News from the world of Lasers

September 2014

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

In this edition: ***BeAM Machines:*** *3D with metals;* ***BOFA*** *3D air extractors;* ***MUNDI TECHNOLOGY:*** *what's new;* ***LASERLINE****: LDF diode lasers;* ***ATL*** *Excimer lasers.* ***NEW: What's in my inbox!***

3D ADDITIVE MANUFACTURING USING METALS

"Additive manufacturing is going to change a lot of things. We are going to be able to manufacture things that up until now were impossible to make at an acceptable price ….."
Emmanual Laubriat CEO **BeAM**

The process: Metal powders are injected into the CLAD nozzle to create a uniform jet. The powders melt as they move across the laser beam resulting 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 no interference with the part surface in repairs and controlled construction by cladding - a proven laser technology offering real opportunities in both repair and additive manufacturing!

Take just 3 minutes to see what BeAM Machines can do - - -
http://www.beam-machines.fr/uk/en/innovation/techology.html

If you'd like to know more contact Raymax Applications Pty Ltd in NSW
info@raymax.com.au 02 9979 7646

3D PRINTING REQUIRES AIR EXTRACTION!

3D Printing brings technological advances across a range of industries but it also creates unsuitable working environments as toxic fumes, dust and particulates, carcinogens and VOC's can become the bi-product of activity. To provide a safe working environment effective capture and filtration is essential as detailed in Safe Work Australia's *Guidance on the Interpretation of Workplace Exposure Standards for Airborne Contaminants 2012*.

BOFA supply four alternate 3D Printing extractors from which companies can select that meet Australian standards: 3D PrintPRO Mini, 3D PrintPro Eco., 3D PrintPRO Max and 3D PrintPRO Max+. Compact and efficient, each unit combines high capture performance with proven filter technology ensuring the effective removal of hazardous particulate, gases and vapours along with odours associated with 3D printing methods.

Keep safety uppermost – contact Raymax to identify your 3D solution

MUNDI TECHNOLOGY

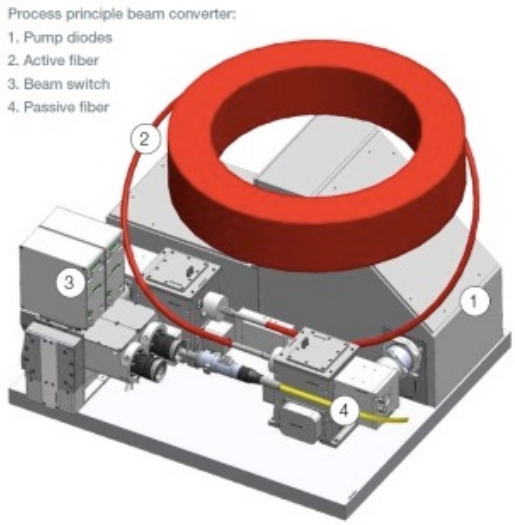
Mundiscan presents the new standard in laser coding offering a two line code of text at a speed of 70,000+ labels per hour! This high rate of coding also brings with it coding quality and reduced operating costs with flexible coding in real time for better traceability.

MundiCam camera system is fully integrated, checking presence of code, quality of output and label movement detection with correction capability.

Both Dutch and Belgium breweries namely Heineken, Palm, Duval and Grolsch use MundiScan lasers 24/7.

Optimum combination – New LDF with high power and superior beam quality. The newly developed diode laser with integrated beam quality converter sets a new benchmark and with up to 4,000 W of laser power, and 8 mm-mrad beam quality. This robust LDF carries a 5 year warranty of diode laser elements and 2 years on the laser system and converter fiber.

The principle of modularity is applied in the operation, making it easy to adapt the beam source to specific applications. Applications with a small focus and corresponding power densities up to a focal length of well over 500 mm can be implemented, enabling remote welding, a new benefit to industry.



The diode laser with 8 mm-mrad is a technical enhancement of the existing LDF series. Starting from a standard diode laser, the laser beam, at medium beam quality is first focused into an active fiber. This improves the **laser beam quality** by conversion technology so that a beam quality better than **8 mm-mrad** is attained at the active fiber outlet.

Should you require further information or a data sheet please contact Raymax on info@raymax.com.au or 02 9979 7646

In 1993 ATL Lasertechnik recognized that expanding the range of applications for coherent UV radiation in science, medicine and industry required a new generation of excimer lasers to fill the gap between large, conventional UV laser sources such as excimer lasers (moderate rep rates, hundreds of millijoules) and RFI-excited UV sources (high rep rates, micro-joules).
This technology is particularly apparent in applications requiring deep UV (248 nm, 193 nm, and 157 nm) beyond the current range of diode-pumped solid state sources.

This gap has now been filled with the ATLEX-1000-I laser is the only air-cooled, 1 KHz excimer laser available. A fraction of the size of others it has an average power up to 15 mJ and 10 Watt at 248nm, respectively. Based on ATL Lasertechnik's proprietary ultra-fast, solid-state switch and coronal "pre-ion-discharge" technology, with an all ceramic laser resonator (TMC), the ATL-1000-I is designed for industrial high duty cycle operation, micromachining, medical and scientific applications.

September 2014 - *What's in my inbox!*

Manufacturers Monthly advises on a forum: Paving the road ahead for manufacturing in Australia – Nov 24-28. If your intersted in attending: http://www.convention2014.org.au

Laser Focus World in news@lfw-media.com Provides a useful article about Ultrafast scientific lasers undergo an industrial revolution.

AMT Magazine starts a discussion: 'Patriotism – It's a big word in manufacturing'. Subscribe to their newsletter: amtmagazine@amtil.com.au

Australia revises AS 4024.1 and adopts **International Machinery Safety Standards.** Keep safe – find out more on: **http://www.safetysolutions.net.au/news/69002**