



# IDEAS ENGINEERED

PROCESS PLANT FOR THE ENERGY & RESOURCE SECTORS



**IDEAS ENGINEERED**

Ideas  
Innovation  
Value  
Reliability

**GLOBAL & INDUSTRY REACH**

People  
Collaboration  
Capital  
Environment

**JORD FOUNDATION**

*Jord designs, manufactures, commissions and services bespoke plant and systems for a wide range of industries in the energy and resource sectors. We are a privately-owned company that is fast approaching five decades of steady, organic growth.*

*To help you solve your technical challenges, we offer innovation, value and reliability, all with personal care and service.*





### Ideas Engineered

Built things start with ideas – yours and ours. Jord's motto reflects our pursuit of creative technical solutions that are cost effective and dependable.

This page features a copper concentrates dewatering facility that Jord designed, built and commissioned on a turnkey basis for an Australian gold/copper producer.

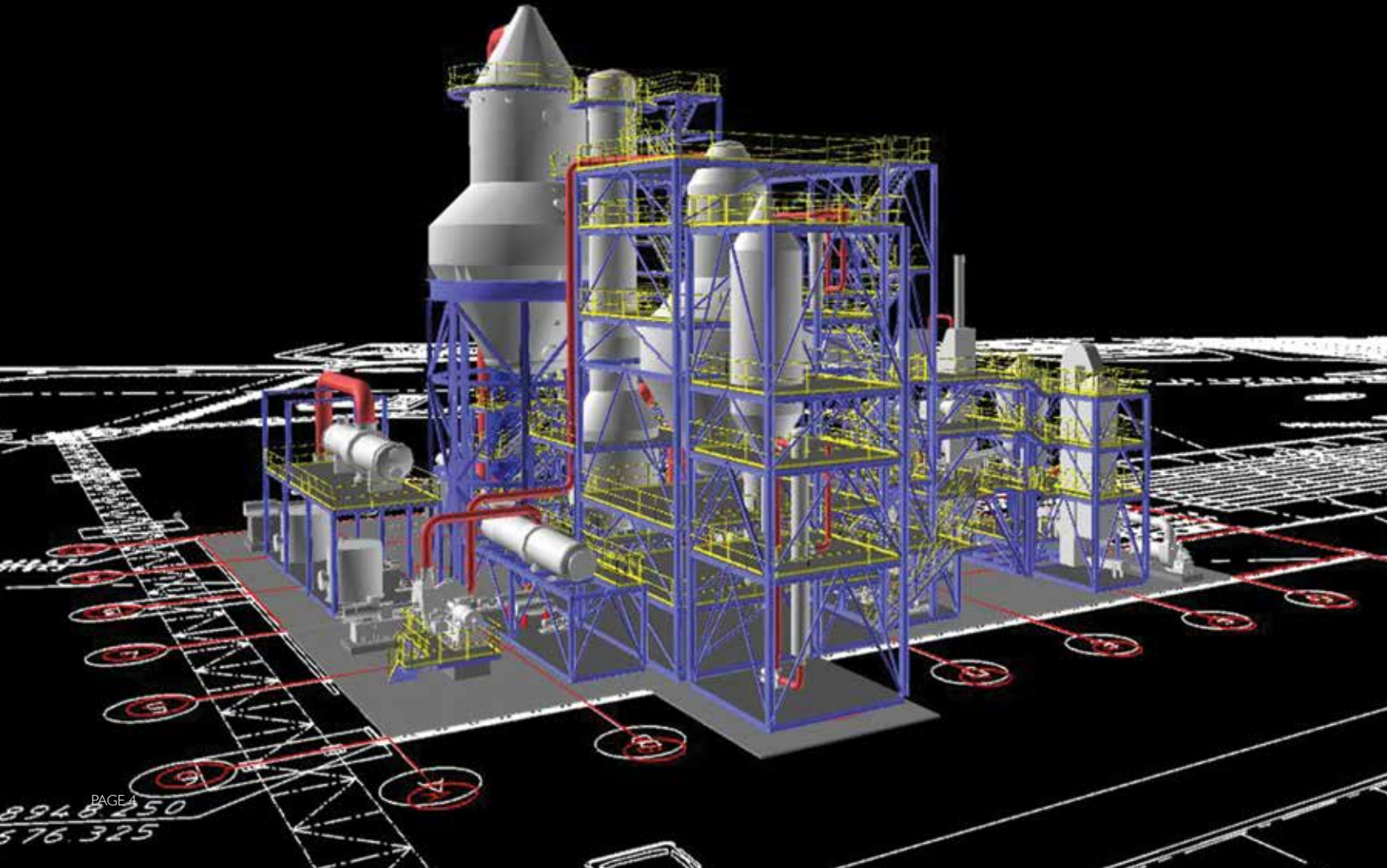
The facility presents a number of industry-first innovations to improve safety, operability and efficiency – for example, enhanced loading features for the export rail siding.

However; perhaps the facility's major breakthrough was how it was funded. Rather than build a new plant immediately, Jord first worked with the client to double the throughput of the existing facility. Five years later, the client could pay for the new plant with the extra cashflow from its old one.

“A pile of rocks ceases to be a pile when somebody contemplates them with a cathedral in mind.”

– Antoine St. Exupery





### Innovation

The world is now embracing lithium ion batteries for electric vehicles, for energy storage and for electricity grid stabilisation. Jord is working with both industry and academia on the optimal processes to crystallise and dewater ultra-high-purity battery compounds.

Our quest is to help produce batteries that deliver the most power and the longest life, in facilities that offer the most efficiency and purity. Where possible, we can deliver plant in modular form to minimise construction risk and maximise delivery speed.

The proof is in the pudding. This page features a 3D model of a crystallisation plant Jord is currently designing and constructing in Finland, to produce battery-grade nickel sulphate, cobalt sulphate and ammonium sulphate.

“Ideas are like rabbits. You get a couple and learn how to handle them, and pretty soon you have a dozen.” — John Steinbeck





### Value

Value is not just about delivering a quality product at a reasonable price. It's also about being quick on one's feet to deliver more value through the ever-changing requirements of a successful project.

This page showcases 2,000 tons of top-side modules that Jord delivered ex-works within 11 months of receipt of order; with zero lost-time injuries. The project included gas compression modules, a pipe-bridge module and accompanying metering, condensate stabilisation and flare gas systems.

This success would not have been possible without close collaboration with our Mexican customer; our German gas compressor partner; our Chinese fabrication partner and our global component supply chain.



“I can't understand why people are frightened of new ideas. I'm frightened of the old ones.”

— John Cage





### Reliability

Reliability in our design and construct business means being able to deliver on one's commitments, no matter how demanding the circumstances. And reliability from then on means process plant that will perform the required service for its full design life.

The air-cooled vacuum steam condenser ("ACC") on the facing page was installed in 2016 in a fertilizer plant some 300km north of Moscow, to perform in ambient air temperatures as low as  $-40^{\circ}\text{C}$ . It is built to last as long as the propane condenser train on this page – delivered over three decades ago and still performing in the desert of central Australia, where summer temperatures regularly exceed  $40^{\circ}\text{C}$ .

**"An idea is salvation by imagination."**

– Frank Lloyd Wright



GLOBAL & INDUSTRY REACH

100+  
countries with Jord  
process plant in active service

5  
billion dollars of  
installed process plant

5  
decades of service  
to industry

INDICATIVE REFERENCES







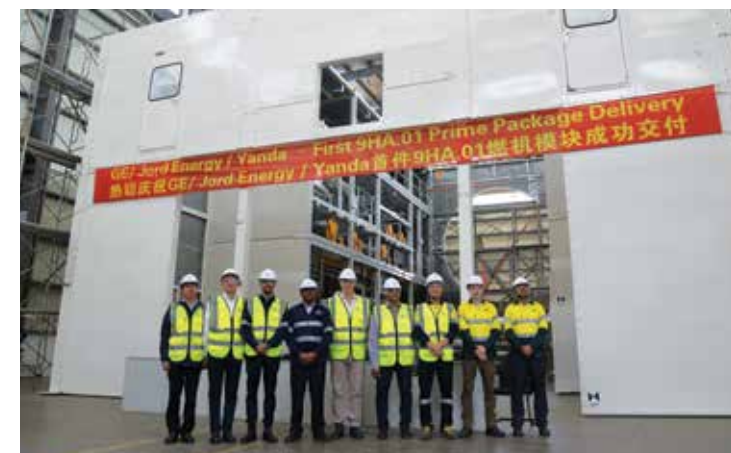
## People

At the end of the day, it's all about people.

We attract and retain able staff who have different backgrounds, language skills, cultures and ideas, but share the values of humility, curiosity and dedication.

Fostering long-term relationships with our customers is another shared value. For example, in a 30-year collaboration with one energy major, Jord has designed, assembled and delivered more than 1,000 gas and steam turbine accessory modules.

The images on this page celebrate one such partnership – the successful acceptance test of accessory modules for a 400MW+ gas turbine – achieved by many dozens of people across fifteen countries and four continents.



“The value of an idea lies in the using of it.” – Thomas Edison





### Collaboration

Jord fosters and sustains long-term partnerships with technology leaders, fabricators and customers, who learn from each other to solve challenges and engineer ideas. Many of these partnerships have prospered for decades.

Jord's service to Australia's largest resource company has spanned all of our five decades. Projects include coal tailing dewatering, hydrocarbon cooling and condensing, nickel smelter effluent treatment and alumina refinery vent gas scrubbing.

This collaborative approach works just as well for new customers. For example, a Japanese customer needed dry cooling solutions for multiple projects in Europe, SE Asia, the Middle East and the Americas. The remote location of one project in the Caribbean meant that it needed a modular construction, something the customer had never experienced before. Jord collaborated with the customer and its supply chain to deliver the best solution.

The images on this page shows the result – air cooler and vacuum steam condensing modules being prepared for shipment to the Caribbean site.

**“Eventually everything connects – people, ideas, objects. The quality of the connections is the key.”**

– Charles Eames





### Capital

Jord has remained debt-free for all of its five decades. Our strong balance sheet, a product of our conservative fiscal approach, allows us to establish and call on large financial facilities to meet the demands of large and complex international projects.

On occasion, we have leveraged this financial strength, offering our customers off-balance sheet financing options to pay for the project cost out of cash generated from the project itself, once up and running.

This approach was used to finance a granulated activated carbon plant (opposite) for a 100-year-old sugar refinery in Georgia, USA. Jord delivered this plant on a turnkey basis, allowing the refinery to simultaneously decommission an environmentally challenged bone char operation.





### Environment

The vast majority of Jord's technology is designed and built to harness and use the world's resources in a sustainable manner.

The flue gas de-sulphurisation (FGD) plant (opposite) delivered a number of benefits for our Borneo, Indonesia-based cement plant customer. First, it allowed them to use local coal instead of shipping more costly coal from Australia. Second, it ensured waste gas emissions were reduced to internationally acceptable limits.

Municipal waste is another area where Jord has been active, helping to divert waste from landfill to energy. Jord is delivering the steam condensing and CO<sub>2</sub> removal systems for two waste-to-energy projects: one generating baseload power from municipal waste in Singapore (upper left), another converting municipal waste to jet fuel in Nevada, USA (lower left).





### Jord Environmental Trust

The Jord Environmental Trust (JET) was established in 2007 with a charter to support international causes that help foster a biologically diverse and sustainable planet.

A proportion of annual profits get assigned to this fund – over \$2 million to date – and distributed to not-for-profit organisations that meet JET's charter.

In particular, Jord is delighted to be a key sustainability sponsor of Bush Heritage, one of Australia's leading conservation organisations. Jord provides pro-bono technical services and finance to deliver water management and clean energy projects for Bush Heritage's many dozens of conservation properties around Australia. This image features the rehabilitated Carnarvon property in central Queensland.

More details of the Foundation's work can be found on Jord's website.





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