

helping you make the most
of laser technology

Workshop information

Venue

The Ramsay Moon Conference Centre,
TWI, Granta Park, Great Abington
Cambridge CB21 6AL



Delegates

Delegates will receive name badges and packs including a CD with key slides or notes of presentations in pdf format. A buffet lunch will also be provided together with refreshments throughout the day. Please advise us of any special dietary needs.

Exhibitors

The exhibition will be located in the same area as the morning refreshments and lunch are served. There is all day parking immediately outside the Conference Centre which will be open from 08.00 for exhibitors wishing to set up their tables before registration. Table tops of approximately 1820 x 910 mm and Velcro-compatible backboards will be provided. 240V power will be available throughout the exhibition area.

Registration

AILU members need only give their names, by phone +44 (0)1235 539595 or email to events@ailu.org.uk. Otherwise a registration form should be completed.

Delegates who are not members of AILU or of a supporting organisation and who decide to join the Association within 10 weeks of the event will be reimbursed the difference between the member and non-member registration fee as a discount on their first year's corporate membership subscription. Full details of AILU membership can be found at www.ailu.org.uk, taking the link to 'about us'.

Travel

TWI is readily accessible by road. The nearest railway station is Cambridge (10 miles) and the nearest airport is Stansted (21 miles). Full details of travel options together with a regional and site map can be found at:
http://www.twi.co.uk/j32k/unprotected/band_1/twi_map1.html

Accommodation

Some accommodation is available at the TWI Conference Centre and may be booked direct by calling the Centre on +44 1223 894327. There is also a Travelodge Hotel (Cambridge Fourwentways, T: +44 (0)870 1911519) within a mile of the Centre and other accommodation in neighbouring villages and in Cambridge city.

Presentations

The programme of talks will be held in the lecture theatre of the Ramsay Moon Conference Centre, TWI.

Exhibition

To book a tabletop contact the AILU office (T: +44 (0)1235 539595; E: courses@ailu.org.uk). Spaces are limited so an early response is recommended.

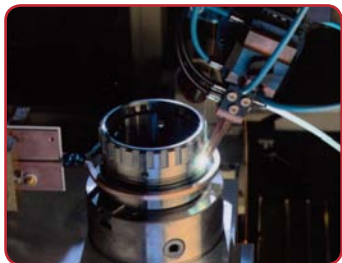
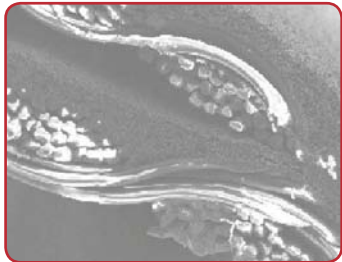
Clinic

A selection of experts will be available for one-to-one technical and/or commercial discussions over most of the lunch period. Places can be reserved upon arrival or pre-booked by contacting the AILU office (T: +44 (0)1235 539595; E: courses@ailu.org.uk).

AILU reserves the right to alter the programme or cancel the meeting at short notice and accepts no responsibility for the views expressed by the speakers or delegates.

Wednesday 20 February 2008
TWI,
Cambridge, UK

Welding and cutting using lasers



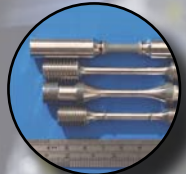
Images Courtesy of GSI Group, TWI Ltd, Comau, Fraunhofer IWS Dresden.

Welding and Cutting with Fibre-Delivered Laser Beams

**Presentations, exhibition, clinic
& tour**

Presentations by international experts.

Supported by:



Images Courtesy of Fraunhofer IWS Dresden, Precitec Optronic GmbH, GSI Group, Laserline AG.

About this workshop

Fibre delivery for welding and cutting has been available for many years, offering many obvious benefits over free space optics for the delivery of high power laser radiation. However, driven by developments in high brightness solid state lasers (especially fibre and disk lasers), the benefits of fibre delivery in terms of delivered power and beam quality has increased massively in recent years.

This workshop will assess the unique characteristics of high power fibre-delivered laser systems, the exciting opportunities they present to manufacturing industry, current activities and future promise.

In this meeting, both the commercial use of laser processing technology and research into improving fibre-delivered laser systems is addressed. Themes include:

- Developments of new fibre-delivered welding technologies;
- Materials processing tools for solid state lasers;
- Innovations in source and delivery technology;
- Case studies of fibre-delivered welding and cutting in the transport, aerospace, textiles and other sectors;
- Fibre laser cutting from fine to thick section;
- Opportunities for collaborative activities and funding in Europe.

Paul Hilton Workshop Chair

Paul Hilton is Technology Manager at TWI, where he has responsibility for the strategic development of laser materials



processing. As such he has been instrumental in the setting up and management of several European collaborative research projects involving applications of CO₂, Nd:YAG, CO, diode and more recently, fibre lasers. Before joining TWI in 1992, he worked in the laser systems industry at Control Laser and Integrated Laser Systems. Before that, he worked for Oxford Instruments.

Who should attend?

This workshop promises to be a valuable day for anyone with an interest or involvement in laser materials processing. The wide scope of the workshop should give delegates an excellent overview of the many opportunities that lasers offer for a variety of applications and sectors.

The workshop will be of interest to manufacturers, supply companies, laser users, laser source manufacturers and suppliers, laser-based engineering subcontractors and machine integrators. All of whom will find opportunities to benefit from the rapid growth in fibre-delivered lasers, and enhance their supply chain partnerships.

www.ailu.org.uk

Programme overview

08:40-09:15	Registration and refreshments
09:15-09:20	Welcome and Introduction Paul Hilton TWI Ltd (UK)
09:20-09:50	KEYNOTE TALK: Development of new laser welding technologies and their industrial use in Germany Berndt Brenner Fraunhofer IWS Dresden (GER)
09:50-10:10	Welding of technical textiles using fibre delivered diode laser beams Aurelie Brun TWI Ltd (UK)
10:10-10:30	Novel concepts for robust laser beam delivery design for industrial applications Mo Naeem GSI Group Ltd (UK)
10:30-10:50	The challenges facing fibre optic delivery of diode laser beams Stewart McDougall Intense Ltd (UK)
10:50-11:25	Refreshment break
11:25-11:45	The future use and adoption of remote laser welding for first tier automotive suppliers Richard Hewitt WMG (UK) Charles Marine Stadco Group Ltd (UK)
11:45-12:05	State of the art material processing tools for solid state lasers Markus Kogel-Hollacher Precitec Optronic GmbH (GER)
12:05-12:25	Supersonic nozzle design for 1µm laser sources Ali Khan University of Cambridge (UK)
12:25-13:30	Lunch & EXHIBITION Clinic
12:40-13:10	PKTN and Photonics 21 - Why you should be interested? Alastair Wilson Photonics KTN (UK)
13:30-13:50	Cutting with a single mode fibre laser Lin Li University of Manchester (UK)
14:10-14:30	Welding of metals using high power fibre delivered diode laser beams Mark Daichendt Laserline (GER)
14:30-15:05	Refreshment break
15:05-15:25	Fibre laser hybrid welding of aluminium alloy for the railway sector Chris Allen TWI Ltd (UK)
15:25-15:45	Thick section and remote cutting with a fibre laser Wolfgang Danzer Linde Gas AG (GER)
15:45-16:05	Pulsed and CW welding of stainless steel using a 100W fibre laser Stewart Williams Cranfield University (UK)
16:10-17:00	Tour
17:00	Depart

www.ailu.org.uk

Registration Form

Welding and cutting with fibre-delivered laser beams

20 February 2008

Delegate information

.....
Title First name Surname
Position:.....
Organisation:.....
Address:.....
.....
Post Code:.....
Tel:..... Fax:.....
E-mail:.....

Payment options

- Please invoice me
- I wish to pay in advance by:
1. Bank/Euro cheque in £ Sterling payable to AILU
 2. Visa/Mastercard (billing in GBP):
Name on Card
- Number _ _ _ _ _ Exp _ / _ / _
Please debit my account
- I wish to register as a delegate. The applicable rate is:
- GBP 142.00 plus VAT (=£166.85).
I am a member of AILU and/or one of the supporting organisations:
 Photonics KTN SOA WOF SEPNET
- GBP 65.00 incl. VAT, GBP 40.00 incl. VAT,
I am unemployed or retired. I am a full time student.
- GBP 175.00 plus VAT (=£205.62).
- I wish to register as an exhibitor. Please reserve me a table.
The applicable rate is:
 GBP 142.00 plus VAT (=£166.85).
I am a member of AILU or one the supporting organisations ticked above.
- GBP 175.00 plus VAT (=£205.62).
- I am registering as a delegate and exhibitor.
Please give me a GBP 50 plus VAT discount on the total fee.

Signed:..... Date:.....

Cancellations will be accepted up to 1 week before the event; otherwise the full fee may be charged.

Complete the form and return by fax or post.
AILU, 100 Ock St, Abingdon, Oxon OX14 5DH UK.
Fax: +44 (0)1235 550499