

# Australian Industry **ozWELD**

# WINS!

WTIA National Diffusion Networks  
Project (NDNP) funded by the  
Federal and State and Territory  
Governments and industry



**AusIndustry**

## **SUCCESS STORY NUMBER D04:** DEFENCE INDUSTRY STUDY MISSION – *Learning of the latest European technologies keeps the Australian shipbuilding industry competitive*

### **Focus**

Through the NDNP Defence Industry Sectoral Project, WTIA is committed to assisting companies and organisations to access latest technologies, systems and know-how, particularly in the shipbuilding industry due to the recent focus on naval defence contracts in Australia. A recent Industry Study Mission to Europe introduced delegates to new welding technologies that may be used to promote innovation and competitiveness in the Australian shipbuilding and repair industry.

### **Visits and outputs**

The Mission commenced in the UK with a visit to TWI to discuss defence-related welding and joining activities, services and products. An excellent understanding of TWI capabilities was gained, and contacts for future collaboration established.

After travelling to the Netherlands, delegates attended the 2-day meeting of the International Institute of Welding (IIW) Welding Shipbuilding Working Group. Of particular interest were papers presented on the latest developments and applications of robotic welding in shipbuilding in both steel and aluminium structures, the economic feasibility of robotic welding in a medium sized shipyard, the latest developments in rapid programming of robot cells to increase flexibility and the development of a very practical quality assurance system in a medium sized shipyard.

Australian delegates also made presentations to the group, giving an overview of current and future shipbuilding and maintenance activities, raising international awareness of the activities and capabilities within the shipbuilding industry in Australia. The meeting was hosted by the IHC Beaver and included a technical tour of their floating dredge building facilities.

The following leading European Shipyards and organisations were visited:

Meyer Werft Shipyard, Papenburg, Germany

- Dredgers Shipyard, Sliedrecht, Netherlands
- Kranendonk Technical Centre, Kiel, Germany
- Aker Oostsee Shipyard, Rostock, Germany
- SLV welding lab, Rostock, Germany
- IMG (Ingenieurtechnik und Maschinenbau GmbH), Rostock, Germany

- Odense Steel Shipyard, Odense, Denmark
- Aker Finnyards (ex Kvaerner Masa-Yards), Turku, Finland
- Blohm and Voss Shipyard, Hamburg, Germany



*At TWI UK, from left: Delegates Geoffrey Cooke (CME), Glen Sloan (ASC) and Glen Allan (WTI) with Graham Wylde and John John Davenport (TWI)*

The European sites visited operated with a highly professional workforce structure where all personnel engaged in welding processes were classified under international competency standards. These standards applied at various levels to welding engineers, technologists, supervisors and welders.

They provided a model on how Australian competency levels can be raised to meet new technologies and demonstrated the benefits of achieving international recognition of qualifications. WTIA has recently initiated a major strategy to resolve this problem through the introduction of AS/NZS ISO 3834 "Quality requirements for welding-Fusion welding of metallic materials" as a compulsory standard for defence contractors.

### **Training and OH&S**

Like Australian industry, the European manufacturers are facing shortages of skilled staff in the welding trades and professions. Shipyard engineers were able to show how their organisations had worked with training authorities to integrate the welding trade skills with the operation of the computer controlled welding and robotic equipment.

### **Conclusion**

The knowledge and experience gained, and the contacts established as a result of the overseas visit will directly benefit Australian industry in a wide range of engineering, welding manufacturing and ship repair activities.

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