

CASE STUDY

NOVEMBER 2015

SAMPLING SYSTEMS



ABOUT BGC Contracting

Established in the 1970's from humble beginnings as a small earthmoving company based in Perth's outer suburbs, BGC Contracting has evolved over time to become one of Australia's premier mining and construction contractors.

Part of the privately-owned BGC Group of industrial companies, BGC Contracting is another success story that owes its genesis to the late Western Australian businessman Len Buckeridge, who acquired the company in 1992.

Today, BGC Contracting is Australia's largest privately owned mining and construction contractor and a leading player in the provision of diversified services across the resources, energy and infrastructure sectors.

Operating from offices in Perth, Brisbane, Whyalla and Sydney, and branches in key regional areas, BGC Contracting has extensive experience on some of Australia's iconic projects, playing a vital role in the development of our burgeoning industry sectors.

[Source: <https://www.bgc.cc>]

MT WEBBER LUMP SAMPLING STATION

In August 2015, Consep was asked to design and supply a modular lump sampling station for Atlas Iron's Mt Webber Crushing Plant.

The Atlas Iron Mt Webber mine, located approximately 230km (via road) south-southeast of Port Hedland, was opened in July 2014 following completion of Stage 1 of the project (3Mtpa). Construction of Stage 2 was complete in late 2014, taking production capacity to 6Mtpa.

BGC originally engaged Consep to supply each of the stockpile sampling stations for the first two stages of the project in 2014 and the BGC/DRA JV contacted Consep again to supply the Lump sampling station equipment package in 2015.

This time around, the design approach was different. The equipment design was unique in that it was required to be modular and skid mounted for ease of installation and to accommodate the small footprint reserved in the plant layout. As always, the sampling equipment and system was conformant to sampling standards

The Lump Sampling System was designed to handle 100tph lump product and generate a truly representative shift composite

sample of the product stream suitable for the plant metallurgical accounting

The equipment package included:

- Linear Cross Cut Mechanical Bottom Dump Cutter Sampler c/w Integrated Cutter Enclosure.
- Variable Speed Sample Belt Feeder.
- Consep H&S Rotary Style Vezin Cross Cut Sampler.
- Consep H&S 12 canister sample collector for storage of the shift composite sample.
- Consep Custom PLC / MCC Control Panel.
- Consep custom design of skid mounted support structure

The sampling station was successfully commissioned by Consep staff during November 2015.



Mt Webber's Lump Sampling Station





The Mt Webber Phase 3 project went from concept to delivery in approximately 10 weeks, which is well below our standard delivery time for this type of equipment package.

Consep's team of highly skilled engineers in tandem with Consep's company owned manufacturing facility meant that every project milestone could be met.

The modular skid mounted design was tailor made for this project and is a perfect example of Consep's innovative quality and showcases the broad range of capabilities our company offers, from structural layout and design, mechanical design, sampling expertise, electrical and control design, project management – Consep is able to provide the services to meet your project specific requirements. Last, but not least, it was the can-do attitude of the Consep team that made this project a success.

Consep have a very broad product range for sampling systems. The sampling products which are fully manufactured and serviced by Consep include:

- Linear cross cut samplers
- Rotary vezin samplers
- Belt feeders, weigh feeders and shuttle feeders
- Bucket elevators and skip hoists
- Swirl tanks, chute works and structure
- Arcual samplers
- Cross belt ARM samplers
- In-line samplers (Pressure Pipe and Fixed Cutter)
- Poppet Samplers
- Custom made samplers
- Continuous sample dewatering modules
- Sample Collection Diverters and Carousels

Consep also offers the widest range of proven drive types. For instance just within our range of linear cross cut samplers we can offer:

- Electric chain, ball screw & belt drives
- Hydraulic & Pneumatic drives
- Continuous unidirectional electric drives

One unique aspect of Consep is our ability to supply both the process and automation systems to go with the sampling equipment which allows us to provide a complete sampling solution.

For many of our clients we also develop the process design and sampling protocols to meet their specific needs, for instance meeting ISO3082 for Iron Ore. We then can develop the functional design and automation system for the sampling station.

Consep tailors each equipment package to suit our client's specific project requirements. Please contact our experienced engineers to discuss how we can assist with your sampling requirements.



Consep Bottom Dump Cutters



Consep Linear Samplers



Consep Rotary Sample Collectors