The French company, BeAM manufactures additive manufacturing machines and distributes them worldwide. As an original equipment manufacturer BeAM has control over the way the machine operates and are achieving success by examining what the market needs in terms of 3D printing and how they can best offer solutions to meet those needs.

BeAM machines use a different technological approach to 3D metal printing. While most machines on the market use P.B.F, or powder bed fusion, BeAM uses D.E.D or Directed Energy Deposition. This requires the use of a sophisticated coaxial nozzle that distributes the metal powder guided by inert gas, along with the laser beam all in one operation.

Based on the DED technology and application BeAM have achieved a process whereby complex parts can designed and built quickly. Additive manufacturing using 3D metal printing has opened opportunities to optimize the design of parts never before possible and it is this aspect, of transferring CAD designs to the laser system, that BeAM offers a unique approach. Through the use of CNC, or Computer Numerical Control, the CAD design sets the paths for the printing to occur and within the BeAM machine there are two locations that respond, the nozzle system injecting powder with three axis movement capability and the base system that holds the part, with two axis capability. This means the part can be moved as the layers are built up making it easier to achieve complex items.

BeAM’s industrial solutions typically utilize a deposition nozzle mounted on the Z-axis of a DED dedicated CNC machine. This allows continuous 5 axis freedom to build or repair components layer by layer without the need for support structures.

BeAM’s DED capability can be used to repair parts like turbine blades and fuel nozzles, add features to existing geometries, and build near net shape items with the best surface finish currently available from any metal-based additive manufacturer. This flexible laser system is available in the recently released Modulo 250 and Modulo 400.

Like further information? Contact Dr Cédric Chaminade 02 9979 7646
Raymax Lasers attended AUSTECH in early May in Melbourne’s Exhibition Centre. The event is being hailed as the most successful with more visitors than ever. Some 12,990 passed through the doors of the AUSTECH section alone, where members of AMTIL, Australian Manufacturing Technology Institute Limited, exhibited. It was extremely busy and we had difficulty keeping up with inquiries and information seekers! Lots of contact details were taken and follow-up has already commenced!

On our stand we represented largely SLM Solutions, but supported and provided information about Laserline, SPI, BeAM and Ophir power meters. The interest in SLM Solutions was very high and quite exciting for our team who were joined by Ralf Frohwerk the Global Business Development Manager from SLM Germany. SLM Solutions has recently grown its stable of offerings to a very smart SLM®280 for production processes and a very large SLM®800 that boasts a large build chamber and fast production.

We observed that the market in Australia appears to be keeping pace with Europe as a number of interested parties were ready to trial a proposed product in one of the systems. Product trials have lead to a number of dedicated workshops opening in Europe and the same is occurring here in Australia.

Product trials assist companies to work out just how they will implement the laser systems in their production lines. Questions of this nature were frequent and assisted by the presentation provided by Ralf Frohwerk at UNLIMIT3D and on hand for later discussions at the stand!

WHAT’S IN MY INBOX?

I have extracted a segment from the CSIRO report on Aussie kids in science – it is uplifting and inspirational. Check out the video and it will change your day, maybe even your life!

Aussie teens win prizes at the ‘Olympics of Science and Engineering’

What do you get when you bring together 1800 high school students, from more than 80 countries, regions and territories, in one auditorium, for five days? The Intel International Science and Engineering Fair

Aussie ambition was on show in Arizona

We supported six bright-eyed students from around Australia to travel to Phoenix, Arizona, for this year’s Intel ISEF Australian delegation. These students came from a variety of schools ranging from Sydney to a home school in a town of just over 300 people. But they’re all teenage science and engineering superstars with interests in technology, engineering, biology, health and chemistry.

Our Aussie delegates travelled over 13,000 kilometres and across multiple time zones to get to the final stage—the Grand Awards Ceremony.

And the stakes were high: not only did our teen participants walk away with international connections and insights into cutting edge research, but they also took home a share of the nearly $5 million USD in awards and scholarships.

So how did our Aussies go? Drum roll please!

On Friday morning Phoenix time (2am Australian Eastern Time), 1800 students crowded into the auditorium for the announcement of the winners and place-getters for the 2019 Intel ISEF Grand Awards.

We’re excited to say that five of our BHP Foundation Science and Engineering Award finalists won awards. A hearty congratulations to Lucy Lake, Ivy Brain, Mitchell Torok, Callum Predavec and Macinley Butson!

One student, Lucy, won the Engineering Mechanics Second Award. She created a new high performance rowing oar inspired by biomimicry—she looked to the bumps on whale flippers to help improve the oar’s design. Lucy’s reaction to receiving the award sums up the spirit of the fair: she looked overwhelmed with surprise and joy, and her smile seemed to stretch from ear to ear!

https://www.youtube.com/watch?time_continue=1&v=bkzPBm-WznU

Raymax Lasers 37/5 Ponderosa Pde WARRIEWOOD NSW 2102 T: +61 2 9979 7646 E: info@raymax.com.au