

Monitoring critical crack locations in STS Cranes

Situation

- Inspections of two STS cranes revealed 10 cracks.
- Cracks are in critical areas of the backstay, requiring close monitoring.
- To maintain safe operations, each crane needed bi-annual inspections, **costing ~\$15,000 per year** excluding downtime.

Solution

- 16 sensor probes per crane, 32 sensors in total across both cranes.
- Rope access team was trained and deployed on the same day as the sensor installation.
- Each crane was out of operation for **less than 2 hours** during installation.



2 hours
installation per
STS crane



32
sensor probes
installed



30%
reduction in
inspection costs

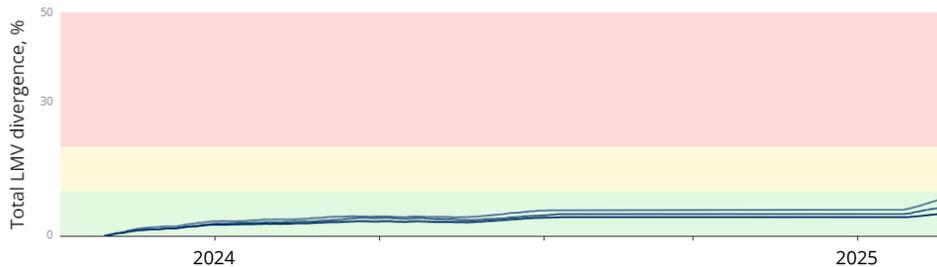


Use case

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Results

- Inspection **costs reduced by 30%**
- Future inspections are now condition-based, triggered by Villari sensor readings.
- Eliminated the need for routine downtime during regular inspections.



No significant LMV was detected, confirmed by visual inspections



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