

NEW LIGHT SHONE ON EXTENDING WEAR LIFE

THE UNIVERSITY OF SOUTH AUSTRALIA (UNISA)'S FUTURE INDUSTRIES INSTITUTE (FII) ANNOUNCED A RESEARCH COLLABORATION AGREEMENT WITH LASERBOND, PROVIDING THE FOUNDATIONS FOR A CENTRE OF EXCELLENCE IN WEAR-LIFE EXTENSION FOR RESOURCE INDUSTRIES.

UniSA is part of a national collaborative group of five major Australian universities that form the Australian Technology Network of Universities (ATN), a new generation of universities focused on industry collaboration and real-world research with accelerated commercial impact. UniSA has a strong foundation in Materials and Mineral Sciences and advanced laser

manufacturing technologies.

The university's new multi-million dollar FII focuses on building knowledge and capacity in core future industries, with its objective to develop informed, industry-connected research and innovation in engineering and the physical sciences.

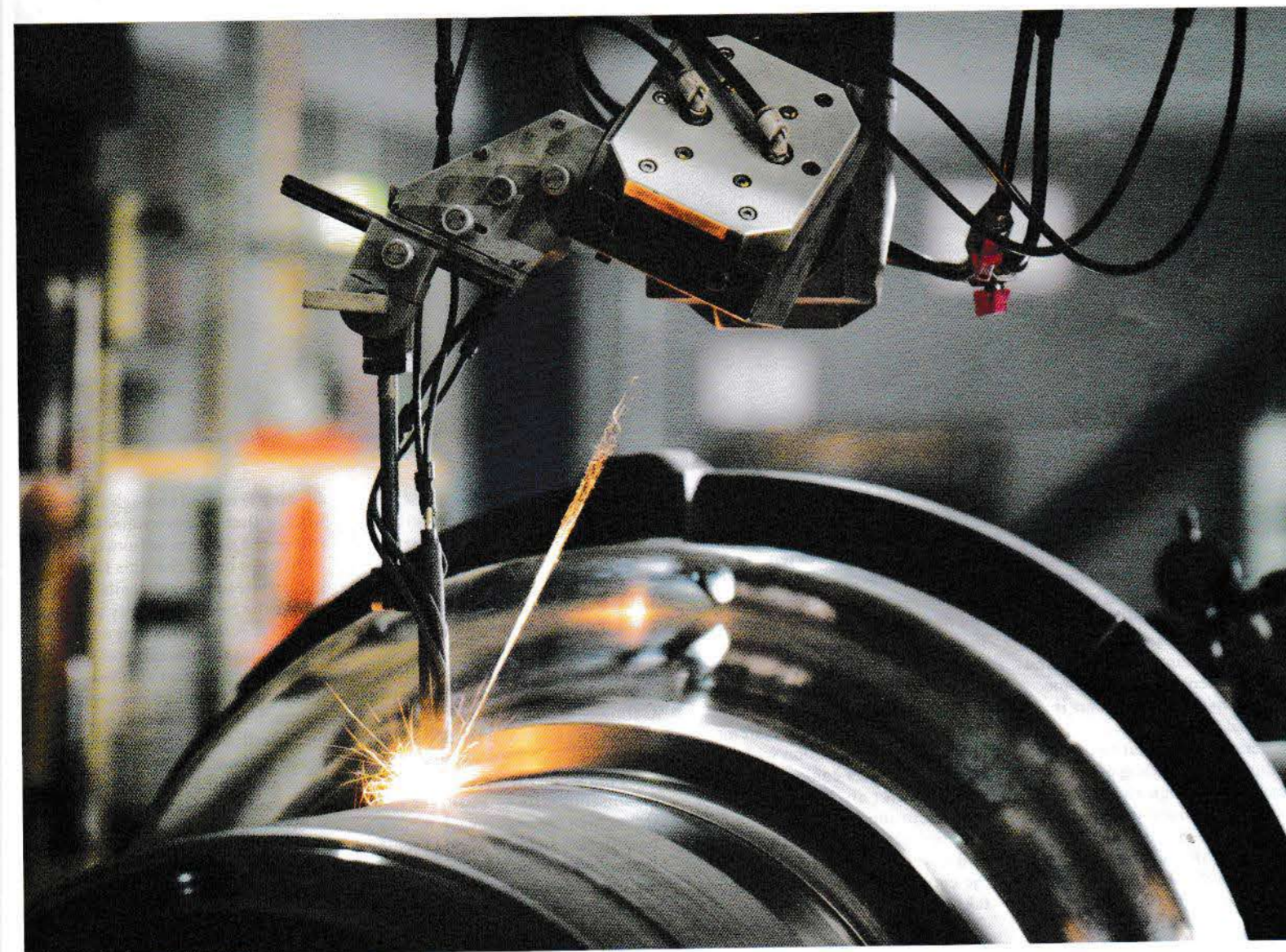
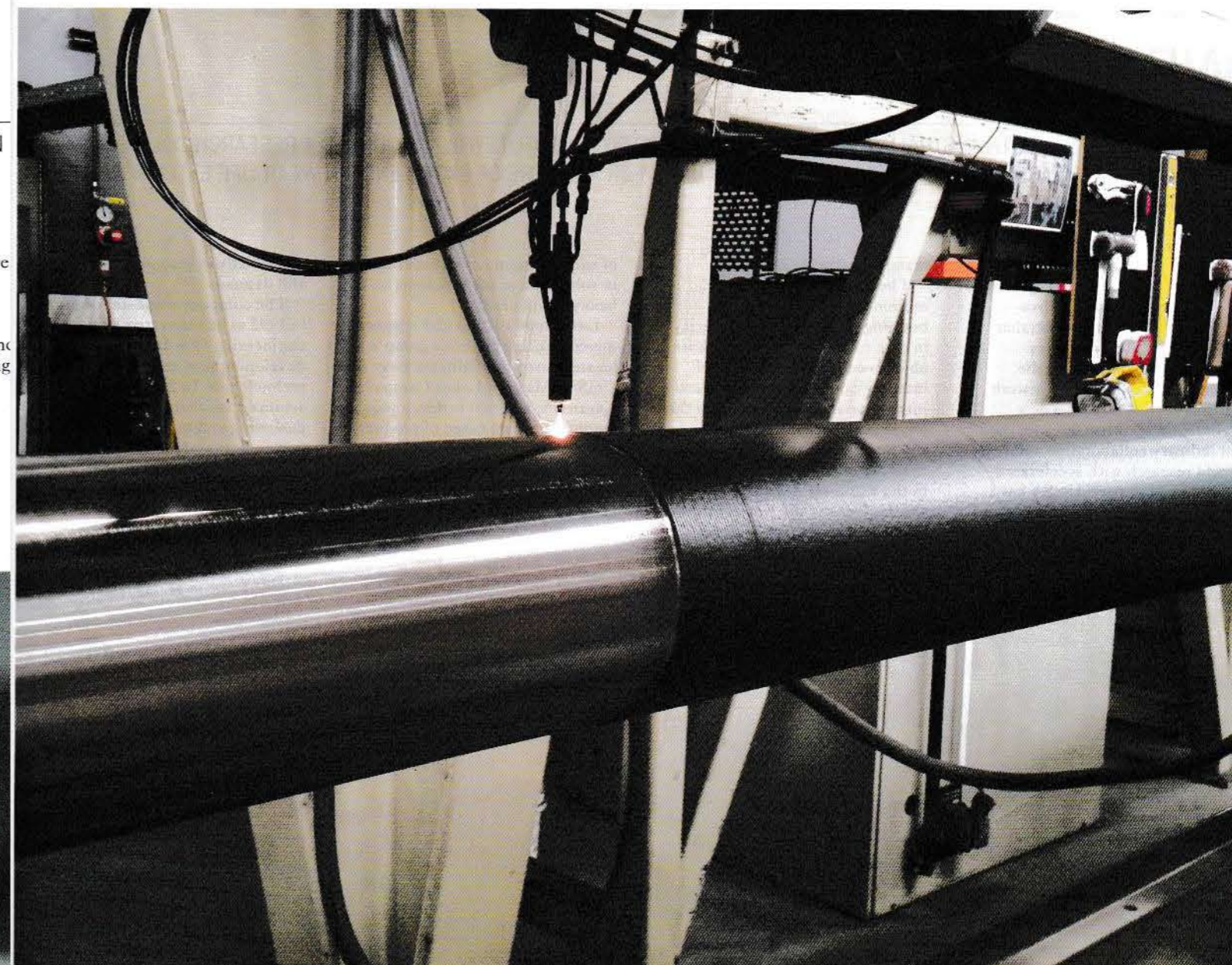
The strategic collaboration offers resource industry companies access to the world-class skills, knowledge, and facilities of the university, together with LaserBond's 25 years

of surface engineering experience in solving wear life problems in heavy equipment.

LaserBond's R&D and advanced manufacturing facilities group is located just a few minutes away from UniSA's Mawson Lakes Campus in Cavan SA, where it is developing and manufacturing a range of products and services with embedded IP for direct or indirect export markets. This North Adelaide location is suitable for supporting innovation in several key growth centres,

particularly in resources, agriculture and defence.

The company was established in 1992 as an innovative surface engineering firm at the forefront and developing new surface engineering technologies. In 2000 LaserBond achieved another world first by designing and building a high-powered integrated laser cladding system capable of metallurgically bonding a wide range of metals to heavy machinery components. Subsequently, in 2015, they



developed a new laser deposition method, which virtually eliminates substrate dilution and detrimental heat effects. This technology makes laser cladding technology available and economic to a wide range of industrial applications, in particular, high wear applications common in resource industries, and as a replacement for hard-chrome, as used on hydraulic cylinders in mining and drilling.

To better understand the metallurgy and bonding of surface engineered coatings, twenty years ago LaserBond invested in an in-house Scanning Electron Microscope (SEM). They also worked with the Australian Synchrotron facility to gain high-resolution insights into the

metallurgical structure being achieved by its 2015 innovation. Through this research collaboration, UniSA will apply its extensive material characterisation laboratories and testing systems to support the development of new cladding materials, applications, and technology.

The company is also investing and developing new laser additive advanced manufacturing systems. Hereto, the collaboration with UniSA:FII's laser engineering group should deliver dividends for local manufacturing.

LaserBond chairman Allan Morton said it was "truly pleasing" to see the company's history of innovation taking another step.

"A great deal of effort, time and

money has been committed to experimental surface engineering developments since the company was formed," he said, adding that founder and executive director, Greg Hooper, always sought to continually push the boundaries and exploring all things metallurgical.

"As an example, Greg recently met with the Fraunhofer Society in Germany to confirm that we are at the cutting edge of laser deposition technology globally," Morton said.

"This society is a research organisation with 67 institutes spread throughout Germany, each focusing on different fields of applied science. It employs around 24,000 people, mainly scientists and engineers with an annual research budget of AUD\$3 billion. More than 70 per cent of its

funding is earned through contract work, either for government-sponsored projects or from industry.

"It's our belief that this format of industry-lead research collaboration brings the best of industry problem solvers together with best academic capabilities in minerals and resource engineering. Almost always our innovation is through unchartered waters, but it creates the foundation for LaserBond's growth. We're proud that our company has now been endorsed by these two highly respected organisations.

"We can look forward to a growing cluster of technology companies hastening and broadening of our laser cladding technology to help more industries in more parts of the world". ■