

INCREASING SAFETY FOR A CEMENT MANUFACTURER BY CONDUCTING HAZARD & OPERABILITY STUDY

Who'd thought safety would be a key ingredient of cement!

Industry
Resources

Sector
Cement Manufacture

Segment
Safety



Project

- The client has a history in cement manufacture spanning almost 200 years. They are the largest integrated cement manufacturer and distributor in Australia and has operating sites spread across the country, including integrated cement plants, mills, and dispatch terminals.
- The manufacturing process uses a High Viscosity Fuel (HVF) plant to transform industrial by-products and waste into an energy source for the cement kilns.
- Following an audit of the HVF plant, a key recommendation was to complete a thorough Hazard and Operability study (HAZOP).
- The client engaged Cromarty Automation to facilitate the HAZOP.

Solution

The purpose of the HAZOP was to:

- Identify possible events that could result in undesirable consequences
- Document existing controls that would eliminate or reduce the consequence if the event occurred.
- Assess any residual risk with the controls in place using the Company risk matrix.
- Make recommendations for reducing any residual risk.

In addition to identifying hazards and existing controls, a qualitative risk assessment was completed to determine the existing risk for each scenario that was reviewed. The risk assessment was completed in line with the clients Risk Matrix.

Cromarty Automation facilitated the HAZOP workshop in accordance with AS IEC 61882:2017. The workshop was conducted over a 6-day period and the team included representatives from Operations, Engineering, Maintenance and Safety; all with a significant amount of experience operating, modifying, and maintaining the HVF plant. To simplify the review process, the HVF system was broken into 14 core operating functions.



Outcome

The finding of the HAZOP identified several recommendations which were documented and added to the site HAZOP action register and a HAZOP report was completed to document each scenario and recommendation in detail.