



CASE STUDY

Oil refinery tracks 14,000 materials with Octave Loop Material Readiness



Key facts:

Company: Worley

Website: worley.com

Industry: Oil & Gas

Country: USA

Octave products used:

Loop Material Readiness (*Jovix*), Active RFID tags, Barcodes, Gate reader, Loop Material Readiness System Coordinator

Key benefits:

- Loop Material Readiness took the project from 5,000 unidentified materials to zero

Introduction

After this refinery project was put on hold for approximately six years due to environmental concerns, Chevron (the owner) contracted Worley to complete modernizations to the Chevron Refinery in Richmond, Calif. The upgrades significantly increased the facility's safety and replaced some of the refinery's oldest processing equipment with modern technology. Chevron said, "Modernization will enable the refinery to continue to competitively produce gasoline, diesel and jet fuel, and lubricating base oils that meet California's strict environmental regulations. The upgrades will improve the reliability of the refinery and allow us to operate successfully well into the future."

Loop Material Readiness scope

Worley chose to deploy Loop Material Readiness to help overcome two main hurdles that the project's materials team faced when jumping on a partially completed project that had been dormant for years. First, the material inventory for the project had been abandoned by the previous contractor, and no records were transferred to Worley. This resulted in a laydown yard of approximately 5,000

engineered pipe spools, valves and steel that were unidentified and largely unaccounted for. Secondly, these materials were in varying conditions of neglect due to the amount of time passed and proximity to the salty air of the Pacific Ocean. The materials needed to be identified and matched with their respective drawings while also undergoing inspection to determine if refurbishment was necessary prior to installation. Loop Material Readiness provided Worley with an efficient and organized method for locating materials and applying barcodes or RFID tags to track their release to various refurbishment contractors. Each material's status was updated automatically in Loop Material Readiness when triggered by a single gate reader installed at the one entrance/exit to the laydown yard.

Site set-up

During deployment, the Loop Material Readiness System Coordinator (JSC) uploaded high-resolution imagery, then mapped and zoned laydown areas for two yards. The addition of these zones was the key to organization and accurate inventory while also passing location information to Worley's procurement system, SAP.

Introduction

After complete implementation of Loop Material Readiness on the Richmond Refinery Modernization project, Worley had a full inventory of inherited materials and could easily maintain an accurate inventory as new materials arrived to replace missing or damaged pieces. GPS locations on all yard materials allowed Worley's materials management crew to operate with reduced overhead thanks to the increased organization and ability to quickly find materials.

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Deployment



Tablets

Built to withstand harsh environments, rugged tablets extend track and trace functionality into the field.



RFID Tags

Active RFID tags automate material identification and tracking throughout the material's lifecycle.



Gate Reader

Gate readers automate data collection through shipping, receiving and intra-site transfers.



Barcode Labels

Barcodes are an inexpensive method of tracking that are printed in the field with mobile printers.



Loop Material Readiness System Coordinator (JSC)

JSCs offer "boots on the ground" support to help realize the highest ROI from Loop Material Readiness.

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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