

# VILLARI | Case Study



## Context

In the dynamic realm of the steel industry, the lifespan of a steel crane is a critical factor. Typically lasting between 20 to 45 years, a substantial number of cranes find themselves in the “end-of-lifetime” (“EOL”) stage or beyond. Aging assets face the challenge of cracks appearing due to steel fatigue, resulting in costly inspections, maintenance, and downtime.



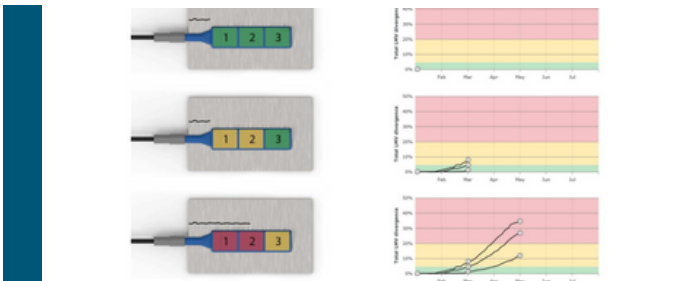
## The Challenge:

A prominent steel manufacturer grappled with this exact issue. With their EOT cranes reaching end-of-life, the alternatives of repairing and inspecting frequently or replacing the cranes would be costly and lead to excessive downtime.



## Villari’s Solution:

Collaborating with an engineering partner, Villari proposed a groundbreaking IoT monitoring solution. Following a comprehensive inspection for each crane, our certified crack detection sensors were strategically deployed in critical locations. Each sensor was installed in 10 minutes without surface preparation and will continue monitoring the crane for up to 5 years.



## Transformation and Results:

The implementation of Villari’s sensor system unlocked a new level of data-driven asset management and maintenance. A continuous stream of data provides instant alerts when cracks start to develop. Maintenance costs and downtime were reduced and the EOL for each asset could now be precisely assessed – and increased in 15% – through the valuable data acquired.



## Conclusion:

Villari and Partner’s innovative approach not only addressed the immediate challenges faced by the steel manufacturer, but also paved the way for a more efficient and cost-effective future in crane maintenance. This case study exemplifies how proactive, data-driven solutions can revolutionize the management of aging assets; ensuring longevity and reliability in crucial industrial operations.

## Key Numbers

10  
min

Installation time/Sensor

Up to  
4.000

Measurements Per Year/Sensor

48  
Hours

Maximum Reaction Time

13-20%

Increase in asset lifetime