Diode lasers for today’s welding requirements from Laserline

One of the most important applications of diode lasers in the industrial sector is laser cladding. It is an established process for producing or restoring high quality laser coatings. Referred to as laser metal deposition welding, the process applies coatings of materials where the laser beam creates a molten pool on the workpiece surface, to which the coating material is fed and melted by the laser at the same time. The additional material, supplied as wire or powder, produces a layer on a base material after melting by the laser. The short reaction time causes only slight distortion, the cooling takes place quickly. The result is a layer that is metallurgically bonded to the base material. It is more hard-wearing than coatings produced by thermal spraying and, unlike hard chromium plating, harmless to health.

The advantages of laser metal deposition welding can be listed as:
- High flexibility
- Short process times
- Low distortion of treated workpiece
- Excellent adhesion
- High precision
- Virtually no porosity
- Extremely hard-wearing surface finish
- Real surface protection against wear
- Prevents corrosion creep
- Achieves much longer service life than from mechanical spraying

Laser powder cladding is a process being used by many repair shops across Australia to repair and refurbish heavy metal items like oil rig drill shafts and large earth moving equipment. In Melbourne, RUAG undertook research into repair of helicopter parts under extreme stresses when landing and now successfully service Defence aircraft!

Powder cladding with a typical particle size of 40-120 µm, enabling the use of a coaxial powder nozzle, can be applied to base materials such as various steels, cast iron, copper, aluminium, nickel-based and cobalt-based alloys can be treated. The layers are formed from iron-based alloys (low-alloy steels, tool steels, stainless steels), nickel-based alloys such as Inconel (625, 718, 738), cobalt-based alloys such as stellites, high-temperature alloys, aluminium alloys, titanium alloys and materials containing carbides as additional wear protection.

Carson Crosse from Raymax overseeing installation and training with the staff at QSP Engineering in Queensland.

The COVID-19 pandemic has not stopped the demand for cladding as new Laserline systems have been delivered and installed during the last two months. Now is the time to innovate and generate more business!

If you’d like to know more about how cladding repair processes can help expand your company offerings Carson or Cédric are available to talk with you on 02 9979 7646 or email info@raymax.com.au.
A partnership for turnkey industrial solutions between HySpex and Prediktera.

HySpex new release of industrial use hyperspectral imaging cameras is now bundled with Prediktera’s Breeze Runtime software a joint ownership venture between the two European companies. HySpex is an industry-leading brand for both airborne and ground-based hyperspectral imaging. HySpex sensors are renowned for their stability, flexibility and superior data quality. Integrating Breeze Runtime.

The software suite supports a user’s journey through research, application development, and process integration. By extending the dynamic features of Breeze with a real-time API, Prediktera reduces the time-to-market for implementation of chemical imaging for OEMs and machine integrators. Users can classify and quantify objects in real-time and use Breeze’s advanced object identification and spatial analysis features to simplify further processing of the scanned objects.

This just adds to the fantastic and innovative functions offered by HySpex!

FOBA Introduces the smallest laser marking head in the world!!

Titus redefines easy line and machine integration:
→ up to 90% smaller scan head,
→ straight (0°) and turned (90°) beam exit,
→ 3m and 10m fiber laser umbilical,
→ clamp’n go laser head brackets,
→ integrated focus finder for speedy focus adjustment and pilot laser for job simulation,
→ short working distances,
→ IP65/IP69 scan head protection,
→ numerous communication protocols (TCP/IP, PROFINET, EtherNet/IP; soon EtherCAT and OPC UA)

In April 2020 SLM Solutions launched the formation of an Additive Alliance Against Corona

The objective of the alliance is to combine the forces of companies in the AM industry and to take advantage of 3D printing’s rapid response time. Since 3D printing is already used in the production of medical components and the tooling to produce medical components, SLM® can quickly leverage machines and processes already certified to the current European “Medical Device Regulation” (MDR) and ISO 13485 guidelines. SLM® machines in the USA are already printing metal injection moulding tools for face shield production showing that additive manufacturing can contribute to combatting the crisis quickly.

"Sharing ideas, skills and networks is of great importance at this time of year to fight together against the spread of the virus, to reduce the shortage of important materials and to close possible gaps in the supply chains. Our global team of experts is available for this," Sebastian Kässner, Chief Marketing Officer at SLM Solutions Group.

We believe this is the time to work together. SLM Solutions invites all companies and organizations that can provide support in the form of production, development or logistics capacities, for example, or that already have concrete ideas and need a partner to implement them to join the Additive Alliance Against Corona.

https://additive-alliance-against-corona.slm-solutions.com/?hsCtaTracking=83c02ca8-29a7-df1c-a146-6ca88e341b97c6ba7df26-54fe-4a3-bb15-81476342df75

WHAT’S IN MY INBOX?
Nespresso launches 80% recycled aluminium coffee capsules

As part of its drive to boost its sustainability credentials, Nespresso has launched coffee capsules made using 80% recycled aluminium. I know one person at Raymax who will appreciate this and trust other coffee connoisseurs in our client base will too!