

HOW MAZZELLA IMPROVED SHIP-TO-SHORE CRANE ROPE PERFORMANCE

AT A MAJOR AMERICAN PORT

Major port terminals operate under constant pressure to keep cargo moving safely and efficiently. For ship-to-shore (STS) cranes, wire rope performance is critical for maintaining uptime, protecting workers, preventing costly delays, and supporting the demanding duty cycles of modern global supply chains.

Mazzella was contacted by a major international terminal on the East Coast of the United States that was experiencing ongoing challenges with wire rope life on their STS cranes.

THE CHALLENGE

The port uses STS cranes to support high-volume container handling.

At the time, the customer was using a 6-strand general-purpose wire rope on their STS cranes. While this rope met basic application requirements, it was consistently reaching change-out criteria after approximately 1,400 operating hours, creating several operational challenges:

- Frequent crane downtime for rope change-outs
- Increased labor costs associated with replacement
- Added strain on maintenance schedules
- Higher inventory requirements for spare wire rope reels

With limited tolerance for unplanned downtime in port operations, the customer was seeking a solution

that could extend rope life without compromising safety or performance.

MAZZELLA'S APPROACH

Mazzella partnered closely with a leading wire rope manufacturer to evaluate the customer's application and identify opportunities for improvement.

The process began with a site visit to review:

- The overall condition of the STS cranes
- Sheave condition and alignment
- Existing maintenance practices
- Operational demands and duty cycles



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During this visit, Mazzella worked directly with the customer's maintenance team to educate operators and technicians on best practices for crane and wire rope maintenance, helping ensure any new solution would deliver maximum service life.

Using performance data from other STS crane port applications, Mazzella introduced the customer to a high-performance wire rope option designed specifically

to handle higher fatigue resistance and longer service life in demanding crane environments.

THE SOLUTION

To validate performance in real-world conditions, Mazzella recommended a trial installation of the high-performance wire rope.

In January, the customer installed the trial rope on their main hoist line using high-performance wire rope.

The trial was conducted over a full year, with periodic site visits from Mazzella to review rope wear patterns, confirm proper maintenance

practices, and monitor crane and sheave condition.

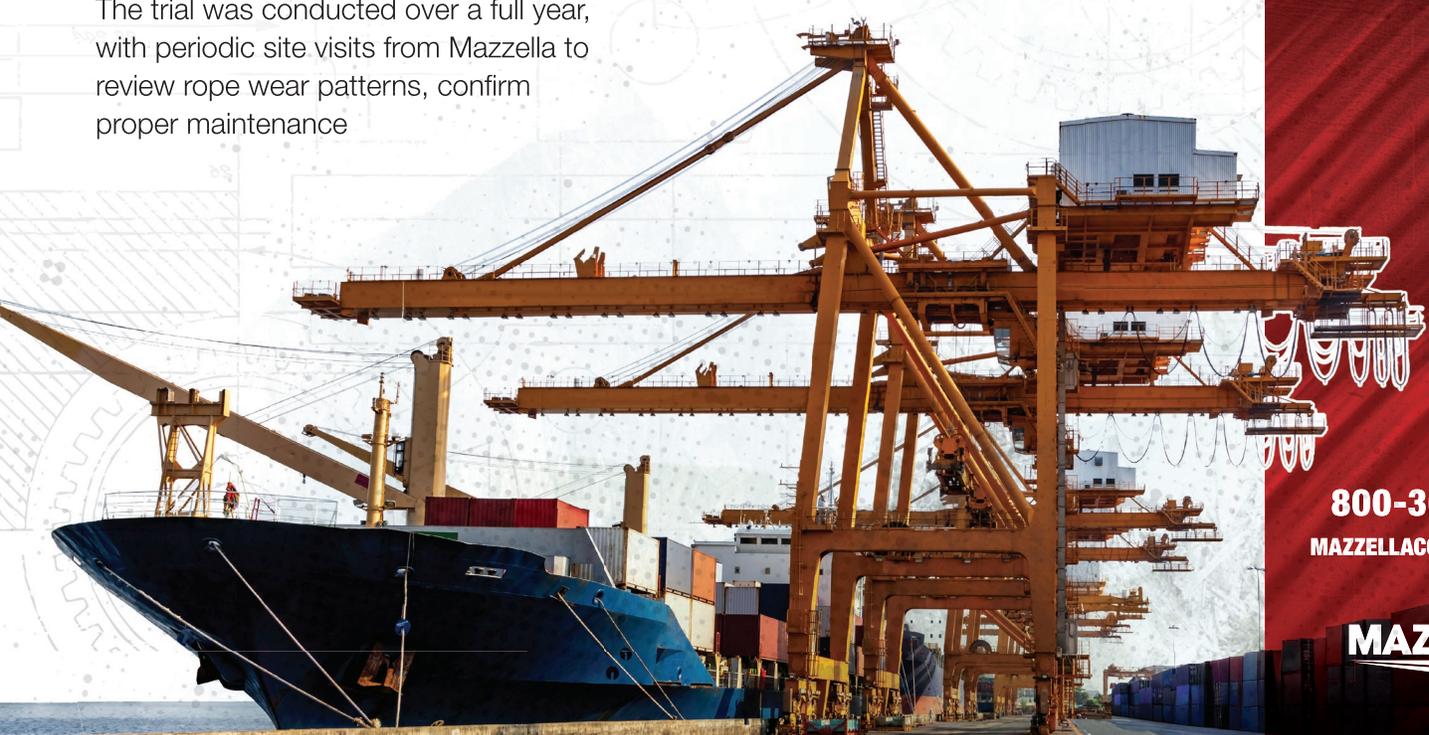
RESULTS AND PERFORMANCE IMPACT

The results of the trial were significant, **extending the rope's life three times over.** On top of increased rope life, the company also experienced:

- **Reduced crane downtime due to fewer rope change-outs**
- **Lower labor costs associated with maintenance**
- **Improved crane availability and operational reliability**

A LONG-TERM VALUE PARTNER

By combining high-performance wire rope technology with ongoing maintenance support and education, Mazzella helped this major port terminal improve efficiency, reduce costs, and increase confidence in their lifting operations.



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