

Inete Case Study: Reagent System Commissioning Manager

The Project:

In 2011 / 2012 Goonyella and Riverside mine sites undertook upgrades of their respective coal preparation plants' dosing systems. Two new reagent dosing systems were designed, installed, and commissioned at each site.

The upgrades involved the construction of two green field reagent storage and distribution systems. These comprised of two 55 kL horizontal storage tanks (one for Diesel and one for MIBC) with new metering systems providing controlled flow of reagents to the existing dosing locations.



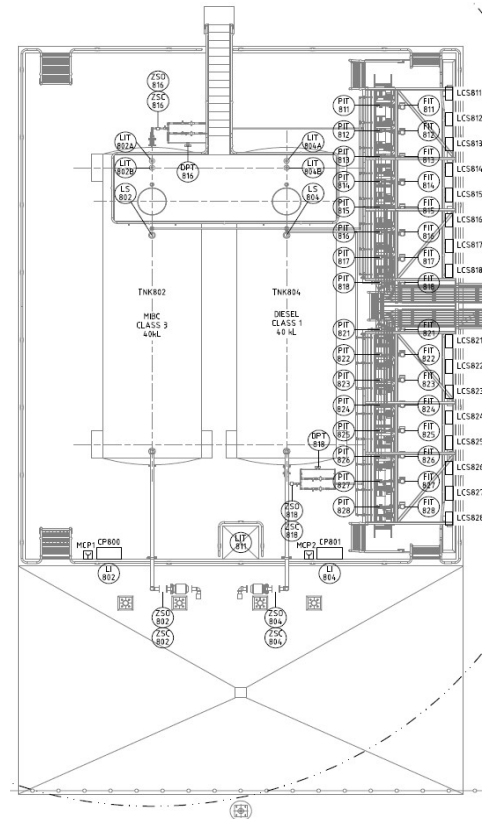
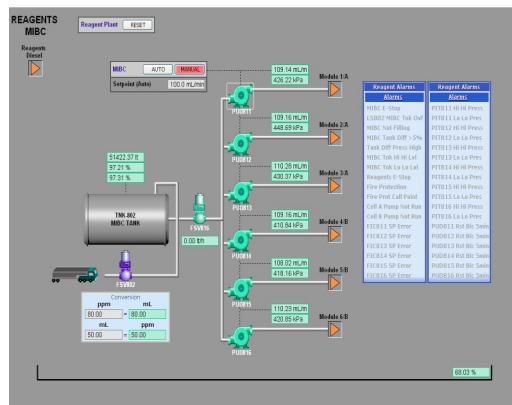
A key feature of the new reagents dosing system is that it has fully automated controls for dosing flow provided to the operators via configurable set points. This is as opposed to the old manual adjustment of dosing flows as was the case.

Each dosing system comprises of four main systems:

- MIBC Unloading and Storage;
- Diesel Unloading and Storage;
- MIBC Dosing System;
- Diesel Dosing System.

Where MIBC (Methyl Isobutyl Carbinol) reagent is a frothing reagent used in the fine coal flotation process.

Inete was engaged as the Commissioning Manager for the project to work with the construction contractors involved with the commissioning to ensure the new installations and their respective operation complies with the design functional specifications.



Project Overview

Project

Reagent Systems Commissioning Manager

Location

Goonyella and Riverside mine sites north of Moranbah township in Central Queensland.

Infrastructure at each site

- Two fully automated reagent dosing systems;
- Two 55 kL horizontal storage tanks (one for Diesel and one for MIBC) at each site;
- Eight (8) by MIBC dosing pumps with ABB variable speed drives at each site;
- Eight (8) by Diesel dosing pumps with ABB variable speed drives at each site.

Project Scope

Commissioning Manager for the commissioning process at both sites new reagent systems:

- Develop Commissioning Plan, complete with contingency, redundancy and test registry;
- Develop commissioning scheduling;
- Maintain a commissioning issues register;
- Tracking of commissioning test documentation & schedule;
- Compile commissioning documentation records into a repository;
- Coordinate and supervise commissioning activities, ensuring prerequisites are completed and safety is complied with.

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Inete Case Study:

Reagent System Commissioning Manager's Role



Installation of a Reagent Dosing System



Reagent Dosing System Pumps

Commissioning Works:

As Commissioning Manager for the commissioning process of the CPP1 and CPP2 Reagent Systems Inete was responsible for:

- Commissioning Planning;
- Commissioning Scheduling;
- Commissioning Documentation;
- Commissioning Issues Register;
- Tracking of Commissioning Test Documentation & Schedule;
- Supervision and Conducting of Commissioning Activities.

The key systems commissioned for each site were:

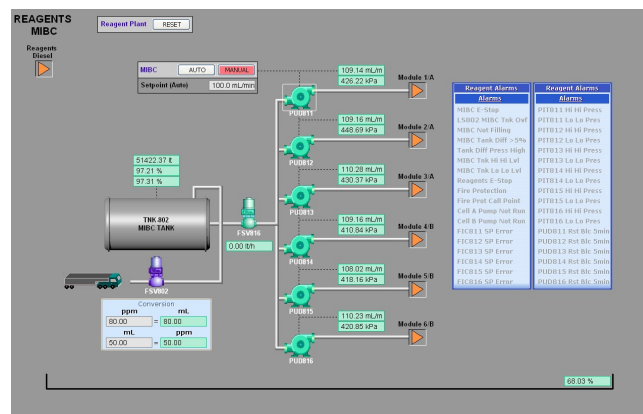
- MIBC unloading and storage — To safely transfer MIBC from a delivery tanker at a rate of 3000 L / min and store in a 55 kL storage tank;
- Diesel unloading and storage — To safely transfer diesel from a delivery tanker at a rate of 3000 L / min and store in a 55 kL storage tank;
- MIBC Dosing System — To deliver MIBC from the storage tank to each of the dosing points in the CPP to within 5 % of the flow set point determined by the operator;
- Diesel Dosing System— To deliver Diesel from the storage tank to each of the dosing points in the CPP to within 5% of the flow set point determined by the operator.



Project Completion:

The fully automated system was successfully commissioned allowing MIBC and Diesel to be provided to each of the 8 dosing points within the CPP via a dedicated dosing pump and supply line to the suction of the respective flotation supply pump.

As commissioning manager Inete managed the commissioning processes, followed up both commissioning and operational issues to completion. Training was completed with all operators at both plants. Inete took responsibility ensuring the Project was commissioned through to a successful implementation and completion.



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