



**Waygate
Technologies**

a Baker Hughes business

Case study

Rail Car Tanks



SAFETY

The Ca-Zoom HD removed the necessity for confined space entry



DATA QUALITY

High-definition imaging enables inspectors to detect defects and deliver precise information. Data collection with the Ca-Zoom significantly enhances traditional RVI methods



SAVINGS

Reduced administrative efforts for entry permits and safety protocols, ultimately minimizing downtime and process costs

Client Expectations

The customer aimed to find a safer, more cost-effective and faster method for inspecting their rail car tanks using an industrial inspection camera. Previously, inspections involved human entry and out of reach areas for the inspector.

To address these challenges, the customer engaged the Waygate Team for a Proof of Concept on one sphere, aiming to establish a new, safer inspection standard that eliminated confined space entry while enhancing data accuracy and overall efficiency.

Our Solution

The Ca-Zoom HD system integrated advanced technologies to enable safe, efficient inspections of confined assets. Its full HD camera, featuring 30x optical zoom, was mounted on extendable fiber poles and deployed through vertical manway using an adjustable tripod. Combined with the camera's Pan-Tilt functionality, this setup allowed inspectors to assess all critical areas within the vessel. Conducting a rapid inspection using camera poles alone enables a swift and efficient checking process.

The Outcome

The primary goal of pressure vessel inspection was to assess overall asset integrity and identify potential defects that could pose immediate risks. Additionally, the customer wanted to determine whether data from the Ca-Zoom would be sufficient for routine preventative maintenance confined space entry.

Waygate successfully delivered these results. The combination of extended fiber poles and an adjustable tripod allowed for a comprehensive inspection using a single configuration. The entire process, including system setup, was completed in under 2 hours, with all necessary perspectives and areas easily assessed.

The client confirmed that Waygate's systems provide a viable alternative to traditional confined space entry and is planning to use the system for the next outages. By utilizing the Ca-Zoom, inspectors remained safely outside hazardous areas, reducing risk while also saving time and costs. This solution not only improves efficiency but also enhances workplace safety, reinforcing the value of remote inspection technology.

