



CASE STUDY

Miwatek Leverages Octave Solutions for Advanced, Holistic Mine Water Treatment

Key facts:

Company: Miwatek

Website:
miwatek.mu

Industry: Mining, water

Description: Miwatek specializes in mine water treatment, offering solutions across the whole value chain, from pre-feasibility studies to operations and maintenance.

Country: South Africa

Partner: Chempute Software Ltd

Octave products used: Facets P&IDWorx (CADWorx P&ID Professional), BricsCAD

Mine water treatment is a critical aspect of the safe and sustainable operation of mining sites. Some byproducts of mining activities, such as heavy metals, acids and chemical residues, can severely impact environmental water quality if not properly treated. Therefore, effective mine water treatment prevents the contamination of rivers, lakes and groundwater, safeguarding communities and the environment while helping operators to comply with environmental regulations.

Headquartered in South Africa and active across several African countries, Miwatek has developed a holistic, vendor-agnostic expertise in this domain, providing solutions across the entire value chain of mine water treatment, from feasibility studies through to project execution.

Identifying goals

Previously reliant on AutoCAD® to develop P&ID drawings, the company needed a more robust platform that could enhance their workflow efficiency and improve design accuracy.

Because mine water treatment involves significant costs, risks and requires complex designs, the team was searching for a powerful, integrated solution that could help streamline processes and quickly and accurately develop P&IDs, 3D drawings and plant layouts.

These deliverables should be easy to share with clients and consultants and provide advanced collaboration features to

let the team convey its thought process and accelerate reviews and approvals.

These considerations prompted the adoption of Octave's Facets P&IDWorx and BricsCAD.

Overcoming challenges

With the help of Octave's implementation partner, Chempute Software, Miwatek was able to smoothly migrate to its new solutions and obtain rapid results.

Octave's Facets P&IDWorx and BricsCAD are two solutions that are easy to use and help our engineers develop highly detailed and accurate P&IDs. Not only do they streamline our design processes, but they also enhance our communication and collaboration with stakeholders," explains Wesley Neutt, Miwatek's Business Development Manager.

Today, Octave's solutions have become a fundamental part of Miwatek's design workflow, ensuring that P&IDs capture intricate design details while documenting the engineering team's thinking and guiding principles.

These P&IDs are used to create 3D drawings, piping layouts and plant layouts, and they help communicate key elements like valve selections, major unit sizes, instrumentation, piping sizes and control system logics.

Key benefits:

- A rapid and smooth migration from Miwatek's previous solution.
- The ability to develop highly detailed and accurate P&IDs, streamline design processes and enhance collaboration with stakeholders.
- Significant gains in efficiency, accuracy and detail of project documentation observed.



Realizing Results: The Newmont Akyem Project

A prime example of Miwatek's utilization of Octave's technology occurred during the design of a TSF cyanide destruction plant. The site needed a cyanide destruction plant with a flow rate of 60 liters per second to manage the volumes of let-over materials produced by the mining operations and stored at the site's tailings storage facility (TSF).

From 2021, Miwatek has leveraged Octave's solutions to conduct pre-feasibility engineering phase, identify hydrogen peroxide as the most cost-effective method and integrate plans with downstream treatment facilities such as the mobile reverse-osmosis (RO) plant.

The company was then able to accelerate process engineering by producing key deliverables, including detailed P&IDs,

engineering lists and process descriptions developed using Facets P&IDWorx on BricsCAD. These deliverables significantly enhanced the accuracy and detail of project documentation.

Lastly, in the second half of 2022, Miwatek led the execution phase, which saw the full-scale application of engineered plans, with ongoing support and modifications facilitated by the seamless integration of Octave's solutions.

Moving Forward

As Miwatek looks to the future, the company plans to leverage the strengths of Hexagon's solutions across more projects to continue enhancing their efficiency in mine water treatment.

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Wesley Neutt

Business Development Manager, Miwatek

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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