Laserline GmbH is leading the field in identifying applications for high powered diode laser systems. Introducing new technology to traditional tasks that brings about change also requires improvements in procedures in the job itself as well as economic improvements in the overall process. Laserline GmbH have focused advances in the use of high powered diodes to these two aspects, process improvements and economic improvements. In a recent case, work undertaken by Hauser & Co a Germany company specialising in coatings, developed a new method, using the Laserline LDF 6000-100 diode laser, that enabled them to combine thermal spraying with laser cladding, two processes that are usually seen as very separate operations in the enhancement or repair of parts, and referred to as thermal laser spraying.

The issue arose when Hauser & Co had to apply a suitable anti-corrosion coating to the membrane walls of boiler tubes in waste incinerator plants. The boiler walls consist of water-bearing steel pipes that absorb the thermal energy of the firing and then transfer it to the water-steam circuits. However, flue gas temperature of up to 1000 degrees C is required to drive the power plant turbines placing the metal under extreme operating conditions, coupled with the inclusion of chlorine in the gas itself all works to break down the pipes inside the boiler.

The solution involved the use of a diode laser integrated into a multiaxial robotic arm enabling better access to the boiler walls and ease of control of spraying as the laser beam is being guided by inert gas ensuring precise application of the cladding material. The result was not just a more economic approach to a task but the coating process yielded a strong long-lasting finish. For more information on the specifics of the application download Laserline - Thermal Spraying with Diode Lasers which can be found on the www.raymax.com.au under White Papers.

Laserline lasers are produced in modular units to make them easy to configure into a process, or, they can be joined together thereby building a single powerful laser system. Of all the installations of Laserline systems, the most preferred use is in some form or repair of parts indicating the existence of a clear market group that is expanding due to the costs savings on purchasing a replacement part and the exceptional finish of the cladding process that has been shown to extend the life of the repaired part. Today we find laser coating of items such as industrial valves, turbine blades, drive shafts, in the repair of sealing plates, spindles and last but not least, in the maritime sector.

Laserline high powered diode lasers can generate up to 25kW output power for industrial materials processing. Applications include cladding, additive manufacturing, hardening, welding of metals and plastics, and brazing. If you would like to know more about Laserline lasers please contact Raymax on 02 9979 7646.
Linx Laser coding and marking machines are ideal for high print volumes – such as food, drink and pharmaceutical products – and provide permanent traceability.

Superior quality codes at some of the fastest speeds available on the market.

The Linx SLHP is a high power, 120 W CO₂ laser which can code accurately at high speeds - for example in excess of 70,000 bottles per hour on high speed beverage production lines. The high power allows many different materials to be marked quickly and permanently – including traditionally hard-to-mark substrates such as glass, rubber and PET.

Key benefits

- Graphics can be accurately reproduced with vector-generated codes
- High power of the laser means a shorter dwell time on the product
- Air-cooled – no factory air required
- Large scan area for multiple lines of code/graphics
- IP56 rating ensures reliable operation in harsh production environments
- Internal air cooling system for increased efficiency and less maintenance
- Air-cooled – no factory air or water required
- Efficient use of the laser source prolongs the life of the laser tube
- No ongoing consumable costs

However, the most important key benefit occurs where a permanent, traceable code provides product security such as in the wine industry. Demand for Australian wine in China is changing with real growth occurring in the area of premium wines. Unfortunately, there has also been a growth in counterfeit activity with loss of revenue being a big concern for many wineries. But the real danger for a winery is the damage to a brand’s reputation, where an inferior counterfeit wine is served leaving the drinker unforgiving of the brand in the future.

Consumers identify brands by the beautiful marketing labels, but protecting the wine itself requires traceable, permanent coding. For many years Linx lasers have successfully coded on glass bottles with data that allows the wine maker to identify and trace their product.

Recently Linx Printing Technologies has made changes to its stable of lasers, old ones becoming obsolete (no more parts available), accompanied by the release of new faster, efficient lasers easy to install on your bottling line. Included is Viscode software that allows flexibility for bottlers to mark traceable codes on bottles and/or labels.

As a UK based company, Linx is very aware of the presence of counterfeit alcohol, with the HMRC seizing 50 million liters every year! If you’d like to read more about how Linx lasers can assist in preventing this, read: Anti-Counterfeiting for Alcoholic Drinks. https://www.linxglobal.com/en-gb/blog/posts/2018/july/anti-counterfeiting-for-alcoholic-drinks/

To reduce risk and ensure traceability why not upgrading to a NEW Linx laser now? And if you want to counter counterfeiting, why not call to discuss possible options with us here at Raymax on 02 9979 7646? We’d be delighted to assist.

WHAT’S ON?

CAMS 2018: Advanced Materials and Manufacturing – Wollongong University
November 27 – 29

Frankfurt, Germany
13 – 16 November.

WHAT’S IN MY INBOX?

Drone Uses Insect-Inspired Vision to Fly Through Small Gaps

The University of Maryland’s Perception and Robotics Group has been working on a system that allows a drone to fly through very small and completely unknown gaps using just a single camera and on board processing. Based on a bee-inspired strategy it yields a success rate of 85 percent. Bees make getting into little spaces through a sort of minimalist brute-force approach to the problem: They fly up to a small hole or gap, hover, wander back and forth a little bit to collect visual information about where the edges of the gap are, and then steer themselves through. It’s not fast, and it’s not particularly elegant, but it’s reliable and doesn’t take much to execute. Want to read more? https://spectrum.ieee.org/automaton/robotics/drones/insect-inspired-vision-system-helps-drones-pass-through-small-gaps?utm_source=roboticsnews&utm_campaign=roboticsnews-09-25-18&utm_medium=email