

SERVICE

LIGHT LIFTING SYSTEMS
GENERAL FABRICATION
PROCESS EQUIPMENT
CONTAINER HANDLING
BULK HANDLING
SHIPYARDS

PORT SERVICE

KONECRANES®
Lifting Businesses™

Crane inspections
SERVING YOU WITH
TRUE CRANE KNOWLEDGE



WHY TO INSPECT YOUR CRANE REGULARLY?

You reduce the risk of costly production losses

You make Your operations safer:

- > You reduce the risk of high consequential costs due to unsafe operations – monetary savings

More focus on predictive operations and scheduled actions:

- > You lower the risk of unexpected breakdowns
- > Maintenance can be planned in the most effective way, during normal operating hours
- > You reduce emergency premiums
- > To get the best available persons to do the job

You have invested millions of dollars in cranes:

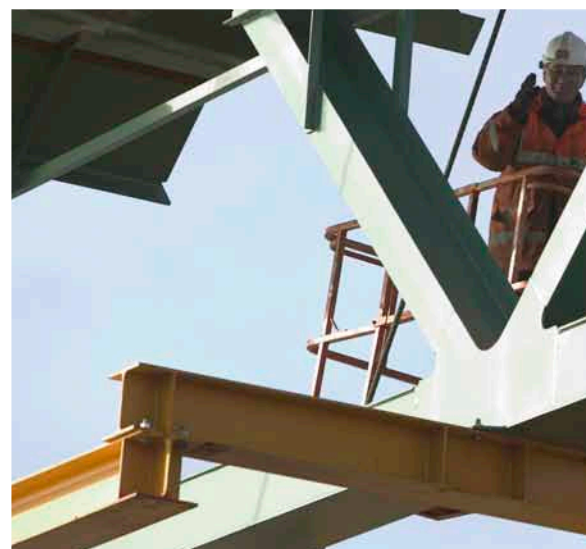
- > It is imperative that cranes are in good and safe condition
- > Inspections together with proper maintenance help to maintain the value of expensive equipment

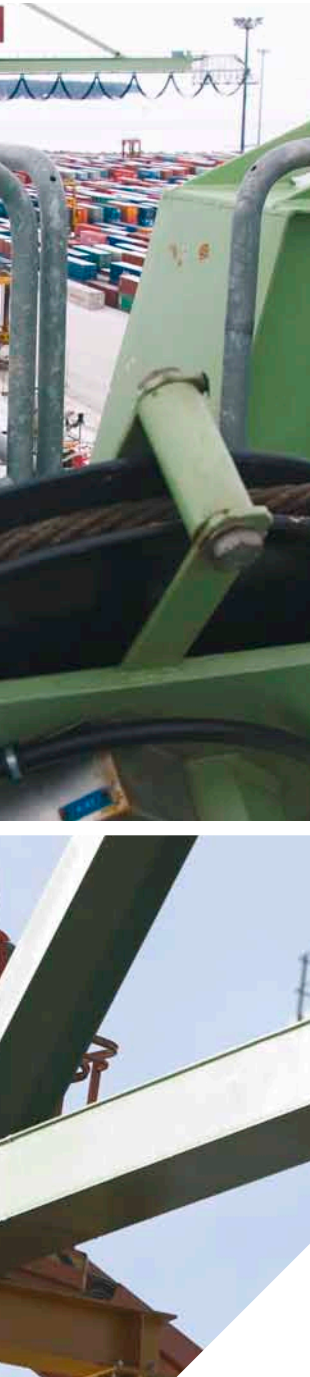
The amount of money allocated to maintenance is usually not sufficient:

- > An outsider can better evaluate the effectiveness of Your maintenance program

A pair of “new eyes” examines the crane and You get new ideas

Recommended in FEM / CMAA crane regulations





OUR INSPECTION PACKAGES

Statutory inspection

- > Main purpose is to fulfill statutory requirements
- > Availability varies by country

One-Time inspection

- > Agreed to be done only once
- > Limited to certain design area only or
- > Covering the whole crane

Scheduled inspection

- > Done at regular, preagreed intervals
- > Scope alternatives:
- > Safety, Electrical, Mechanical, Structural or
- > All inclusive

OUR TOOLS

Experienced inspectors:

- > We share our global experience with You

Tools to conduct a professional inspection:


- > Inspection Program
 - > Specific and detailed check-lists
 - > Inspection done systematically
 - > Findings are properly reported
 - > Recordings are stored
 - > Coding makes the data comparable



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CRANE INSPECTION
DECEMBER 2006
 Crane 11
 G300



Customer
 Location
 18.12.2006 - 18.12.2006

Inspection Summary

Priority 1	Priority 2	Priority 3	No Priority
2	3	0	25

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EXECUTIVE SUMMARY

Oslo Port Authority
 P.O. Box 230 Sentrum
 N-0103 Oslo
 Norway

Inspected cranes : STS, Kran 509 (G258)
 Date of inspection : 13.5.2003 - 15.5.2003

GENERAL
 Inspected cranes : STS, Kran 509 (G258)
 Date of inspection : 13.5.2003 - 15.5.2003

MAJOR FINDINGS

No	Crane	SAFETY
1	509	Main hoist brake disc rusty. Pic. 3
2	509	Main hoist rope damaged. Pic. 4
3	509	Festoon rail cracked at three spots. Pic. 6

No	Crane	OTHERS
1	509	Some bogie shaft ends rusty. Pic. 1
2	509	Portal junction box damaged. Pic. 2
3	509	Window wiper blade broken. Pic. 5
4	509	Three festoon trolley wheels defective. Pic. 7
5	509	Foot locker door handle / lock broken. Pic. 8

CONCLUSION
 In general the crane is in excellent condition.
 The festoon rail needs immediate attention and has to be repaired.
 The main hoist ropes have to be replaced soonest.
 In the routine weekly inspection the main hoist emergency brake disc surfaces shall be checked and cleaned as necessary, the steel brushes to be adjusted.

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WORK ORDER
 Crane Inspection - Dec 2006

Customer: Location: 45400
 Project no: 45400

Crane name / ID: Crane 1 / G300
 Inspection date: 18.12.2006 - 18.12.2006
 Manufacturer: Konecranes
 Year built: 2002
 Capacity: 55
 Span: 45

Inspection Item	Qty	Cond.	Request	Sign
BOGIE A				
MOTOR A	2	8	/ / /	
Description:	Damaged motor body.			
AUDIBLE WARNING DEVICE A	1	8	/ / /	
Description:	Broken - bulb to be replaced			
SPREADER				
TWIST LOCK A	2	4	/ / /	
Description:	To be lubricated			
FLIPPER A	2	8	/ / /	
Description:	Slightly damaged - to be welded.			
DRIVE SPROCKET A	1	8	/ / /	
Description:	Sprocket cover missing			

Printed: 20.12.2006
 Reported by: Inspector
 MonitorParks 2.1.0

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SAFETY SUMMARY REPORT
 Crane Inspection - Dec 2006

Customer: Customer
 Location: Location
 Project no: 45400

Crane name / ID: Crane 1 / G300
 Inspection date: 18.12.2006 - 18.12.2006

Priority code	Condition code
0 - Not Priority Established or Assigned	1 - Not Inspected 2 - Not Applicable (object does not exist) 3 - Acceptable
1 - Safety Item Involving Potential Danger to Life	4 - Clean or Lubricate 5 - Review Item Periodically 6 - Requires Adjustment
2 - Involves Production Related Losses Plus Repair	7 - Modify 8 - Repair Item 9 - Replace Item
3 - Repeat Consequence Only	10 - CAUTION - DO NOT USE

PRIOR. COND.	MACHINERY	COMPONENT / SUBCOMPONENT	DESCRIPTION
1	8	BOGIE A	Audible Warning Device A
1	8	SPREADER	Drive Sprocket A
			Sprocket cover missing

Konecranes signature: _____
 Customer signature: _____

Printed: 20.12.2006
 Reported by: Inspector
 Crane name / ID: Crane 1 / G300
 MonitorParks 2.1.0

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CRANE CONDITION

Customer: Customer
 Location: Location
 Project no: 45400

Inspection date: 18.12.2006 - 18.12.2006
 Running Hours: 4500 (18.12.2006)
 Inspector: Inspector

Crane name / ID: Crane 1 / G300

Inspection Item	Priority / Condition	Condition Code	Description
BOGIE A			
EMERGENCY STOP SWITCH A	0	3	Acceptable
MOTOR A	2	8	Damaged motor body.
WIRING AND CONDUITS	0	3	Acceptable
TERMINAL BOX	0	3	Acceptable
AUDIBLE WARNING DEVICE A	0	3	Acceptable
WARNING LIGHT A	0	3	Acceptable
SPREADER			
TELESCOPE A	0	3	Acceptable
GENBOX A	0	3	Acceptable
WIRE ROPE A	0	3	Acceptable
TWIST LOCK A	0	3	Acceptable
FLIPPER A	3	8	Repair item
FLIPPER A	0	3	Acceptable
DRIVE CHAIN A	0	3	Acceptable
DRIVE SPROCKET A	1	8	Repair item
POWER PLUG A	0	3	Acceptable
CABLE TRACK	0	3	Acceptable

Printed: 20.12.2006
 Reported by: Inspector
 Crane name / ID: Crane 1 / G300
 MonitorParks 2.1.0

REPORTING

Inspection reporting is understandable:

- > Detailed reporting for Your maintenance specialists
- > Separate Safety Report
- > Summarizing Executive Report

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PICTURE REPORT
 Crane Inspection
 December 2006

1. BOGIE A - Motor A
 

Damaged motor body.

2. SPREADER - Drive Sprocket A
 

Sprocket cover missing

Printed: 20.12.2006
 Reported by: Inspector
 Crane name / ID: Crane 1 / G300
 MonitorParks 2.1.0

THERMOGRAPHIC SERVICES

Use of an infrared imaging and measurement camera to "see" and "measure" thermal energy emitted from an object


Benefits:

- > Measure the temperature & see heat produced
- > Identify and locate the problem fast
- > Clear reporting
- > Find problems before they stop the crane
- > Reduce down-time

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THERMOGRAPHIC REPORT

Customer: Customer
 Location: Location
 Crane Name/ No: Identification
 Part: Part 5
 Unit: Unit 5
 Swing Control Relay




05-07-06 16:01:08

Date Measured	Spot Temperature	Background Temperature	Emissivity
07.06.06	44.7°C	38.0°C	0.95

DESCRIPTION
 Measure temperature from the Swing Control outside. Found overheated control relay of brake control.

POSSIBLE CAUSE
 Bad contact point of relay.

ACTION NEEDED / TAKEN
 Relay had to be repaired during daily maintenance on 9 July 06.

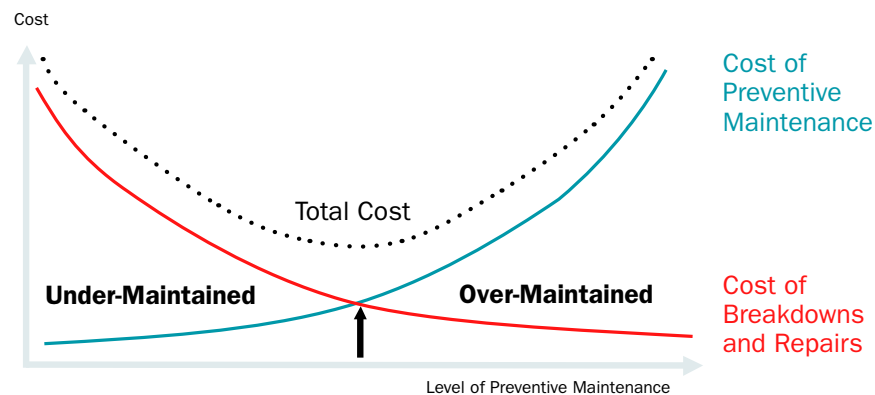
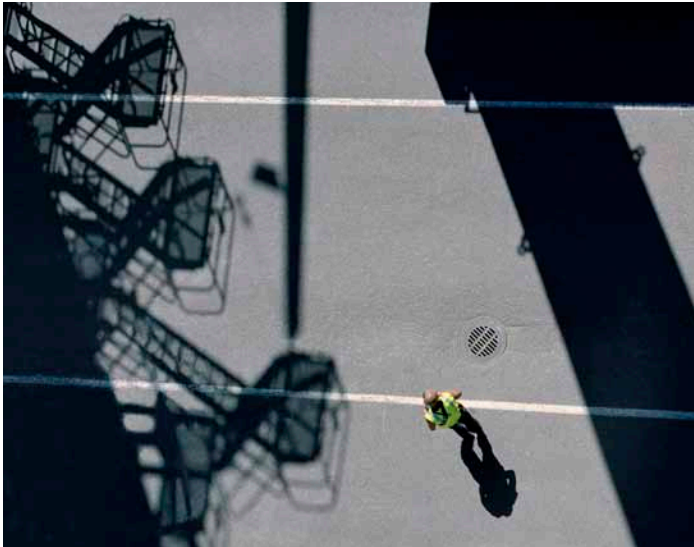
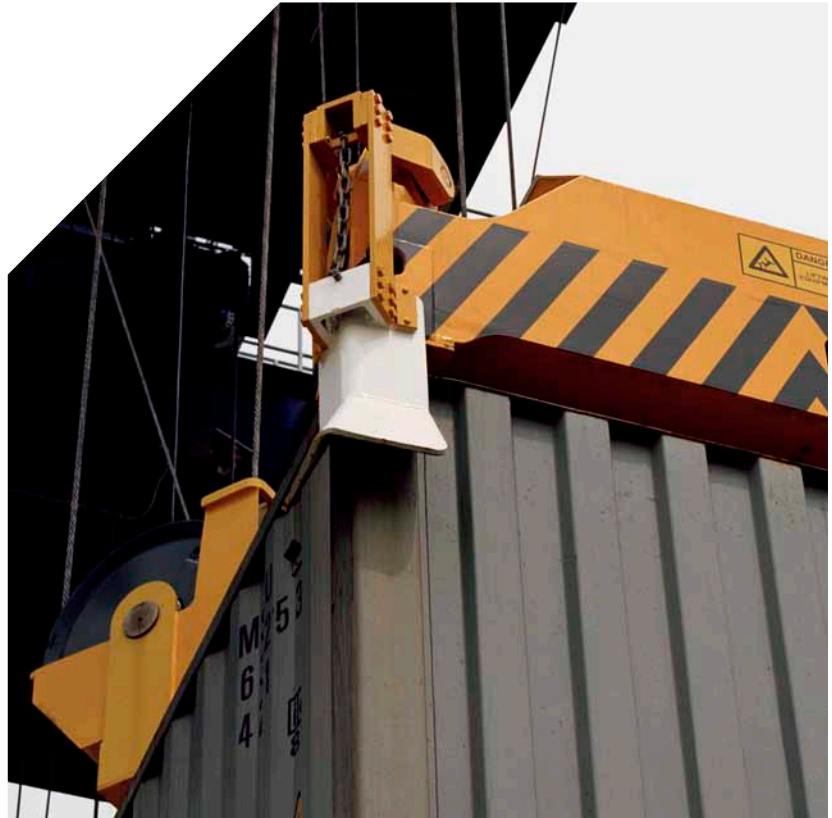


Signature: _____
 Reported by: Stefan
 Designation: Electrician
 Date: 11.06.06

MAKE YOUR OPERATIONS SAFER

Inspections produce long-term savings:

- > Higher crane uptime
- > Increased safety
- > Expensive production losses minimised
- > Better productivity – increased profitability
- > Reduced penalty costs
- > Store the right spare parts – optimise Your capital
- > Professional report from experienced crane experts
- > Latest technology and standards
- > Possibility for global contracts with leading crane manufacturer





QUAY
CRANES



YARD
CRANES



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STACKERS



FORKLIFT
TRUCKS



CONTAINER
TRUCKS



STRADDLE
CARRIERS



BULK
UNLOADERS



SHIPYARD
CRANES



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Konecranes is a world-leading group of Lifting Businesses™ offering lifting equipment and services that improve productivity to a wide variety of industries. The company is listed on the OMX Helsinki Stock Exchange and in 2006, sales totalled EUR 1,483 million. With 8,000 employees at over 370 locations in 41 countries, we have the resources, technology, and determination to deliver on the promise of Lifting Businesses™.

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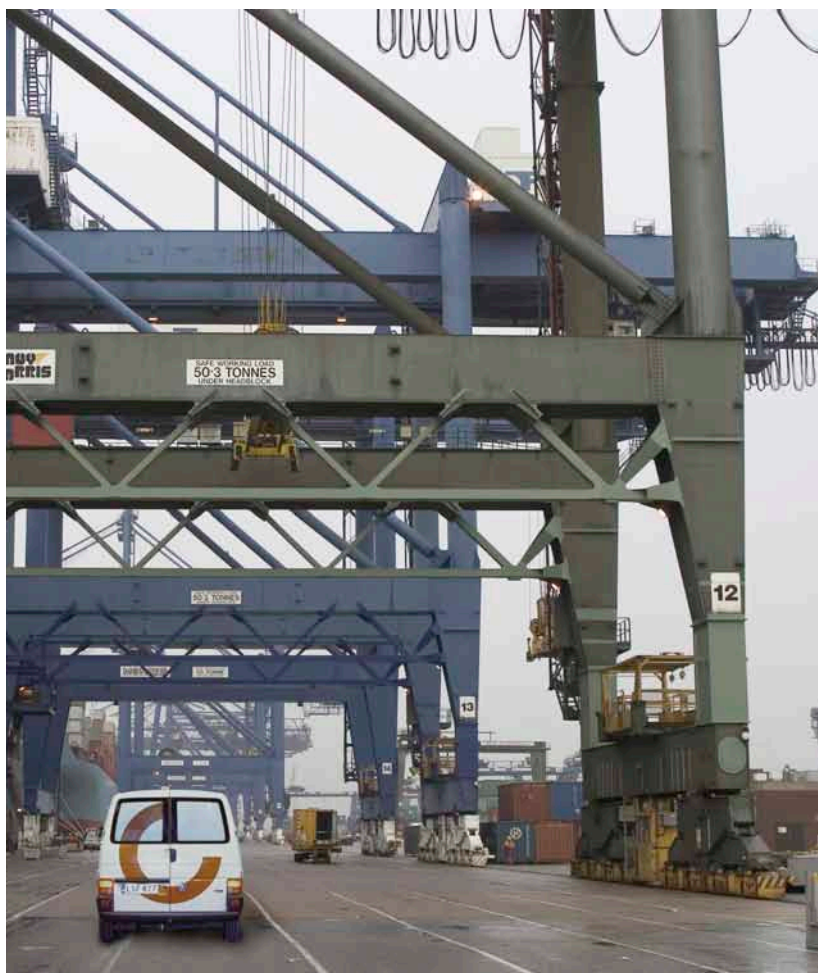
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