HAVER & BOECKER

AUSTRALIA

INNOVATIVE ENGINEERING

THE FASTEST EVER INSTALL OF A PACKING LINE

Case Study

A HAVER & BOECKER Company

COMMERCIAL OUTCOMES

The new bagging plant is nominally rated at 4,800 bags per hour for GP cement and delivers substantial efficiency, reliability and productivity benefits.
The higher throughput means Cockburn Cement can now meet market demand through a single eight-hour shift operation where previously two shifts were required.

This reduced operational time allows maintenance functions to be carried out during business hours and it has seen a reduction of product waste through the recycling of spillage and flush material.
The cleaner bags and improved product presentation has also lead to greater customer satisfaction.
And in our team!

A POWERFUL PARTNERSHIP

COCKBURN CEMENT

Building a Stronger WA since 1955

an ADBRI company

Cockburn Cement, an Adbri Ltd company, is a leading supplier of cement products to Western Australia's mining, agriculture and construction industries.

In 2017, the company awarded its tender for a new packing line to global technology developer HAVER & BOECKER. While the choice of technology may have been easy, the installation was not without its challenges. Powered by innovative thinking and engineering expertise, the partnership overcame all constraints to execute one of the fastest ever installs of a high capacity HAVER & BOECKER packing line without any supply interruption.

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Choosing the right technology partner

Cockburn Cement's Kwinana packing plant is one of seven Cockburn Cement manufacturing and distribution facilities located around WA.

When the plant's grey product packing machine and associated palletiser were approaching end of life in 2017, the company began a competitive tender process to upgrade its equipment.

Having experienced the quality and performance of HAVER & BOECKER equipment, Cockburn Cement selected HAVER & BOECKER's 14 spout ROTO-PACKER® RVT14 – the latest in high capacity packing technology – to replace the incumbent technology.

Adam Scata, Operations Manager, Cockburn Cement said: "The technology implemented in HAVER & BOECKER designs sets them apart from the competition.

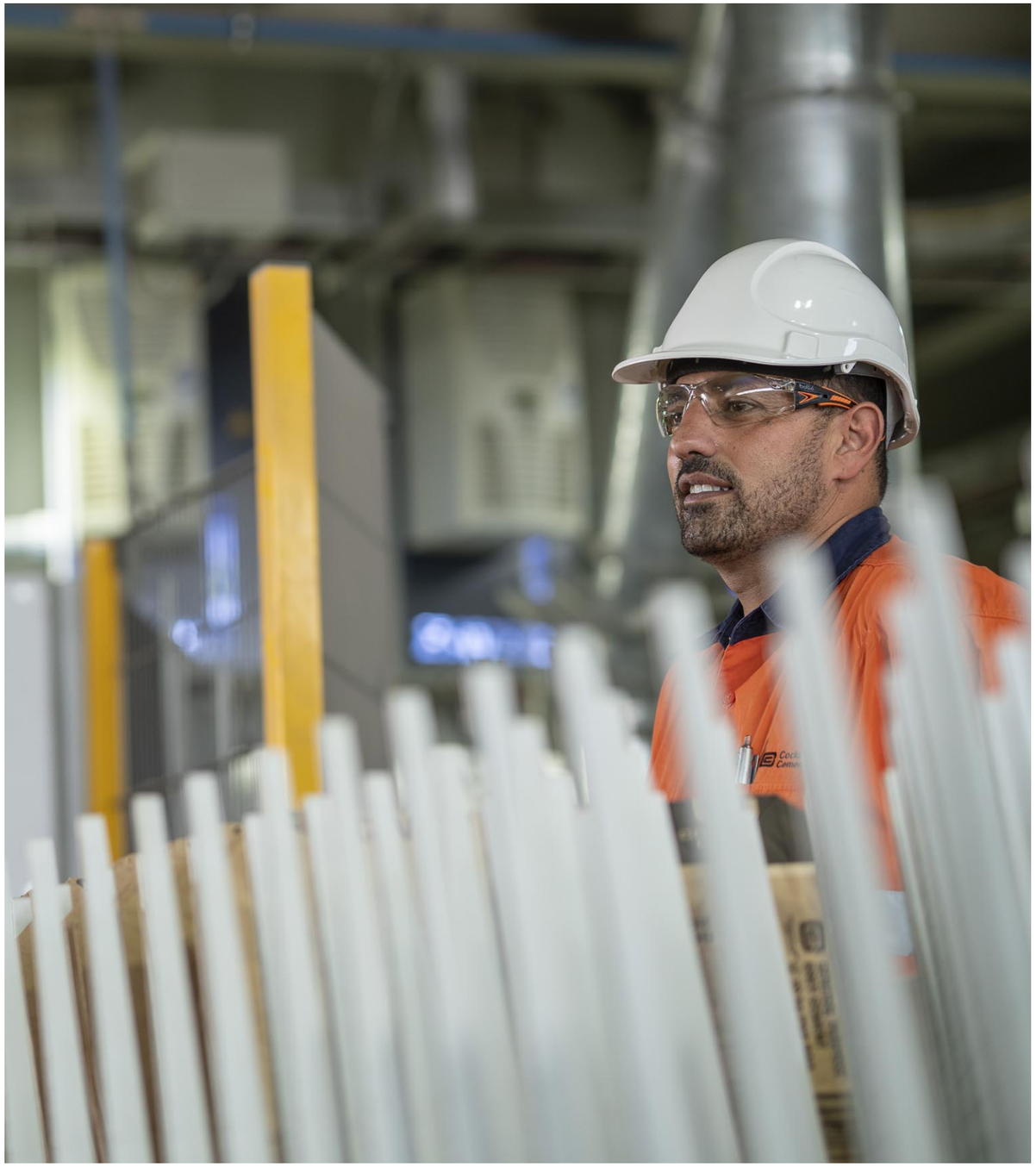
"Their machines are well known worldwide and are utilised across our business and joint ventures."

The RVT14 is capable of quickly changing from one product to another requiring only 15 minutes of downtime – significantly faster than the older machines.

Dinesh Kapadia, Engineering Project Manager, Cement and Lime, Adbri Ltd said: "With HAVER & BOECKER's advanced technology we were confident we could meet our objective of producing 4,800 bags per hour.

"It also gave us the opportunity to continue with a standardised technology for ease of operation and maintenance as well as spare parts inventory."

The RVT14 also requires less maintenance, creates less waste and produces cleaner bags.



A POWERFUL PARTNERSHIP

Features of the HAVER & BOECKER packing solution for Cockburn Cement

In addition to the RVT ROTO-PACKER®, the system installed for Cockburn Cement has a number of key features:

ROTO-LOCK®: ROTO-LOCK® is a rotating flow gate. It completely eliminates spillage during the dosing process and requires almost no maintenance.

Spillage collecting equipment: low and high.

Residual emptying, cleaning and flushing system: This automates product change for a quick and easy switch, while also minimising of product losses and increasing output due to time savings between product changes.

INSTALLATION DESIGN INNOVATION

Spatial limitations within the plant meant the RVT14 would need to be installed in the same location as the existing packer and palletiser.

With ongoing demand from key customers, the removal of the existing packing equipment and the installation of the new system had to be completed without interrupting market supply. This presented some challenging installation constraints. While stock building was undertaken and the rest of the plant remained operational, the timeframe to stop the old packing line, decommission the old machine and commission the new one was still very tight.

"A conventional build methodology would have required a considerable amount of time, estimated at three months," said Mr Kapadia. "It would have also meant considerable additional cost through stock building and off-site storage of material."

With some innovative thinking, the Cockburn Cement team proposed an alternative solution. "We used the high quality detailed drawings provided by HAVER & BOECKER to develop the modular design," said James Keys, Project Manager, Cockburn Cement. "Prior to installation, the packing system would be assembled in four modules outside the packing area in a space 300 m from the plant."

RAPID HIGH CAPACITY INSTALL

Once assembled and ready for installation, the modules were transported by SPMTs (Self Propelled Modular Transporters) from the assembly area to the installation site. Demolition of the existing machine was carried out in 48 hours giving a clean floor for installation of the new machine by crane. At any one time, HAVER & BOECKER had up to three technicians onsite to supervise.

"The Cockburn Cement team developed a great working relationship with the HAVER & BOECKER technicians from the managing directors through to the onsite installation teams," said Mr Scata. From powering off the old machine to commencing the wet commissioning of the new equipment was just 42 days – the fastest ever install of a high capacity HAVER & BOECKER packing line. "By implementing the modular design, the production time off-line was significantly decreased in comparison to a traditional build," said Mr Scata. "HAVER & BOECKER provided ample support to meet site installation needs and were very committed to ensuring deliverables were achieved post commissioning."

INSTALLATION DESIGN INNOVATION

Adding value

According to Adam Scata, Operations Manager, Cockburn Cement: "The modular install had its risks but Cockburn Cement together with HAVER & BOECKER managed them well."

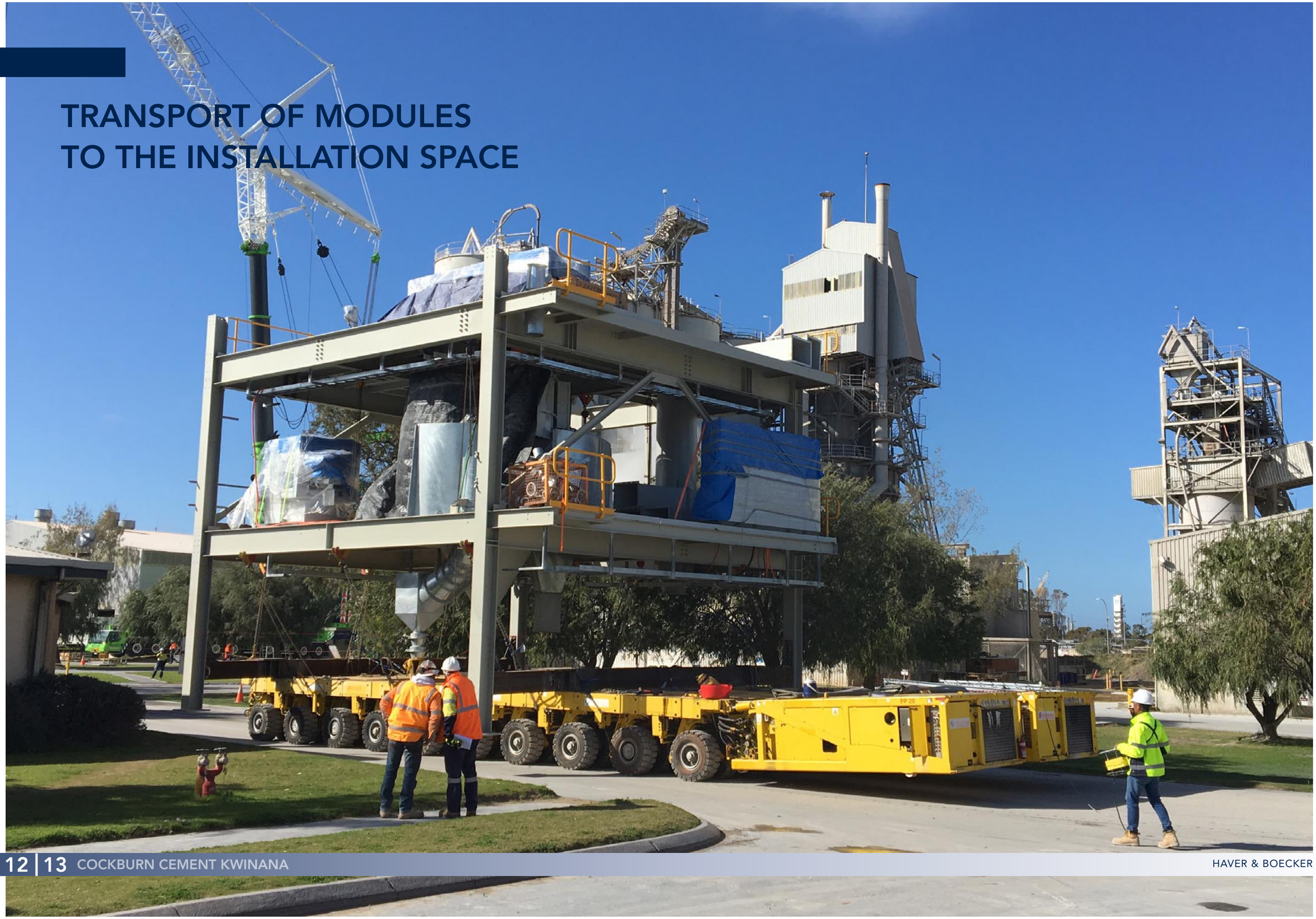
"They provided excellent support to our team as the innovative modular design concept was deve loped."

This included the packing machine layout which, designed in close consultation with the Cockburn Cement project team, ensured the footprint of the machine was the best achievable fit within the packing shed.

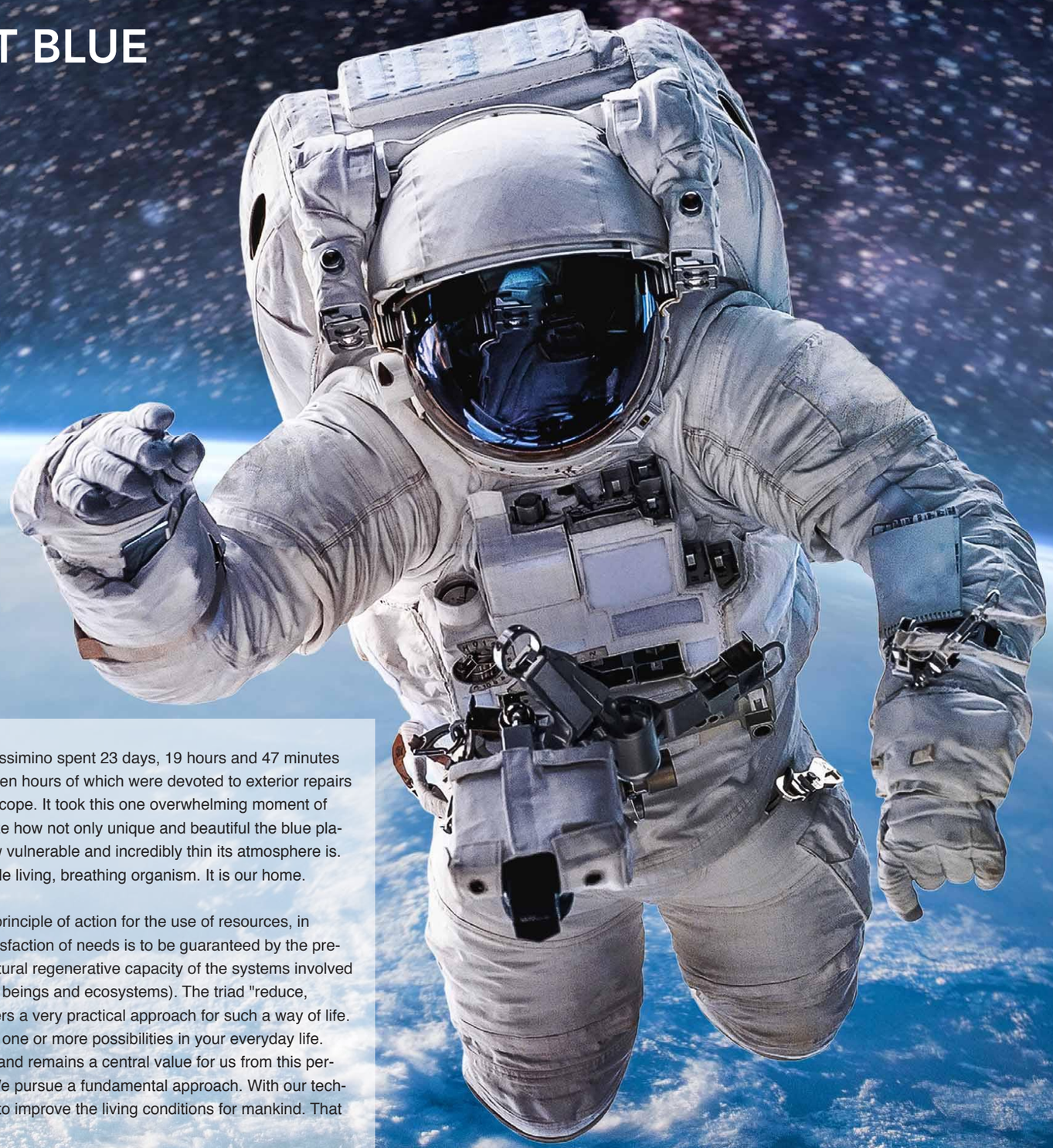
"The HAVER & BOECKER technicians also supported the incorporation of the blend back system to recycle all flush and waste material. This eliminated any waste going to landfill, offering both cost savings and sustainability gains," said Mr Scata.

Further efficiencies were realised by implementa- ting a double pallet stacker to increase throughput. A pallet scanning system was also installed to improve quality control and health, safety and environment factors by ensuring stable stacks in warehousing.

TRANSPORT OF MODULES TO THE INSTALLATION SPACE



PLANET BLUE



THIS PLANT IS IN THE PLANET BLUE CATEGORY EQUIPPED WITH:

- clean dosing unit ROTO-LOCK®
- fully automatic and safe bag applicator RADIMAT®
- expandable to SEAL Technology
- HAVER & BOECKER residual emptying system for grade change without loss of material

PLANET BLUE
HAVER & BOECKER

Michael James Massimino spent 23 days, 19 hours and 47 minutes in outer space, seven hours of which were devoted to exterior repairs to the Hubble telescope. It took this one overwhelming moment of spacewalk to realize how not only unique and beautiful the blue planet is, but also how vulnerable and incredibly thin its atmosphere is. The Earth is a single living, breathing organism. It is our home.

Sustainability is a principle of action for the use of resources, in which a lasting satisfaction of needs is to be guaranteed by the preservation of the natural regenerative capacity of the systems involved (above all, of living beings and ecosystems). The triad "reduce, reuse, recycle" offers a very practical approach for such a way of life. Surely you will find one or more possibilities in your everyday life. Sustainability was and remains a central value for us from this perspective as well. We pursue a fundamental approach. With our technologies we strive to improve the living conditions for mankind. That is our mission!

HAVER & BOECKER Australia
35 Millrose Drive, Malaga, WA 6090
Phone: +61 8 6240 6900
E-mail: info@haveraustralia.com.au
Internet: www.haveraustralia.com.au

PM 425 E 1120
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