There is a great deal of new and revived interest in hot wire welding, as a means of combining the deposition rates of GMAW with the quality of GTAW. One version or other is already being used by participants in the oil and gas industry, by the Navy, and by builders of aircraft engines. Hot wire welding and cladding will be the subject of a one-day conference at the FabTech Int’l and AWS Welding Show in Chicago. Presentations on both hot wire GTAW and hot wire plasma processes will be also on the agenda. One topic that will be addressed at the conference will be the popular use of hot wire gas tungsten arc cladding of tube and piping for the offshore oil and gas industries. In another presentation, hot wire GTA “narrow groove” welding will be shown to have performed well on titanium. Advantages are increased deposition rates and faster travel speeds. Also on the agenda are “buildups, butterings, and claddings” of Inconel. Critical metallurgical and other issues will be addressed by hot wire equipment producers, users, and consultants.

Conference price is $345 for AWS members, $480 for nonmembers. To receive a descriptive brochure, call (800) 443-9353 ext. 229, (outside North America, call 305-443-9353), or visit www.aws.org
HOT WIRE WELDING & CLADDING  
Tuesday, November 13, 2007  
8:50 AM – 3:15 PM  
Member of AWS, FMA or SME: $345  
Nonmember: $480  

There is a great deal of new interest in hot wire welding and cladding. Although invented many years ago, this technology never really saw the light of day until recently. One version or other is already being used by participants in the oil and gas industry, by the Navy, and by builders of aircraft engines. Hot wire welding and cladding will be the subject of a one-day conference at the FabTech Int’l and AWS Welding Show in Chicago. Presentations on both hot wire GTAW and hot wire plasma processes will be on the agenda. One topic that will be addressed at the conference will be the popular use of hot wire gas tungsten arc cladding of tube and piping for the offshore oil and gas industries. In another presentation, hot wire GTA “narrow groove” welding will be shown to have performed well on titanium. Advantages are increased deposition rates and faster travel speeds.

8:50 AM – 9:00 AM  
Welcome and Introduction  
Chairman: Bob Irving  
Co-Chairman: Tom Rankin  

9:00 AM - 9:40 AM  
Hot Wire Gas Tungsten Arc Welding—An Overview of Process Applications and Capabilities  
Jonathan T. Salkin, President, Arc Applications, Inc., York, PA  

The hot wire gas tungsten arc welding process has found increasing use over a wide range of groove welding, buildup and cladding operations. Commercially available and specialized hot wire equipment continues to promote application of the process for producing high-quality welds in industries including nuclear, power generation, pressure vessel and offshore oil.

Applications will be presented to show the process capabilities, characteristics, benefits and limitations. Examples of process control and variations to consider will be discussed based on welding requirements, materials, process variables, weld design and inspection.

9:40 AM – 10:20 AM  
Hot Wire Narrow Groove Welding and Cladding with Nickel-Based Alloys  
Jeff M. Kikel, Manager, Weld Engineering, BWX Technologies, Inc., Nuclear Operations Division, Barberton, OH  

Where a considerable amount of work is directed toward pressure vessel fabrication, hot wire gas tungsten arc welding is used extensively for the narrow gap welding of nickel-based alloys. The hot wire process is also used for buildups, buttingers, and cladding of high-strength low alloy steel.

10:20 AM – 10:40 AM  
Hot Wire GTAW - Practical Considerations and Applications  
Tom Rankin, Vice President and General Manager, ITW Jetline Engineering, Irvine, CA  

This talk will cover the early development of the process along with basic theory and important variables. Justification for the use of hot wire process and equipment requirements will be presented. Application examples of successful cladding, joining, and deep groove using stainless and Inconel will be presented.

10:40 AM – 11:00 AM Refreshment Break  

11:00 AM - 11:40 AM  
New Advances in Hot Wire Cladding Applications  
Daniel Alford, President, ARC Specialties, Houston, TX  

This presentation will be a discussion of recent advances in plasma, variable polarity, as well as new configurations for automatic cladding. New programming techniques for bore cladding will also be discussed.

11:40 AM – 12:30 PM  
Wire Surface Condition Impacts Hot Wire Weld Quality  
Harry Wehr, Technical Director, Arcos Industries, LLC, Mt. Carmel, PA  

The surface condition of the welding wire used to make hot wire overlay deposits can impact the quality and integrity of the weld in several ways. A detailed study of 625 welding wire used for hot wire applications has shown that there are three major areas where wire surface condition can impact deposit integrity: surface roughness, residual contaminants and wire cast. If the weld deposit must be clean and defect free, each of these areas must be addressed.

12:30 PM – 1:30 PM Lunch  

Note: There will be no afternoon refreshment break; however refreshments will be available in the back of the room.

1:30 PM – 1:45 PM  
Observations from Gus Manz, Inventor of Hot Wire Welding  
Gus Manz, President, A. F. Manz Associates, Union, NJ  

Hear from the inventor himself, who was awarded a patent on the hot wire welding process on February 25, 1964.

1:45 PM – 1:55 PM  
Observations from Fritz Saenger, Member of the Original Hot Wire Welding Research Team  
Fritz Saenger, Consultant, Columbus, OH  

Listen to the observations of a member of the original research team for the hot wire welding process.

1:55 PM – 2:35 PM  
Welding and Cladding in the Oil and Gas Industry  
Don Schwemmer President, AMET Inc., Rexburg, ID and Galen Wright, President, Arc Innovations Inc., Edmonton, AB, Canada  

In response to some of the requirements by the oil and gas industry in Canada, a company is narrow groove welding 1.5- to 2 in.-thick 2205 duplex stainless steel, and cladding 625 Inconel tubulars.

2:35 PM – 3:15 PM  
The Benefits of Hot Wire GTAW in the Orbital Welding Industry  
Rob Pistor, Managing Director, Liburdi Engineering, Dundas, ON Canada  

Several applications and issues will be discussed, including narrow groove welding, overlay cladding, nuclear canister closure welding, and 1G vs. 5G parameters.

3:15 PM – Adjournment
CONFERENCE REGISTRATION FEES

AWS members: $345
Nonmembers: $480

Each nonmember attendee will receive a two-year complimentary membership in AWS. Registration includes all conference sessions, two continental breakfasts, two lunches, and refreshment breaks. The registration fee does not include hotel accommodations. Hotel accommodations are subject to hotel regulations and are the responsibility of the attendee.

Each participant will also earn 14 PDHs for attending the conference.

LOCATION AND ACCOMMODATIONS

Omni Newport News Hotel
1000 Omni Boulevard
Newport News, VA 23606
Phone: (757) 873-6664 / Fax: (757) 873-1732

Take advantage of the specially negotiated rate of $83 for single and double occupancy. This rate is also extended to you three days before the conference and three days after the conference (depending on hotel availability). Be sure to mention the American Welding Society. The deadline for reservations at this special price is September 17, 2007. Each reservation must be guaranteed with a major credit card. Any reservation cancelled via the website can be done 24 hours in advance. Any other reservations must be cancelled five days in advance of the arrival date and must be done directly with the hotel. There is no charge for parking.

ACCOMMODATIONS FOR THE DISABLED

Pursuant to the Americans with Disabilities Act, AWS and Omni Newport News Hotel strive to ensure accessibility for all their guests. Please inform the hotel when you make your reservations, and also contact the AWS Conferences & Seminars Business Unit at (800) 443-9353, ext. 229.

GUARANTEE

AWS guarantees that you will leave the conference a satisfied customer. If for any reason you are not satisfied, please send a letter as soon as possible to John Ospina, AWS Conferences and Seminars, 550 NW LeJeune Road, Miami, FL 33126.

REFUND POLICY

AWS knows your plans can change and offers a flexible refund policy. If you notify AWS at least two weeks before a scheduled conference that you’re unable to attend, you will receive a full refund, less a $75 administration/hotel attrition fee. Notification received less than two weeks before the conference will result in a refund less a $175 administration/hotel attrition fee.

You may send a substitute at no additional fee. No refunds are given for no-shows.

Note: AWS reserves the right to cancel any event at its reasonable discretion. In the event of cancellation by AWS, registration fees will be refunded in full. AWS shall have no further liability.