

SODIUM SULPHATE PNEUMATIC CONVEYING

Tianqi Lithium Kwinana – LHPP Project

LHPP Project at a Glance

100% owned by Tianqi Lithium
Kwinana
FY18-20;
Stage 1: 24,000 tpa Lithium
Hydroxide Monohydrate Processing
from Spodumene Ore.
Stage 2 increased total capacity to
48,000 tpa.
Spodumene ore will be supplied from
the Talison Greenbushes mine (51%
Talisson owned).

NOVEMBER 2019

TLK LHPP2 PROJECT
KWINANA, WA

Project Manager:
Enes Kaya

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receive and handle;

- Quicklime
- Hydrated Lime
- Limestone
- Cement
- Flocculant
- Coagulant
- Acids
- Caustic
- Cyanide
- Others



Sodium Sulphate Conveying Package

The Lime Systems supplied package transfers powdered Na_2SO_4 from the discharge of the dryer in train 2 to the bagging system in train 1 of the lithium hydroxide monohydrate processing plant.

The product that is discharged from the dryer is at an average temperature of 70°C , and is fed into the buffer hopper via a rotary valve. The buffer hopper allows surge filling of dense phase vessel for conveying efficiency. The product is then conveyed through $\sim 100\text{m}$ of piping into train 1 of the processing plant.

The conveyed product is discharged into a separation bin where the powder is separated from air and transferred to a silo downstream for bagging. The separation bin ensures the silo downstream is not pressurised, this is achieved with a Lime Systems dust collector and rotary valve.

Quick facts:

- Transfer of 9 tph Sodium Sulphate (Na_2SO_4) at 70°C .
- Pressure vessel to AS 1210-2010.
- $\sim 100\text{m}$ of DN100 316L pneumatic piping with air injection points for maintenance.
- Basalt lined long radius bends
- Buffer and Separation hoppers to ensure consistent product transfer.
- Dust collection/extraction for entire system.
- Standalone control panel for dense phase transfer system.



Stainless Steel rotary valve to ensure consistent flow of product from separation bin and to control airflow into silo downstream.



Pictured above, dust extractor and buffer hopper to surge fill vessel for conveying efficiency.

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