

WTIA NATIONAL DIFFUSION NETWORKS PROJECT

With the help of a Federal Government grant and support from Industry and State and Territory Governments, the WTIA launched the WTIA National Diffusion Networks Project (NDNP).

The Project involves the implementation of a structured welding and joining technology demonstration and improvement program for the Alumina, Building & Construction, Defence, Inspection & Testing, Medical Devices & Sensors, Mining, Petro-Chemical, Pipeline, Power Generation, Pressure Equipment, Rail, Road Transport and Water Industries.

The sectoral strategy involves the WTIA working directly with leading Australian firms, SMEs, supply chains and technology specialists in the OzWeld Technology Support Centres (TSCs).

The NDNP acts as an umbrella encompassing the OzWeld TSC Network consisting of over fifty local and overseas organisations contributing appropriate and leading-edge technologies to assist Australian industry.

For further information about the Project please contact Chris Smallbone at the WTIA Tel: +61 (0)2 9748 4443, Fax: +61 (0)2 9748 2858

Visit the WTIA website <http://www.wtia.com.au> and the WTIA Certification website <http://www.wtiacertification.com.au> to obtain information on becoming internationally qualified and certified

***“WTIA National Skills Campaign”
Targeting Skills Needs in all Regions to Keep Jobs in Australia***

IMPORTANT NOTICE

Note: For cancellations received within 10 working days of an event, 100% of the fees will be charged. Replacement delegates may be sent in lieu of those cancelled. WTIA reserves the right to cancel events due to insufficient registrations or other reasons beyond their control. Confirmation of bookings will be sent to delegates upon registration. WTIA also reserves the right to refuse registrations.

REGISTRATION FORM

Welding of Stainless Steels
To: WTIA PO Box 6165, SILVERWATER, NSW, 1811
Phone: (02) 9748 4443 Fax: (02) 9748 2858
EMAIL: info@wtia.com.au (ABN 69 003 696 526)

Surname: _____

First Name: _____

Position: _____

Company Name: _____

Address: _____

Suburb: _____ State: _____ PC: _____

Email: _____

Tel: _____ Fax: _____

Mobile: _____

Specific dietary requirements _____

Please book me to attend:

- Perth WA - 6 Oct Melbourne Vic - 8 Oct
 Brisbane Qld - 12 Oct Sydney NSW - 14 Oct

Exact venues will be confirmed on registration.

FEES

\$550 WTIA/ASSDA Members \$650 Non Members

Membership Number: _____

Fees include coffee/tea, lunch, course notes and GST

METHOD OF PAYMENT

Please ensure all details below are filled correctly. All payments should be made payable to WTIA.

Cheque/Money Order MasterCard Visa

Cardholders Name: _____

Expiry Date: ____/____/____ Amount \$ _____

Card No: ____/____/____/____/____/____

Signature: _____ Date: ____/____/____

Funds may be transferred to the following account details. Please return a **remittance advice** to fax: 02 9748 2858 or email a.zervas@wtia.com.au. National Australia Bank BSB: 082 330 Account: 047162875 Branch: 28 George Street, Parramatta, NSW Account Name: Welding Technology Institute of Australia.

~ OZWELD SCHOOL OF WELDING
TECHNOLOGY ~
SWT-35

**WELDING OF
STAINLESS STEELS:**

**World authority
Dr Damian Kotecki**

2010 Seminars

**Perth, WA – Wednesday 6 October
Melbourne, Vic - Friday 8 October
Brisbane, Qld - Tuesday 12 October
Sydney, NSW – Thursday, 14 October**

INTERNATIONAL EXPERT SPEAKER

Dr Damian Kotecki has enjoyed a 45 year career in welding, from hands-on welding training, through university education and teaching, to professional experiences at Battelle Memorial Institute. He worked for 18 years with The Lincoln Electric Company USA where he was Technical Director for Stainless and High Alloy Product Development in the company's Consumable R&D Department.

He is an expert in the area of welding metallurgy, particularly as it relates to stainless steels and hardfacing alloys. Dr Kotecki holds five US patents and is the author of more than 60 papers and published articles on arc welding science. He recently co-authored, with Dr John Lippold of The Ohio State University, a textbook on *Welding Metallurgy and Weldability of Stainless Steels*.

He has presented lectures at major technical conferences around the world as well as teaching tutorial seminars on welding of stainless steels, in the USA and in Argentina, Australia, Chile, China, India and South Africa.

Dr Kotecki has been a continuous participant in the activities of the International Institute of Welding (IIW) Commission II *Arc Welding and Filler Metals* for 32 years. In that role he spearheaded the successful effort to develop physical standards for calibrating instruments for ferrite measurement in stainless steel weld metals. These physical standards are still current today.

COURSE PROUDLY SUPPORTED BY

WTIA National Diffusion Networks Project SMART Industry Group members

WTIA Technical Panels

WTIA Divisional Committees in WA, Queensland, Victoria and NSW



STAINLESS STEEL IN AUSTRALIA

Stainless steels are chosen for use because of the material's special properties, particularly longevity and corrosion resistance, and other important attributes such as hygiene, safety and environmental and aesthetic value.

In the past 15 years, the use of stainless steel in Australia has more than doubled. Annual consumption has increased from around 60,000 tonnes a year to 135,000 tonnes a year. There has also been significant regionalisation of fabrication, due to growing sectors (such as the wine industry) and major projects in regional areas, including energy and mineral processing.

As stainless steel will sometimes be more expensive, on an initial cost basis, than competing materials in a given application, it is critical that the manufacturing process optimises the positive qualities of the material through best practice cutting, welding and post weld treatment.

In the coming decade, Australia plans more than \$900 billion of major project activity. Much of this activity will incorporate stainless steel in the operation kernels or some part of the design. Quality of outcome, and opportunity to participate in these projects, will rest on the skill of fabricators to produce superior techniques in welding and other technologies.

Stainless steel is not hard to weld, but it is different to weld and fabricate. This seminar will outline key principles and differences to assist fabricators to meet the challenges of the near future.

WHO SHOULD ATTEND?

Personnel: Production Managers, Maintenance Managers, Welding Engineers, Responsible Welding Coordinators and Supervisors, QA Managers, Fabrication Managers, Specifiers, Designers, Technical Welding Representatives and Educators.

Industries: Fabrication, Tankage, Naval, Process Plant, Oil and Gas, Offshore, Architectural, Mineral Process, Building, Marine, Pressure Equipment, Manufacturing, Quality Assurance, Maintenance, Transport, Inspection, Wine, Pulp and Paper, Construction and Food.

SEMINAR CONTENT

This seminar addresses correct handling, avoiding contamination, pickling, passivation, housekeeping and other issues within the context of welding metallurgy. The full range of stainless steels is covered in the Seminar content, as well as processes and consumables including covered electrodes, submerged arc wires and fluxes, gas tungsten arc wires and gases and flux cored arc electrodes and gases.

SEMINAR OUTLINE

- I. Introduction to stainless steels – a brief history
- II. Welding of martensitic stainless steels
 - A. Typical industrial alloys
 - B. Metallurgical features affecting welding
 - C. Welding procedures
- III. Welding of ferritic stainless steels
 - A. Typical industrial alloys
 - B. Metallurgical features affecting welding
 - C. Welding procedures
- IV. Welding of austenitic stainless steels
 - A. Typical industrial alloys
 - B. Need for ferrite and measurement of ferrite
 - C. Other metallurgical features affecting welding
 - D. Welding procedures
- V. Welding of duplex stainless steels
 - A. Typical industrial alloys
 - B. Metallurgical features affecting welding
 - C. Welding procedures
- VI. Welding of precipitation hardening stainless steels
 - A. Typical industrial alloys
 - B. Metallurgical features affecting welding
 - C. Welding procedures
- VII. Filler metal classifications
 - A. AWS and EN ISO systems
 - B. How to convert good filler metals into bad welds

SEMINAR PROGRAMME

08:00	Registration
08:30-12:30	Session 1
12:30-13:15	Lunch
13:15-16:30	Session 2
16:30	Close