

The Height of Safety

A Best Practice Guide for Overhead Travelling Crane Re-certification



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Introduction

Overhead travelling cranes are one of the most visible and critical pieces of equipment on industrial, manufacturing and mine sites, yet they are also potentially one of the most dangerous. Risks associated with overhead crane use include: incorrect selection; vulnerability to severe weather conditions; operator error (such as slinging method, impact with objects, intentional and un-intentional abuse); load dislodgement; and potentially the most critical, continued use of an unsafe crane.

The risk of operating a piece of plant in an unsafe condition has been known for some time, but for many years these risks were either improperly addressed, or simply ignored, because owners and operators were not being held to strict standards regarding maintenance and inspection. Recent changes to the regulatory environment for the continued safe use of overhead travelling cranes have greatly increased owner and operator focus on ensuring their plant is safe to use.

“Undergoing a 10/25 year re-certification ensures that overhead crane equipment is kept in proper working order.”



Images: Bigstock, Demag

The Importance of Maintenance Planning

One of the hidden dangers facing owners and operators is not being aware of when their equipment's design life is up. Design life refers to the period of time that a designer or manufacturer specifies during which their product will operate within the specified parameters.

In 2011, AS2550 was updated, specifying timeframes for mandatory inspections and where responsibility lies for ensuring maintenance activities, including remaining design life evaluation, are completed¹. Certain types of cranes, hoists and winches that were designed and manufactured after 2001 are required to be design registered with WorkCover, and these plants cannot be leased, hired or used unless they have a current certificate of design registration². Certain types of cranes, hoists and winches must be item registered with WorkCover regardless of their date of design or manufacture. These registrations must be renewed annually³ and routine inspections conducted every three months.

The two main components of overhead cranes are the running components (wheels, hoists, motor and other moving and wearing mechanical parts) which typically have a design life of ten years, and the structural component (steel girder, end carriages) which have a typical design life of 25 years. Therefore, cranes, hoists & winch owner/operators are required to know either the remaining design life of their equipment or that it has been independently certified for continued safe use. Undergoing a 10/25 year re-certification ensures that overhead crane equipment is kept in proper working order and complies with current safety standards and recommendations.

Despite the introduction of the upgraded standard, many companies are still more concerned about cost and lost production time rather than the safety standards of their cranes.

Consequences of Avoiding or Delaying Maintenance

Ignoring or delaying planned maintenance may save an hour or so initially, but the downtime and lost productivity that can result from an accident or serious mechanical fault can be significant, with consequences including injury to workers, fines if this injury is found to be due to negligence, delayed projects, lost productivity and equipment damage. Ignorance of the remaining design life of overhead cranes means that owners and operators are potentially exposing their workers to the aforementioned risks.

AS2550 sees the onus placed on owners and operators to know the remaining design life and to ensure that outdated or unsafe equipment is not in use. If equipment is found not to meet the standards during inspection, advice should be sought on what is required to bring the plant up to standard as the piece will not be useable until these deficiencies are rectified.



“Demag can perform all of your required lifting equipment safety inspections.”

Solution

Demag is a global leader in the design, manufacture, maintenance and recertification of cranes and crane components. They offer a wide range of products and services, including specific design and tailored solutions for the recertification of all cranes, including where the remaining design life is unknown.

These tailored solutions involve the application of General Overhaul kits that allow in-service equipment which is found to be close to, or outside, its remaining design life to be overhauled and recertified with a minimum of costs and interruption to service. Application of overhaul kits is key to providing continued safe use without the need for a complete replacement of the hoist or major parts.

Aiming to ensure all customers get the performance and utilisation they need from their installed equipment, Demag seeks to provide regular and reliable performance for optimum equipment availability and a high level of safety for owners and operators.

Demag’s highly qualified service specialists are authorised to carry out safety inspections on all types of equipment and can perform all of your required lifting equipment safety inspections, utilising state-of-the-art expertise and a wealth of experience to help you to meet your legal obligations as an owner and operator of industrial equipment. Demag works with you to keep your existing equipment running safely and reliably, increasing the ROI and offering you the most cost effective solution currently available in the Australian market.

[1] Australian Standard, "AS 2550.1-2011. Cranes, hoists & winches – Safe Use: Part 1 - General Requirements", 2011

[2] WorkCover NSW, "Cranes, hoists and winches", http://www.workcover.nsw.gov.au/formspublications/publications/Documents/cranes_hoists_winches_guide_4422.pdf

[3] WorkCover NSW, "Cranes, hoists and winches", http://www.workcover.nsw.gov.au/formspublications/publications/Documents/cranes_hoists_winches_guide_4422.pdf



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