chair, at Greg.Chambers@luvata.com.

RWMA MACHINE PLATES

RWMA members may purchase Machine Plates, displaying their association with RWMA. These plates measure 3 ¼" X 2". They are sold in sets of 25, at $25.00 per set. To request an order form, contact Susan Hopkins at susan@aws.org, or call 800-443-3953, ext. 295. These are only available to RWMA members for their use on equipment they produce.

RWMA LOGO

As an RWMA member, we hope you are displaying the RWMA member logo on all your company's promotional material. To request a logo sheet, contact Susan Hopkins at susan@aws.org.

FROM THE FIELD

Submitted by:
Larry Moss – Automation International

I may be dating myself by telling this story, but I believe the lesson to be learned is just as important today as it was those many years ago.

We had received an urgent call from a customer that their welder had been out of production all day. They were falling behind, management was beginning to panic and they needed help. We were informed that their maintenance man had been trouble-shooting the welder and control throughout the day and replacing items, hoping to alleviate the problem.

In asking questions regarding symptoms, the maintenance man relayed to us that just after production began that morning, the welder just quit welding but still had power to the controls. This particular welder had one of our control systems that used several small I.C. operational amplifiers (the ones that look like a little 14-legged bug") that you could easily remove from the sockets in the circuit board. We always included in our control package both the diagnostic control procedure and several of these "bugs" as spares located in the control for quick replacement. He had surmised that one of these were the culprit. He replaced it, restarted the welder and they began to weld ------ for awhile. Again, the welder quit welding. He replaced that pesky little "bug" again and it was back in production but a few minutes later it quit.

Now, this went on until he had run out of all the spare "bugs" and thus the reason for the urgent call. We asked questions, making sure they had checked certain voltages and so on but, by this time, they were in no mood to talk. They wanted a service technician on site, now!

Our service tech arrived at the plant the next morning and sure enough, there were a pile of those little bad " bugs" at the bottom of the control cabinet. The tech went through his diagnostics and found that the voltages were all correct. They started the welder in production and sure enough, several minutes later it stopped. Regrouping, the tech surprisingly found the true culprit. (And this is where I am dating myself.) This welder was equipped with the old ignitron tube contactor. The water circuit to the ignitrons had been inadvertently shut off by some other personnel. With lack of water, the temperature of the ignitrons reached the over temperature limit and would shut down the control. While the maintenance man was replacing those little "bugs", this gave the ignitrons time to cool down enough to reset and were ready to weld- only to again, overheat.

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So what is the lesson? Sometimes it is just the simple things. Time has passed. We improve, but in our quest as to put technological advancement and diagnostics in our welders and controls, we are reminded that we are not to make assumptions and always check the obvious.

DID YOU KNOW?

THE ORIGIN OF THE RESISTANCE SEAM WELDER

Submitted by:
Tom Snow, T. J. Snow Company

If you've ever wondered why most automobile gas tanks are made the same way – two hemispherical sheet metal stampings with out-turned flanges joined by a continuous resistance seam weld around the circumference – there's a reason for it.

Jim Snow, my father and the founder of T. J. Snow Company, knew that reason and enjoyed repeating the story as told to him by his mentor in the resistance welding machine business – Edwin Arthur Mallett.

Mr. Mallett was a bald-headed Englishman who came to the United States by way of Canada and ended up working directly for the original Henry Ford as a manufacturing cost reduction trouble-shooter at the Ford Motor Company in Detroit.

After successfully completing an assignment to reduce the cost of manufacturing wire wheels by redesigning them to use fewer spokes, Mr. Mallet was asked by Mr. Ford to design a cheaper gas tank.

Seam Welded Gas Tank at Henry Ford Museum

Back in the early days of the automobile industry, gas tanks were fabricated much like most water heater tanks are today, with a single sheet of metal rolled into a cylinder. The longitudinal side seam was manually arc welded and then the cylinder was capped and arc welded at the top and bottom.

Those long arc welds were slow and expensive to produce and Mr. Ford was adamant that there must be a less expensive method of making a gas tank. After all, he was the car maker who specified that suppliers ship parts in wooden crates of a certain size that could then become the automobile's floor boards.

For many years, Fords had drum-type gas tanks mounted in front of the windshield, where a direct-reading gauge made it easy to keep track of how much gas had been used, but Mr. Ford was open to new ideas. The problem was that Mr. Mallett couldn't come up with an idea for better gas tank design despite working on the problem for quite some time. He said it eventually became awkward to run into Mr. Ford in the office hallway and be questioned about his lack of progress.

Finally, a breakthrough came one Sunday evening as Mr. Mallett helped his wife by drying the dishes as she washed them. He noticed that she was using two deep-drawn sheet metal dishpans … one for washing and one for rinsing. Mr. Mallet immediately envisioned one dishpan turned upside down and positioned over the other, with the matching out-turned flanges ready to be resistance seam welded.

Of course, a major problem with his idea was that resistance seam welders did not yet exist! But there were lots of spot welders already in use and Mr. Mallett understood the process well enough that he believed a machine could be designed to make a continuous liquid-tight resistance weld that would seal up the tank.

He soon quit Ford to join Thomson Welder Company, one of the early pioneers in manufacturing resistance welding machines, where he designed and sold the first resistance seam welder to Nash Motors, which was known at the time for being a progressive car manufacturer.

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Because Mr. Ford was miffed at Mr. Mallett for leaving his company, Ford Motor Company was the last car manufacturer to convert to the new and less expensive method of manufacturing gas tanks.

My father met Mr. Mallett in 1952, when he was hired out of the motor rewinding industry to travel the southeast as a salesman for the Jones-Sylar Company of Chattanooga, Tennessee, then the exclusive manufacturer's agent in the southern states for the Taylor-Winfield Corporation of Warren, Ohio.

My father knew nothing about resistance welders, but Mr. Mallett, by then a senior sales engineer for Taylor-Winfield, took a liking to him and often came south by train to support his sales efforts by making joint customer visits. I can remember Mr. Mallett visiting our home before or after a week on the road and insisting that he take us all out for ice cream. (His favorite flavor was vanilla.)

Mr. Mallett retired and my father lost touch with him after starting the T. J. Snow Company in 1963, but I would like find a descendant of his who might have a photo we could have copied and framed for display in our lobby as a memorial to the man who mentored my father and instilled the resistance welding knowledge and business principles we continue to use today as we look forward to celebrating our company's 50th anniversary.

Typical Resistance Seam Welder

RWMA Q&A COLUMN

Check out the January 2011 and then again in March 2011 issues of the AWS *Welding Journal*. RWMA Technical Committee Vice Chair Don Maatz, authored the Resistance Welding Q&A column. This column appears every other month in the *Welding Journal*. If you would like to contribute your expertise to a future issue, please contact Susan Hopkins at susan@aws.org.

AWS ONLINE FORUMS

Did you know that AWS has online forums? These live, interactive forums on the AWS Web site at www.aws.org are your virtual sounding board to the wide world of welders and welding. They provide a fast and east way to exchange ideas, post questions, share insights, as well as get tips and advice on everything welding.

There is no limit to what you can learn on the forums. Everything from inspection questions to new jobs, to advice on equipment and consumables, and local events, are posted. It is the one place where all welding professionals can get together for a chat or even a good laugh.

Don't miss out on the action. Join the forums at http://www.aws.org/cgi-bin/mwf/forum_show.pl.

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RWMA ON FACEBOOK

RWMA is now on the popular, social networking site, Facebook. On the site, RWMA has been established as a fanpage that visitors can join. Becoming a part of the networking site increases RWMA's visibility.

Become a fan, and we will keep you informed of all the current happenings within the Committee. If you have any suggestions to make this page more useful, do not hesitate to contact Susan Hopkins, RWMA Manager at susan@aws.org.

CENTRAL COMMUNITY COLLEGE OFFERS NEW WELDING PROGRAM

The new Welding Program at Central Community College, Grand Island, Nebraska, has installed a new 150 KVA Standard Resistance Welder with ENTRON Controls, to meet the needs of local manufacturers in training their employees.

The reason to have job-ready employees for many reasons; one of the most is quality of welded assemblies, and properly trained resistance welding operators. The local manufacturing plants assisted in the funding. Jeff Leep, Branch Manager at Linweld, Inc.; Jim Dally, President, Standard Resistance Welder, and Mike Zintak, ENTRON Controls, LLC., conducted a one day training session of the use and operation of the resistance welding and welding control. During the training, the welding of stainless steel, cold roll steel and aluminum were reviewed. Samples of CRS 20 GA to 1/8 to 1/8 aluminum were welded.

The photos show Dally and Zinktak, along with Central Community College's instructors; Robert (Bob) Niemann, Associate Dean of Instruction Trade/Industry; Scott Ruehling, Machine/Welding Academy Instructor; Russ Moore, Welding Coordinator/Trainer, and Dennis Senff, Instructor. The installation of a welder of sufficient size will allow the welding of small and large weld nuts, projection welded assemblies, aluminum assemblies, and wire grids.

With the equipment resource, Central Community College will be able to do development work for local manufacturing plants and train operators in a development lab setting.

If any additional information is desired, contact Standard Resistance Welder, ENTRON Controls, or Jeff Leep at Linweld, Inc.

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RWMA MEMBER NEWS

Happy Birthday APEX Controls

APEX Controls is pleased to recognize our 20th year in business. An open house is in the planning stages for August of 2011 to celebrate and thank our customers, vendors and associates that have made our continued success possible. Since 1991, APEX Controls has successfully built a reputation for excellence throughout a variety of industries, including automotive, furniture, appliance, and food processing.

The open house will be held in the spacious new facilities that APEX Controls moved into in March of 2007 located in Hudsonville, Michigan. Sustained growth over the company's 20-year history created the need for the new 12,000 sq. foot facility, allowing APEX Controls to consolidate controls engineering, resistance welding components sales, electrical panel building and machine wiring functions into one building. The consolidation and expansion has provided the opportunity for continued growth in the automation and welding industries.

For more information about APEX Controls' upcoming 20th Year Open House, please contact Matt Post, Terry L. Stevens or just stop by our facility at your convenience.

Cal Manufacturing Announces Vice President of Sales and Marketing

Cal Manufacturing, Inc., manufacturer of resistance welding cables in Vicksburg, Michigan, announces the appointment of Cheryl Benson to the position of Vice President of Sales and Marketing. Cheryl is the daughter of Bill Morren, former President of Cal Manufacturing, Inc., until his passing in 2005. Carrying forth his vision of a company that values its customers by focusing on impeccable products at a price that is affordable and delivery unmatched by its competitors is key to the success of this small company. Cheryl believes that "Cal's continued success and growth is fueled through the enhancement of our current products and services as well as providing 'one stop shopping' for all cable needs to include our new line of cable adapters, busbars, water-cooled busbars and our new and improved furnace/induction cables and the resurgence of the Swivel King kickless cable which Cal patented in the 1990's specifically for the robotic assembly lines."

Cal Manufacturing, Inc. Expands Its Products and Services

Cal Manufacturing, Inc., is growing to expand our products and services to include cable adapters, busbars and water-cooled busbars. Cal Cables now has specialized CNC machining to address our more demanding design requirements and providing "one-stop shopping" for our customers. In addition, we are also expanding our line of furnace/induction cables to provide cables with MCM (circular mill sizes) 2,500 MCM and larger depending on the industry application.

The CAL line of cables is also featuring it's Swivel King kickless cable on You Tube. The Swivel King was originally designed and patented in the 1990's for the Robotic Welding Market. We found something unique; however, in that manual jobs received the greatest benefits from this cable. The Swivel King will allow the welding head to twist 180-degrees with as little as 15-pounds of pressure. The swivel feature relieves stress on the shoulders, arms and wrists.

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Cal Manufacturing to be Published in *NFIB, the Voice of Small Business*

Watch for Cal Manufacturing's Vice President, Cheryl Benson in the March/April *NFIB* magazine, talking about a candid moment in the resistance welding industry.
Link to the magazine: http://www.nfib.com/?am

CenterLine Welding Products Hires Welding Technical Sales and Support Representative

CenterLine is pleased to announce that Mr. Daniel Sabrosky has joined CenterLine Welding Products, Troy, Michigan, as Welding Technical Sales and Support Representative.

Dan has extensive automotive industry experience with strong emphasis on process development, production systems, quality assurance, tooling design and production launches. He spent 15 years at General Motors in various capacities including Manufacturing Engineer, Welding Engineer and Project Coordinator. With strong knowledge of Lean Manufacturing principles, Dan has played a key role at GM in 10 successful production launches.

Dan's broad knowledge of resistance welding and advanced manufacturing processes will be of great value in assisting customers to select and integrate CenterLine's complete range of systems, components and services for metal joining, forming and coating applications.

CenterLine (Windsor) Limited Hires Corporate Account Manager

CenterLine (Windsor) Ltd. is pleased to announce that Mr. Joe Ruggiero has joined CenterLine as Corporate Account Manager responsible for Ford Motor Company.

Joe has over 15 years of automotive industry experience implementing and managing welding commodity programs. For the past 10 years Joe operated JEC Distributors, a welding component commodity distribution company, representing a host of international suppliers to domestic and transplant OEM and Tier manufacturers. CenterLine consumable and component products were represented by JEC for the Canadian and North US markets during this time.

In his new capacity, Joe will manage CenterLine's commodity supply commitments and standard component product sales to Ford operations throughout North America. His extensive product knowledge, practical experience, and dedication to uncompromised customer satisfaction will enable CenterLine to provide Ford with the highest possible level of support.

CenterLine (Windsor) Limited Announces New Corporate Account Manager

CenterLine (Windsor) Ltd. is pleased to announce that Mr. Greg Crain has been appointed Corporate Account Manager responsible for Chrysler Group LLC.

Greg has over 25 years of automotive industry experience. Among his career highlights, Greg has worked for General Motors and Ford as a mechanical designer and as a Program Manager within the machine tool industry managing multi-million dollar programs for OEM and Tier 1 clients. For the past 4 years Greg has been with CenterLine's Special Machinery Division with responsibility for key account estimating and process development proposals.

In his new capacity, Greg will manage CenterLine's sales and service commitments to Chrysler group operations throughout North America. His extensive product knowledge, practical technical experience and dedication to customer satisfaction will enable CenterLine to provide Chrysler with the highest possible level of support.

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CMW Changes Its Focus

CMW International, the Indianapolis, Indiana-based manufacturer of specialty metals products announced today that it will focus its future resources on two core product lines. The focus of those resources will be high-density metals and resistance welding consumables.

"High Density Metals and Resistance Welding Consumables serve attractive markets for our continued success in the future", stated George K. Stillabower, Senior Vice-President of Sales and Marketing. High Density Metals are used in diverse markets such as Aerospace, Medical, Electronics, Die-casting and Energy. These markets make it a growth engine for the future, according to management. CMW's materials technology and production methods match these markets very well and build upon the company's recent significant investments in new laboratory equipment, advanced manufacturing methods and personnel.

CMW will also concentrate on its resistance welding consumables business. Its specification and brand position are well known with a 90 year legacy supplying automated and advanced manufacturing processes. CMW supplies a broad range of products to end users that improve production efficiency. Those product s include electrodes, holders, Elkonite® copper-tungsten, cap electrodes and its unique FINNCAP® cap electrodes. FINNCAP® cap electrodes have proven to be a very attractive alternative to traditional welding caps.

As part of this focus effort, CMW plans to exit the silver-based wrought contact business. " The traditional mechanical silver-based contacts market is not growing as alternative technologies go into most new applications and we believe now is the time to transition out of this business while silver is at its current high-market price levels." stated Mr. Stillabower. He went on to say, "The lack of growth in this sector of the company combined with the volatile commodity pricing for precious metals make this an ideal time to exit We are currently working with our customer base as they transition to alternative sources of supply."

CMW reports that it plans to be out of the wrought silver based contact business in the second quarter of 2011. CMW will continue to provide specialty silver blended materials for its high density metals and welding customers, where silver is critical to the chemistry of the products and applications.

Alyssa Chen, Administration Manager at Prevail

Congratulations Alyssa Chen, who has been promoted to Administration Manager of the Research & Development Department. Alyssa's previous position with Prevail was Assistant to the General Manager.

Celebration At Prevail

Prevail hosted an annual party on January 15. Many of their suppliers, clients and friends were there to celebrate at this wonderful event. The party included performances from dancers, drama and singing. Awards were given to Prevail employees on their excellent performance in 2010. A great time was had by all those in attendance.

RoMan Manufacturing's Co-founder, Dietrich Roth, Helps Start A New Welding Education Scholarship

Mr. Dietrich Roth and his wife Betty of Grand Rapids, MI have made a generous, personal donation to the AWS Foundation to create a section named welding education scholarship in honor of Dietrich Roth. Dietrich was a co-founder of RoMan Mfg. in 1980 along Mr. Robert Hofman. Dietrich is retired now, and he and Betty currently reside in the Grand Rapids area. Kudos to Dee and Betty for their generosity and vision to give back to an industry that has given so much to them. The scholarship details can be found on the AWS web site at: http://www.aws.org/w/a/foundation/opportunities.html.

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Techno-Control Welcomes Marc Boissonnault Back

Techno-Control Cybernetic is very happy to welcome back Marc Boissonnault with the team after a year of absence. Marc has been fighting very strongly against cancer and we are grateful to see him back.

RWMA 2011 MEMBERSHIP DIRECTORY

The 2011 RWMA Membership Directory will be available in January.

Be on the lookout for the new RWMA 2011 Membership Directory in your mailbox. This Directory is a great networking tool to pass out to your customers.

The Directory is available at ALL shows where AWS and RWMA participate. It is also available on the RWMA website to download, as well as sent with all RWMA member prospect packages and resistance welding inquiries.

Resistance Welder Manufacturers' Association Scholarship

This scholarship was established in 2005 by the Resistance Welder Manufacturers' Association (RWMA) to perpetuate its legacy of support for welding education.

The RWMA scholarship was established upon the dissolution of the RWMA in 2005, to commemorate the efforts of all those who had worked throughout the years to provide opportunities for learning. The Resistance Welder Manufacturers' Association Scholarship continues, under the direction of the AWS Foundation, to support students of the resistance welding process. The hope is that the scholarship recipients will learn to appreciate the simple elegance and robustness of the process, so that they can carry the message forward to the next generation.

It is awarded to a college junior pursuing a minimum four year bachelor's degree in welding engineering or welding engineering technology. The applicant must have a minimum 3.0 overall grade point average. The applicant must express an interest in the resistance welding process. The applicant must be a citizen of the United States or Canada and plan to attend an academic institution located with the U. S. or Canada. Financial need is not required.

Applicant must complete an essay of 500 words or less about why the student wishes to become involved in the resistance welding industry.

The award is for $2,500, and the deadline is February 15, for the following Fall term.

To find out more about the Resistance Welder Manufacturers' Association Scholarship and to complete the application log to http://www.aws.org/w/a/foundation/scholarships/rwma.html.

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RWMA 1st Vice Chair - Wade Burnette, NSRW, Inc.,
RWMA 2nd Vice Chair - Mark Gramelspacher, CMW Inc.
RWMA Immediate Past Chair - Michael Simmons, Resistance Welding Products, Ltd.,

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Representative, Tom Snow, T.J. Snow Company
Alternate Representative, Richard (Dick) Vreeland, Ewald Instruments

Copper Products Division
Representative, Greg Chambers, Luvata Ohio, Inc.
Alternate Representative, Dan Wellman, Obara Corp., USA

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Representative, Dan Uszynski, CenterLine (Windsor), Ltd.
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Vice Chair – Don Maatz, RoMan Engineering Services, Inc.

ANYTHING TO ADD?

If you have news for us, we'll be glad to print it. Send a copy of the information in electronic format to susan@aws.org, and we'll make sure it gets in the next issue.

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