



**CONSEP**  
ENGINEERING INNOVATION



 **COMPANY PROFILE**



## COMPANY OVERVIEW

Established in 1990, Consep is a leading Australian based global integrated Engineering Solutions Company that works across Construction, Gold & Mineral Processing, Process Plant, Sampling Systems and Water & Wastewater.

At Consep we are tenacious in the pursuit of the right answer and the best solution for the problem at hand. Stopping at nothing and using our ingenuity to remove obstacles, discover ground-breaking solutions and provide innovative technical recommendations for our Clients. In short there is no way we would ever say 'no way'.

What makes Consep special?



### INTEGRATED ENGINEERING SOLUTIONS

At Consep, every successful project, big or small is the result of an Integrated Engineering Solution that is customised to our clients' needs.

Using our in-house team of specialist engineers, including Metallurgical, Chemical, Mechanical, Electrical and Project Management Engineers ensures the best design solutions.

### IN-HOUSE FABRICATION

Our in-house fabrication ensures all componentry is exact and works seamlessly to deliver increased operating efficiencies and enhanced machinery effectiveness for the life of the project. We are fully ISO9001 and AS/NZS4801 accredited.

These capabilities can extend to include installation, maintenance and provision of parts for the life of the machinery by our qualified and experienced staff.

### TRUSTED GLOBAL EXPERTISE

With over 25 years experience we have grown to become an acknowledged first choice trusted partner and global business providing, installing and servicing engineering solutions and machinery to more than 40 countries.

Our expertise, understanding and knowledge is unmatched.

## CONSEP HOIST

The Consep Hoist is a versatile self-climbing materials hoist designed to eliminate dependence on the tower crane for efficient transport of formwork and other materials used in high rise construction.

Consep Formwork Hoists only require the use of a crane for installation and disassembly.

Guide rails are progressively climbed using the hoist's own drive system, leaving your crane available for other duties whilst the hoist meets the needs of the form workers.

Consep's Formwork Hoists avoid the need to disassemble formwork tables and lifting by crane. The large platform provides ample room to load and unload with complete table forms (and all types of formwork) lifted by the hoist then wheeled out at the required level.

The Consep Hoist is unique in its ability to provide true day zero access to the poured deck, minimising formwork cycle times. Material can be rolled from the Consep Hoist to the freshly poured deck as soon as concrete has cured sufficiently to be walked on. A Consep Hoist can

reduce floor cycle construction by up to 2 days per floor. On a 40-storey building that's 80 days of labour saved!

Consep Hoists safely secured to your building can safely operate in windy and wet conditions often when cranes can not. If you can work on the building, you can use the hoist,

Consep Formwork Hoists ensure the highest levels of safety are integrated into the design, with automatic speed sensing brakes, safety locking pawls, top and bottom limit switches, remote control and full width electrically interlocked landing gates you can rest assured your workers (and your company) are in safe, secure hands.

With Global supply, delivery and support, Consep's Formwork Hoist is Australian designed to conform to all Australian and ISO design codes and is also CE approved.

They have been deployed throughout Australia and the world including USA, Singapore, Hong Kong, New Zealand, United Arab Emirates and the United Kingdom.



## CONSEP ACACIA



Consep is the exclusive worldwide supplier of the Consep Acacia. The Consep Acacia is a complete process solution to maximise recovery of gold from gravity concentrates.

The utilisation of gravity leaching in gold processing plants has become the standard method for the processing of high grade gravity concentrates. The Consep Acacia is a packaged processing plant for the treatment of high grade gravity gold concentrates, such as those generated from a Knelson Concentrator. The plant consists of an up flow fluidised reactor for the leaching process, which has been developed and optimized for maximised gold leaching reaction kinetics.

The Consep Acacia system is market leading with an extensive worldwide installation list. The Consep Acacia features robust and reliable reaction chemistry, superior solids handling techniques, compact design and simple operating philosophy. The Consep Acacia achieves overall recoveries in excess of 95%, often over 98%.

The Consep Acacia product range has expanded over the years with the development of complete modular packages for our clients. Depending on a clients specific needs these could include additional modules for Electrowinning, cathode sludge recovery, barren solution recycling systems, sampling systems, detoxification modules, and a range of other ancillary packages.

## KNELSON CONCENTRATORS



Consep is the exclusive manufacturing agent for Knelson Concentrators servicing the Australian and South East Asian markets. We are proud to have been closely associated with Knelson since our inception in 1990.

The Knelson Concentrator is the market leading product installed in almost all gold and copper-gold mines in Australia and South East Asia, with over 500 local Consep installations.

The batch Knelson Concentrator (QS, XD or CD) is

used to recover native gold or other precious metals from slurry streams, with units ranging from lab scale to 1,000tph.

Consep offers a range of support services to our large installation base of clients, including process, mechanical and automation optimisation services.

The Continuous Knelson Concentrator (CVD) is for high mass pull applications, and is used to recover sulphides and industrial minerals from slurry streams.

## LEACHAID

Consep is the exclusive world wide distributor of LeachAid for use in intensive leaching plants. LeachAid is a proprietary chemical which acts as a catalyst in gold leaching, resulting in greatly improved leach rates and recoveries.

## VIBRATING SCREENS

Consep has a wide range of screen designs available for a broad variety of applications including dewatering, sizing, scalping, trash, carbon and gravity feed screens.

Consep is unique in our ability to provide custom screen designs. Consep's unique ability in screening is developing a custom solution that doesn't just include the screen, but also the associated chute work, with most of our installations also including a complete chutework package.

Consep offers a wide range of designs of vibrating screens from step deck, horizontal deck, curved deck screens, in a range of sizes from 0.6 x 1.2m through to 2.4 x 6.0m.

Consep has a major advantage for the supply of gravity feed screens used to scalp the feed prior to the installation of a Knelson Concentrator. This application is a specialist duty requiring a detailed process knowledge to maximise gold recovery in the gravity circuit.



## TURNKEY GRAVITY PLANTS



Consep can supply a wide range of processing solutions tailored to client needs. Many of our customers require more than our core equipment. Our core technology we can supply for gravity recovery plants is our gravity feed screens, Knelson Concentrators, Consep Acacia leach plants, electrowinning and smelting technology. Many of our customers require a turnkey solution rather than individual equipment, and Consep has the experience and knowledge to successfully supply a turnkey package that works.

The key difference that makes Consep special is that the core gravity recovery technology is our own, and so we know exactly how to get the most from the equipment.

The complete package is designed and manufactured under our own roof, including the complete electrical and automation supply.

With a Consep turnkey gravity package you work with a partner who will support you for the life of your mine, and who knows every aspect of the gravity circuit.

It is important to note one feature that separates Consep from others – Consep has a proven installation list of satisfied customers. Our existing customers include companies developing their first mine, right through to the world's largest gold mine.

## ELECTROWINNING TECHNOLOGY

Consep's Electrowinning Cell and rectifier combination represent the latest generation of cells and rectifiers. There are many features that together ensure the Consep Electrowinning Cell represents the best technology on the market, including:

- Stainless steel construction
- Ease of cleaning of electrical contacts
- Ease of access to key components
- Spacers to minimise short circuiting
- Inbuilt operator safety features

Consep's Rectifiers utilise the most advanced, proven and reliable Switch Mode technology.

We can also offer a wide range of additional equipment such as lifting frames, cathode storage racks and ventilation fans, to make sure your gold room is as safe and efficient as possible.

Consep also offers a cathode washing station with integrated sludge filtration.



## SMELTING PACKAGES



Consep supplies smelting packages that are able to be integrated into a client gold room, as well as containerised turnkey packages. The common feature of our packages is that we are able to supply all of the components you need to turn the gold product from your electrowinning cell or table into a gold bar.

Our experience in the gold industry allows us to provide advice and recommendations on the best options available.

Consep's containerised turnkey smelting packages are complete gold rooms that consist of a secure 40' container that is fully fitted out with ventilation systems, air conditioning, lighting, work bench, sink and shelving, and contain all of the minor equipment (oven, weigh scales, bar moulds etc), spares packages and the furnaceman's safety and tool kits to allow simple set up of this secure package.



## SAMPLING EQUIPMENT

Consep offers a complete range of Samplers to meet all requirements of mining operations. The samplers, which are manufactured and serviced by Consep, include:

- Linear cross cut samplers
- Rotary and arcual vezin samplers
- Cross belt ARM samplers
- In-line samplers (Pressure Pipe and Fixed Cutter)
- Sample dewatering modules
- RSDRs and Carousels

Consep also offers a range of proven drive types including belt, ball screw, chain, hydraulic and pneumatic. We have an installation list of over 1000 samplers in a wide range of commodities, making Consep one of the worlds largest and most experienced sampler suppliers.

Consep's installations include solutions, slurries, low moisture content ores, high moisture content ores, and wet concentrates. We have specialised equipment to suit all duties.



## MATERIAL HANDLING



Consep offers a wide range of material handling solutions for our clients. All have been developed through working with our customers to design equipment packages that suit their specific needs.

Consep can also design and supply the chute work associated with our material handling equipment.

Many of the industries Consep supply to require equipment that is extremely robust and designed for long operational lives and low maintenance.

Consep's range of specialist material handling products include:

- Belt feeders and conveyers
- Weigh feeders
- Shuttle Feeders
- Bucket elevators
- Skip Hoists

We custom design our equipment to meet the specifications of our clients.

## WATER SOLUTIONS

Consep has built a reputation for supplying quality water and wastewater treatment processing solutions. Consep's range of equipment includes:

- Clarifiers and Thickeners
- Dissolved Air Flotators (DAFs)
- Grit Removal & Separation units
- Solid Contact Clarifiers

Consep offers a complete range of solid liquid separation equipment from US based industry leader WesTech, combining process efficiency,

quality manufacture and long lasting equipment performance for the water and wastewater industries. With over 2000 installations of clarifiers and thickeners worldwide, WesTech has world leading technology for water & wastewater treatment and liquid solid separation.

Consep has partnered with Manukau Water Services, Sydney Water, Hutt City Council, ESI, Orica, Ampol, BP, Darwin LNG, Queensland Curtis LNG, Water Corporation (Western Australia), South East Water (Victoria), Queensland Water and many others on major projects.



## ROTARY DRYERS, COOLERS AND COATERS



Consep's Rotary Dryers, Coolers and Coaters represent leading technology in the industry with a wide range of proven installations. Our technology is designed and manufactured in-house by Consep, with our team of skilled specialists.

Consep's Rotary Dryers are built to provide lasting service in the process of drying many products. They provide considerable energy savings over alternative methods and have demonstrated their durability by many years of continuous service.

Consep Rotary Coolers and Fluid Bed Coolers allow products to be handled subsequent to being processed through dryers or furnaces. Coolers can cool product using ambient air in lower temperature ranges whilst higher temperatures require water cooling.

Throughputs can be anything from a few tonnes per hour to hundreds of tonnes per hour. Consep's installation base is close to 200 units in a wide range of industries.

## ASPHALT PLANTS

Consep Asphalt Plants have been operating in Australia for over 50 years. Consep services and equipment supplies includes:

- Rotary Dryers
- Hot and Cold Elevators
- Pugmills
- Tower Units
- Dust Systems
- Bitumen Kettles
- Surge Systems
- Plant Refurbishments

Consep's Asphalt Plants include key features that make them the right choice for you.

- Guaranteed output for 160°C.
- Product with up to 5% moisture in-feed.
- Environmentally friendly designs.
- Bitumen fumes expelled from the pugmill can be oxidised by the burner flame.
- Dust is collected and incorporated in the product.
- RAP feed systems available.
- Designed and manufactured in Australia.
- Over 130 plants Australia wide.



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