

Australian Industry **OZWELD**

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



AusIndustry

SUCCESS STORY NUMBER MS02: LATEST TECHNOLOGIES FOR THE LASER PROCESSING OF PLASTICS – *Technology Demonstrations for the Medical Devices and Sensors industry, and others, in Australia.*

Technology Needs in Australia

Australian manufacturers are aware of the need to adopt best practice technology in order to be competitive in a global market place. A degree of complacency remains, however, that exhibits itself as some manufacturers being prepared to carry on using superseded technology rather than to make timely investments and commit to emerging technologies.

With the assistance of the OzWeld Technology Support Centres Network, WTIA is bring to industry awareness of the opportunities for Australian manufacturers to exploit the most appropriate precision manufacturing practices.

After an initial series of Seminars in March 2002, Dr Norman Stockham of TWI UK visited Australia in April 2005 to deliver a series of Workshops explaining the state-of-the-art in medical device technology and discuss the impact of trends in new materials, processing, electronic packaging and MEMs. The workshops, attended by over 70 people around the country, also reviewed the challenges facing the medical device industry and some potential solutions and discussed future technologies and needs in Australia. Australian capabilities in the sector were show cased by ANSTO and CSIRO.

Technology Demonstrations: Laser Processing of Plastics

As a result of the identification of technology needs through the previous events and liaison with industry representatives, a series of Technology Demonstrations on laser processing of plastics was held in Adelaide, Perth, Brisbane, Melbourne and Sydney in August 2005.

It soon became obvious that the technology on display was of interest to a wide range of industry sectors, from automotive and defence to packaging and medical devices, and the events were well supported by AEEMA, AusBiotech, AIDN, SAE and the Medical Device Network.

Over 140 people attended these free demonstrations which involved moving 250 kg of laser equipment across the country.



Taking a good look at laser processing equipment during the Technology Demonstrations in Perth WA

The team of presenters included Ian Henderson of the WTIA, Simon Doe, CSIRO Manufacturing and Infrastructure Technology and Gerri Triani from ANSTO, central members of the ISP. Most importantly, presentations, demonstrations and equipment were provided by John Grace of Raymax Applications, Peter Roberts of BASF-Australia, Neil Penman of Photon Engineering and Jeff Franks and Bernard Kögl of Laser Resources of Australia/Rofin.

These companies donated considerable time and effort to ensuring that industry could access the very best and latest information and technologies in these advanced manufacturing techniques. The events in each state were hosted by CSIRO-MIT, Royal Perth Hospital, QMI, Minifab and ANSTO.

Lasers have found wide application in materials processing in a very broad range of industry endeavours, including welding, drilling, marking, cutting, soldering, brazing metals, plastics and ceramics. The advent of portable medium power solid state lasers with fibre optic beam delivery has considerably broadened the industry interest in investing in laser technology, because these systems can be configured to address a number of technology needs to ensure the available capacity is utilised.

The Technology Demonstrations brought together a unique combination of expertise and equipment to demonstrate first hand, directly to industry, the future of laser processing in Australia.

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