

– PORT CRANE KBAI™ PROJECT

IMPROVE ASSET RELIABILITY AND REDUCE COSTS WITH KNOWLEDGE-BASED ASSET INTEGRITY

A major container terminal operator in Asia is undertaking a pilot KBAI project to prove the technology and show the benefits.

In 2009 KBM was invited to apply its risk based maintenance approach to port cranes utilising KBM's web based Arivu software as the platform.

KBM's risk engineers and project team worked with the client and subject matter experts to develop the port crane risk models using KBM's tried and tested Knowledge Based Asset Integrity (KBAI™) methodology. This included establishing consequence of failure profiles for the assets.

By adopting an innovative risk-driven management approach, the client was able to intelligently apply maintenance resources to the areas that have the greatest potential to impact their business, and to model future performance.



Knowledge-Based Asset Integrity (KBAI™)

Traditional maintenance programmes typically use a time-based preventive approach. However, this is applied without consideration of parameters such as asset age, condition, frequency of operation or operating environment. These factors, and others, affect the likelihood of asset failure and should influence maintenance frequency.

The KBAI™ methodology, on the other hand, is a dynamic inspection and maintenance approach that allocates resources based on risk.

The KBAI™ risk profile and the optimised maintenance plans generated provide reductions in unnecessary maintenance and a highly effective refocusing of maintenance activity where it will add the most value.

The KBAI™ tool is accessed via the Arivu™ web based software platform. This allows asset-intensive organisations to manage their assets' integrity via links to their existing maintenance management system.

Port Crane KBAI™

This client utilises Arivu™ software to determine the optimum maintenance levels for port cranes in their operation. Data on over 100 port cranes is held within Arivu. As a result of applying the KBAI™ methodology planned maintenance costs have been reduced by over 10%. Breakdowns have also reduced as a result of KBMs failure cause analysis. This has led to less delay to ship unloading and allows a greater throughput of ships as time in port is reduced.

For more information please contact your regional KBM team.

Design

Build

Operate

Decom.



Working better by working together

Our extensive knowledge of the technical aspects of asset maintenance and asset performance management, coupled with our experience of organizational change management means we are uniquely positioned to help you improve your asset portfolio. By moving up to our next generation approach, you will enjoy peace of mind, knowing your decisions are supported by accurate, intelligent and highly engineered strategies.

Lloyd's Register is an independent risk management organisation providing risk assessment and risk mitigation solutions and management system certification around the world.

The Benefits

Arivu™ provides a unique approach within asset intensive industries, and gives our clients the tools to overcome the obstacles to optimised asset management.

- The application of risk driven strategies to an entire asset base, not just single assets or systems
- Scenario generation for modelling future risk and the probability of failure
- Potential for resource light implementations, drawing on the extensive expertise of Lloyd's Register
- Dramatic reduction in the time taken to extract value from the physical asset base
- Embedded continuous improvement processes and initiatives, with minimal business interruption
- Optimised operational maintenance regimes and reduced direct costs of asset maintenance
- Higher confidence in decisions over capital maintenance plans
- A 'roadmap' to improve asset and organisation performance leading to operational excellence.

Knowledge Based Management
Lloyd's Register EMEA
T: +44 (0) 207 709 9166
F: +44 (0) 207 423 1525
E: thom.kemp@lr.org

71 Fenchurch Street
London, EC3M 4BS UK

www.kbai.net

Knowledge Based Management
Lloyd's Register Americas 'Inc
T: +1 281 493 2236
F: +1 281 493 5161
E: art.harris@lr.org

1505 Highway 6 South, Suite 250
Houston, Texas 77077

Lloyd's
Register

LIFE MATTERS