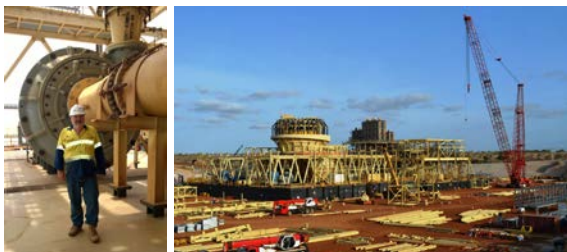


Giving you confidence

Working with customers in mining operations for over 80 years we deliver innovative, cost effective process solutions for Iron Ore, Industrial Minerals, Coal, Metals and a wide range of other fine minerals worldwide.

A proven innovation from our process engineering team is the Lyons Feed Control Unit (LFCU). Proudly carrying the name of development team leader John Lyons (pictured onsite below), the LFCU delivers world's best practice in feed control technology.



LFCU construction, Grande Côte, Senegal

Features

- Integrated rise rate control for the decanting of fines
- Optimised hydrodynamics allowing the feed to expand and move through the bin
- Fluidisation systems to energise the compacted feed prior to discharge
- Optional feed hydrocyclone system to control slimes (suspended solids).

Benefits

- Excellent throughput, flow and density control
- Fines decant capability
- Increased capacity stabilises processing plant feed conditions allowing the optimisation of downstream separation equipment
- Decreased downtime and higher plant efficiency resulting in increased revenue

Application

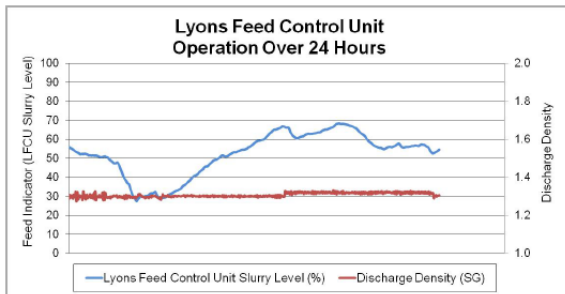
Historically, slurry surge bins were designed without considering the mode of flow within the bin. The mode of flow was inevitably funnel flow where the slurry flowed down a central channel to the discharge point. This resulted in an inconsistent slurry density at the discharge and bin volume not utilised effectively.

The LFCU is an advanced, technology-driven, smart surge bin manufactured exclusively by Mineral Technologies. The use of the LFCU in plants worldwide has resulted in consistent slurry density at the LFCU discharge point despite large fluctuations in feed flowrate and density into the bin.

While these units were initially utilised to stabilise and control the feed to processing plants, we are now also finding application in stabilising tailings discharges and in desliming and upgrading fine heavy mineral feeds.

Bin Performance

The figure below shows the unit providing constant density with the bin slurry level varying from 30% to 70%.



The ability to stop the bin full, re-fluidise and get back to density controlled discharge utilises the entire bin for storage capacity and further reduces input fluctuations effect on bin performance.

Customer feedback



"I have worked with several CD tanks designed by John Lyons, both at Ginkgo and Snapper mineral sand mines. I would recommend this application wherever density control is a key parameter in maintaining steady state operations."
Albert Vandenberg BE (Chem Eng) Director – AV Minerals



"The bin design was absolutely the best surge bin I have ever used. It gave excellent plant stability at all material levels which enabled us to maximize plant performance. It also made start up on a full bin possible which will minimise downtime on repair days and unintended shutdowns. Very good design!"
David Chesser, Experienced Metallurgist

Installations

- Balranald, Iluka, Australia
- Chemours, USA
- CSN Mining, Brazil
- Grande Côte, TiZir, Senegal
- Kenmare, Mozambique
- Paraburdoo, Rio Tinto, Australia
- Snapper, Cristal Mining, Australia
- Trimex, India