

Downtime Reporting Service

Tiwest Joint Venture

Chandala Processing Plant



Chandala Processing Plant: Located 60km north of Perth the plant processes ilmenite into 230,000 tonnes of synthetic rutile, half of which is sent to the Tiwest Kwinana Pigment Plant where it is converted to titanium dioxide pigment. Chandala consists of three major plants, a dry mill for separating the minerals, a synthetic rutile plant for upgrading ilmenite into high quality synthetic rutile, and a residue management plant.

Background: The Downtime Reporting Service was designed in-house by Tiwest to monitor machinery in the plant and to report when equipment was not functioning as expected. When the person who built the DRS left Tiwest, the skills to support and maintain the system went with him. Zoodata was called in after the Service had been out of action for over a year. Whilst access to source code was possible, documentation had not been kept up to date. A major upgrade to the plant had also taken place during the non operational period for the DRS, including upgrading the PLC to DCS (changing from analog to digital) thereby necessitating a change in business rules.

THE BRIEF

Zoodata was tasked with:

- Data migration from a no longer functioning server to a new Database Management System.
- Getting the Downtime Reporting Service operational again.
- Updating the existing tags.
- Incorporating new business rules into the existing code.
- Upgrading the system to current technology.

CLIENT BENEFITS

- Equipment can now be monitored continuously.
- Software generates equipment efficiency reports.
- These help determine which equipment needs maintenance or replacement.
- Reports assist in servicing schedules of equipment, which in turn assists budgeting.

TECHNICAL DATA

- The original system was built in Visual Basic.NET2 and has been converted to .NET4.
- Code has been refactored to facilitate future work.
- Config files have been extracted from the code, making configuration easier.
- Code is now kept in source control, to allow rollbacks and auditability.
- Integration tests discovered new bugs in the existing system. These were fixed.