News from the world of Lasers

April 2015

Distributed by Raymax Lasers ® - Keeping our customers in the light!

In this edition: ***LIGHTMACHINERY*** *New excimer laser;* ***BeAM:*** *CLAD technology;* ***JDSU:*** *MicroNIR;* ***NEWS; WHAT'S ON WHERE; WHAT'S IN MY INBOX; AUSTECH:*** *Raymax on* ***Stand #686.***

LightMachinery
Excellence in lasers and optics

IPEX-700 Series Excimer laser from LightMachinery

Powerful, Reliable, Compact, Simple to Operate

Designed for medium duty cycle operation in industrial and R&D environments, IPEX-700 Series lasers deliver high power ultraviolet laser machining combined with state-of-the-art performance. Incorporating LightMachinery's proprietary ICON™ (Integrated Ceramic on Nickel) technology, IPEX lasers offer long gas lifetimes, superior optical stability and precise control of laser operating parameters.

IPEX-700 is ideal for applications such as pulsed laser deposition, PLD and can be operated from any computer using Windows 7 or 8. A Microsoft Surface Pro 3 is included in the package.

LightMachinery's Optical Design Tools:

Need to design the specifications for your own Etalon, Fizeau Wedge or Fresnel Rhomb? Then go to https://lightmachinery.com/optical-design-center/ its FREE! LightMachinery has created a set of free cloud based optical design tools that range from simple calculators to sophisticated design software. Enjoy!

Want more information about the LIghtMachinery's ***new*** *excimer laser system? Contact Raymax on 02 9979 7646*

AUSTECH May 26 to 29 (Melbourne)

Raymax Lasers are on stand **# 686**

Raymax offers a technical difference. Come and talk to our physicists to help resolve your manufacturing requirements!

BeAM
BE ADDITIVE MANUFACTURING

BeAM – be Additive Manufacturing

Industrialise your manufacturing and repair process

BeAM is the first European manufacturer of additive manufacturing (3D) machines using **metal powder** deposit technology. BeAM manufactures and markets systems for the manufacture and repair of parts.

Offering a solution based approach to reduce technological and financial risks for manufacturers, whilst allowing them to benefit from technology with a competitive edge at an early stage.

The CLAD process

Metal powders are injected into the CLAD nozzle to create a uniform jet. The powders melt as they move across the laser beam, this results in a uniform and dense deposit with technical properties akin to parts produced by forging and founding processes. The deposited material is protected locally against oxidation by a neutral gas.

With over 600 plane engines repaired for the US company Chromally.

The CLAD process has allowed optimization of the engine part along with extending the life cycle of the combustion engines. The process is showing positive applications not just in the aviation field, but in nuclear and medical fields as well due to its capability of manufacturing high precision metal parts and reparation using a 3D printing technique.

Diagram of CLAD nozzle

To find out more about BeaM visit Raymax at AUSTECH Stand #

JDSU

The MicroNIR by JDSU

The MicroNIR spectrometer is an ultra-compact near-infrared spectrometer that is breaking the paradigm in the pharmaceutical and security industries, specifically for its high performance-to-price ratio and ease of use. The spectrometer is the smallest NIR probe available on the market today, allowing for easy integration into a unit operation such as a fluid bed dryer, blender, roller

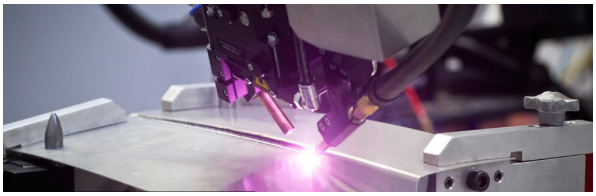
compactor, or tableting machine for moisture content monitoring or process endpoint determination in pharmaceuticals. In addition, the MicroNIR's small form factor allows for a lightweight method to detect dangerous materials such as explosives or narcotics.

Infrared usage is a growing field. Interested parties should access the international *Journal of Near Infrared Spectroscopy.* A number of studies using the MicroNIR are published in these across a range of uses. Raymax has access to some studies and are happy to pass them on. Request by emailing *info@raymax.com.au*

NEWS - Laserline visits in Australia

During April Markus Rütering, the Asian Sales Manager from Laserline, toured Australia with Raymax's Cedric Chaminade. In each stop they viewed installationed Laserlines in action. Most lasers are used for cladding in a restorative or reclamation process on heavy machinery parts such as oil drill bits or screw compressor rotors. The process can add years to a part and save on the purchase of a new part providing a very attractive solution to heavy industry.

If you'd like to know of a laser cladding facility near your work place contact Raymax and we will point you in the right direction.



WHAT'S ON WHERE?

AUSTECH 26 – 29 May, Melbourne

LASER World of PHOTONICS 22 – 25 June, München

NEWS - PerfoTec systems Australian publicity

PerfoTec lasers provide a revolutionary soluti on to the shelf life of fresh produce. This was realized by Dominic Jenkin, Field Extension Office for ***VegetablesWA*** who wrote a fantastic article for the 2015 Autumn publication. The article has now been placed on the PerfoTec sight for international viewing of this great product from the Netherlands. www.perfotec.com

NEWS – Intelligence Mark Positioning gets Australian publicity

An article discussing IMP using a FOBA M1,000 laser for marking on medical products is currently appearing on Manufacturers Monthly web site (News 20 April). With exponential growth in hip and knee implants across the globe, Australian and international standards require individual traceable marks on each product. IMP provides ease of accuracy!

http://www.manmonthly.com.au/news/medical-product-marking-with-lasers

Find out more by visiting Raymax at AUSTECH Stand 686

What's in MY INBOX!

Advances in laser usage in the medical area are spectacular as indicated in the latest issue of *Biooptics World.* Here neurosurgeons are using real-time navigated laser therapy for brain lesion ablation within intraoperative magnetic resonance imaging. The two processes are:

1. The NeuroBlate System employs a pulsed surgical laser to deliver targeted energy to abnormal brain tissue such as tumors and other neurological soft tissue lesions through a minimally invasive and image-guided approach.
2. The ClearPoint system—neuro-navigation technology that enables minimally invasive neurosurgery under continuous magnetic resonance (MR) guidance—provides surgeons with a high-resolution view of the patient's brain and real-time direction during intracranial procedures.