CASE STUDY

Oil sands project revolutionizes inspection process with Octave Loop Material Readiness

Key facts:

Industry: Mining

Country: Canada

Octave products used: Loop Material Readiness *(Jovix)*, Rugged Tablets, Active RFID Tags

Key benefits:

- 98% success rate for all punches
- 89,243 inspections

This Canadian oil sands mining project processes 110 million tons of oil sand yearly, yielding 194,000 barrels of bitumen daily at full production. Loop Material Readiness was deployed on the secondary extraction which brought the project to first oil in 2017 and ramped up in Spring 2018.

Jobsite challenges

- Inspected material from 250+ suppliers
- Manually produced inspection checklists
- No scalability
- Shipment instructions from multiple suppliers varied
- Inspection checklists manually entered into Excel

With so many vendors, shipment instructions varied significantly, and the lack of standardized processes for receipt inspections made it difficult to train receivers. Manual inspections were difficult to track, store and receive. Before data entry, scalability could only be achieved by scanning or copying the physical documents.

Whether from receipt or preservation and maintenance inspections, data entry coordinators manually entered inspection checklists into Excel, and spreadsheets were aggregated to build reports. The process was flawed and an expensive use of labor. A variable time gap between the

inspector submitting checklists and report population meant that reporting was rarely up to date.

The Goal? Efficiency and Visibility

Solution

Loop Material Readiness was deployed to provide a full inspection management service, including receipt inspections used as triggers to flag and quarantine overages, shortages and damages (OS&Ds).

It provided immediate visibility into discrepancies between project and vendor inspections for the same equipment. The project could also schedule recurring inspections, providing preventative maintenance and preservation of materials.

Implementation

Equipped with rugged tablets and active RFID tags, approximately 60,000 pipe spools and 140,000 structural steel pieces were tagged by Korean fabricators. Pipe supports, bulks and structural connections were shipped within tagged crates. Mechanical, electrical and instrumentation materials were tagged at off-site laydown or mod yards. Cable was cut into engineered lengths and loaded onto supplier-tagged reels. Over a 20-month period using Loop Material Readiness, the project had completed 89,243 inspections. Receipt inspections were automatically generated on vendor shipments. Each template (of 195) was built to vendor specs and recurred on custom schedules to preserve and maintain materials. Templates featured prompts for proper inspection involving maintenance, calibration, sensor reads, axle/motor turning, lubrication and/or oil misting. Rules ensured failed inspections were flagged and quarantined. Including owners, EPC firms and partners, there were 169 Loop Material Readiness users. Consolidated and aggregated data from multiple heterogeneous sources provide a 'single reliable source of the truth,' which increases efficiency and ultimately reduces costs.

Results

- 98% success rate for all punch items
- Saved 5 to 15 minutes per inspection
- Captured, closed punches before commission, start-up and walkdowns; estimated savings of $500,000
- Standardized processes offered real-time data for all
- Inspectors could complete these tasks: mobile inspections, take/edit pics showing change over time, send complete inspections to supervisor and notify other inspectors of completion
- Inspection Coordinators, Supervisors and Managers could complete these tasks: view inspection details, generate reports, monitor KPIs, assign fails to be addressed, alert correct personnel to problems, timestamp damage or failure, hold parties accountable for inspection performance and approve inspections

- Reduced inefficiencies of managing indirect labor inspectors by material verification, task completion compliance, no manual data entry and collecting pics/signatures as proof of work
- Continuous improvement and change management:
  - Location/status/care, custody and control-driven
  - Transparent, time-stamped, single source of data
  - Inspection criteria can be exported, analyzed, compared, improved and changed, whether for immediate needs or future deployments (scalability)
  - Changing engineering requirements updated by management and executed on next inspection run

Summary

The Loop Material Readiness inspection program was deployed to contractors and partners, resulting in digital records that revolutionized the way inspections will be done on future projects. The dynamic functionality allows managers to export, analyze and improve inspection questions and ensure the best quality measures, optimizing risk mitigation and efficiencies.

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.