Use case

# Extending the life of EOT cranes through continuous monitoring

## Situation

- EOT cranes are reaching designed end-of-life resulting in safety concerns
- Rising cost due to mandatory increased inspection frequency and unexpected operational shutdown
- Replacement of a single crane
  costs roughly \$5M

## Solution

- Based on inspection critical locations were identified and a sensor plan was developed.
- In total 96 sensors were installed on 12 EOT cranes.
- Each crane was out of operation for less than hour during installation.





sensor probes installed



**1.700.000** measurements per year



Closeup of installation

Sensor



Sensor

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### The future of structural health monitoring

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### Results

- No crack growth was detected and verified with visual inspections.
- Showcasing safe and continuous operations for EOT cranes outside their designed lifetime.
- Reducing inspection costs and postponing purchasing new cranes.





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#### The future of structural health monitoring