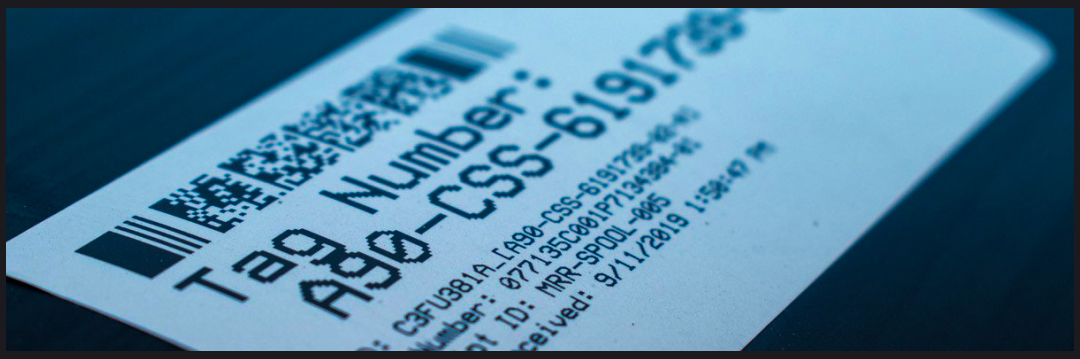
CASE STUDY

Owner-implemented, third-party barcodes and Octave Loop Material Readiness



Key facts:

Industry: Cement Manufacturing

Country: Canada

Octave products used: Loop Material Readiness *(Jovix)*, Barcode Labels

Key benefits:

- Receiving process 10x faster
- Zero lost materials over two years
- Streamlined field transactions
- Increased accuracy

RFID isn't always the answer.

Loop Material Readiness is deployed at a commercial cement manufacturing project in Alberta, Canada. The owner uses Loop Material Readiness to support several EPC firms and a complex supply chain that includes multiple fabricators, marshalling yards, laydown yards and material warehouses. Using Loop Material Readiness project-wide ensures complete visibility throughout the entire material lifecycle, from fabrication to installation, no matter the EPC firm or sub-contractor. The owner now has access to robust functionality in reporting, trending and predictive analytics, and the system is easily configurable to achieve total visibility across the material lifecycle.

Challenges

Steel piece marks from other countries are often illegible. Piecemarks are notoriously difficult to identify generally, but it's especially problematic when materials are arriving from the other side of the globe. Pieces are usually heavily painted and weathered from months-long rides on trains, ocean liners, barges and trucks. Using different vendors can mean different shipment methods and packaging arrangements. Shaking down shipments

with no single material language causes lost productivity for a receiving crew.

Solution

A single source of truth for material status and availability across all vendors

Working in conjunction with an EPC firm's purchasing system, a program for using third-party barcodes was introduced at a fabrication facility. Once upstream standardization was implemented, data could move downstream easier. As a result, barcodes were tied directly into the original purchase order (PO) and originated by the EPC firm instead of the fabricator. After fabrication and shipment, receiving teams used tablets to scan the barcode-labeled pieces upon arrival. The scan revealed information about where the piece had been, where it was going and when it needed to be there, providing real-time information to inform workface planning.

As a precaution, the site adopted a secondary barcoding system to ensure each material is accurately accounted for throughout the lifecycle, no matter the conditions on-site. A Loop Material Readiness barcode is applied to the piece and automatically tied to the original barcode scan, providing a back-up in case of loss or damage to the original. The secondary barcode is also a quick visual indicator as to whether a material has been received into Loop Material Readiness. That's especially valuable during a large shakedown. This process was adopted project-wide across all EPC firms as a bolt-on solution to their individual purchasing software.

The heavy use of barcodes on this project and minimal use of RFID demonstrates that, for material visibility, there is no auto-ID "silver bullet." RFID and GPS are not inherently superior to barcodes, and each project presents a unique use case. The Loop Material Readiness team works closely with project stakeholders to conduct a Material Readiness Assessment (MRA) and determine their ideal auto-ID options.

This particular project is a success story for how barcodes can work just as well as other auto-ID options to achieve total visibility. RFID is great, but it's always a question of what is most appropriate for a specific project. For this implementation, there are only a few hundred active RFID tags, and they are used only for long-lead, high-cost materials that need to be monitored in real time as they move through the global supply chain.

Jobsite challenges

- Receiving process approximately 10x faster
- Zero lost or unidentified steel pieces over two years
- Owner transitioned to project-wide receipt of shipments via PO with mandatory application of second barcode to all materials, in addition to steel
- Streamlining field transactions decreased safety risk exposure and increased accuracy

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.