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SludgeVISION

THE SCIENCE OF SMARTER DEWATERING

SOLUTIONS THAT WORK

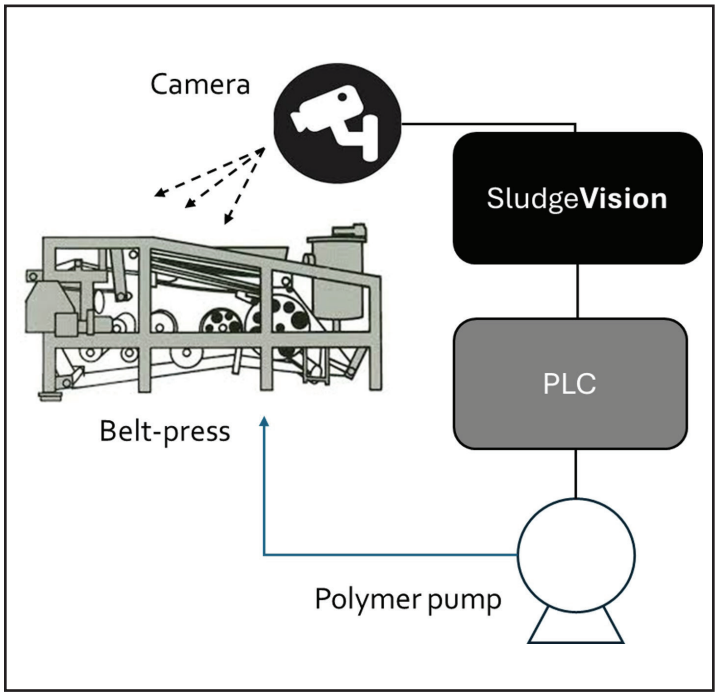
Introducing Sludge**VISION**

SludgeVISION is an advanced technology designed to improve the sludge dewatering process. By combining camera with computer vision software, it delivers a data-driven solution that turns a traditionally manual operation into a precise, automated process. The result is measurable savings, consistent performance, and a more sustainable approach.

How it Works: Precision in Action

SludgeVISION uses a non-invasive camera and a Base Station to continuously monitor your gravity belt press. The system's computer vision algorithms analyze the visible fractions of sludge and belt in real-time, providing immediate insights into dewatering efficiency.

- **Real-Time Monitoring:** The camera captures a live feed of your belt press, feeding video stream data directly to the SludgeVISION software.
- **Intelligent Analysis:** The software processes this visual data to calculate the fraction of belt and sludge visible.
- **Actionable Feedback:** This real-time feedback is then used by operators to make on-the-fly adjustments or integrated into a PLC or SCADA systems for automated polymer dosage control.



Key Benefits: Save Time & Money and Improve Quality

Polymer Savings: Polymer is a major operational expense. SludgeVISION helps you optimize your dosage, often leading to a 30% reduction in chemical consumption

Time Savings: Free your operators from manual supervision of the belt press. With SludgeVISION, they can focus on other critical tasks while the system ensures consistent dewatering quality. SludgeVISION acts as a "co-pilot", providing a new level of confidence and control.

Consistent Performance: Sludge composition can fluctuate, making manual control difficult. SludgeVISION's real-time monitoring and automated feedback loop ensure consistent sludge separation, delivering reliable dewatering performance even as conditions change.

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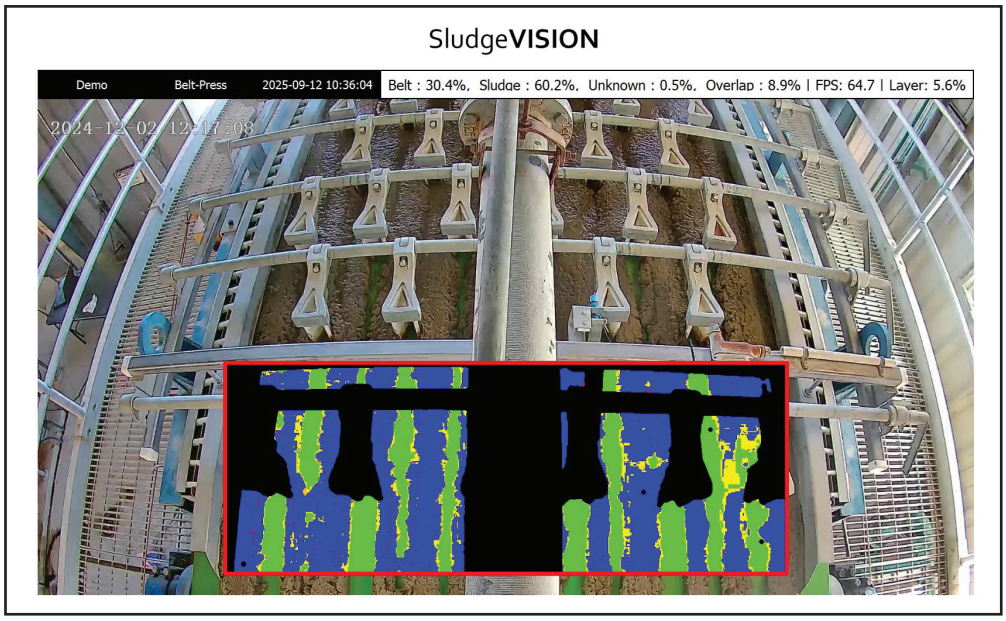
Seamless Integration: The Polymer Control System (PCS)

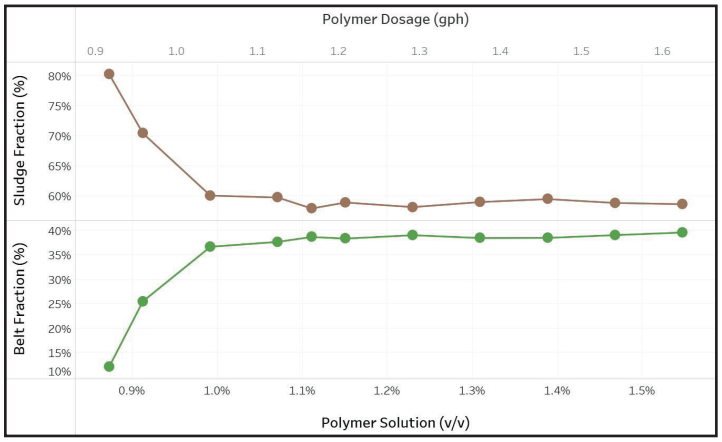
The Polymer Control System (PCS) is the core of SludgeVISION's automated capabilities. This integrated system connects the SludgeVISION Base Station to your industrial PLC/HMI, enabling true closed-loop process control. The PCS can:

- Communicate with your existing plant hardware.
- Run in Auto Mode to automatically adjust pump speed based on real-time data.
- Initiate Safe Mode to protect the process in case of communication loss or system faults.

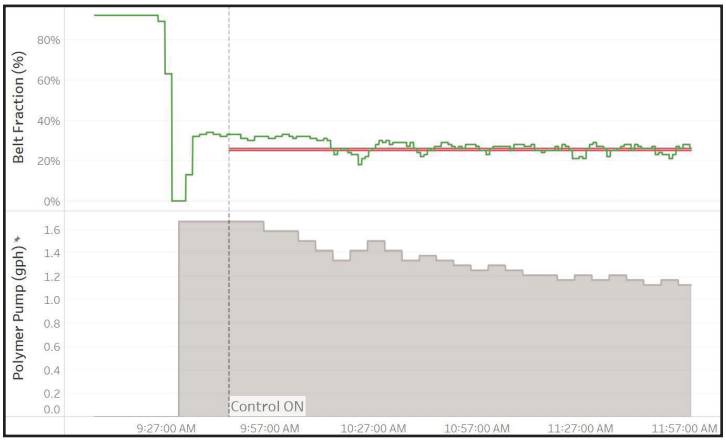
This system provides a robust and reliable platform for automated polymer dosing, ensuring you get the most out of your dewatering process with minimal intervention.



SludgeVISION Software.



Example of sludge and belt fractions from SludgeVISION at various polymer concentration by changing the polymer pump speed and maintaining the primary water flow.



Example of polymer pump control using SludgeVISION system at a wastewater treatment plant in Northen California.

FAQs

What is the SludgeVISION Base Station?

The Base Station is an industrial-grade computer that serves as the central hub for the system, hosting the SludgeVISION software and managing all data.

What if the belt is dirty?

SludgeVISION is designed to handle this. Its algorithms are trained to differentiate between the sludge and the belt, ensuring accurate analysis even with a dirty belt or inconsistent belt color.

What if I lose communication?

The system has a built-in fail-safe (Safe Mode). If the camera feed is lost or communication is interrupted, the system automatically reverts to a safe, predefined pump speed to prevent over- or under-dosing.

Can I use SludgeVISION to optimize other variables?

Yes. While its primary function is polymer dosage control, the system's analytical capabilities can be expanded to provide insights for optimizing other parameters, such as dilution water and mixing energy.

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