MARCH 2022 | ISSUE 120

Crane Certification Association of America

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CCAA NEWSLETTER

We're back!

The 2022 CCAA Fall Conference Host

Tadano Mantis

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PRESIDENT'S CORNER

THE 2022 CCAA FALL CONFERENCE HOST

TADANO MANTIS

Plant tour on November 14 - Tadano Mantis, Richlands, Va

Dean Barley, President & Chief Operating Officer, Tadano America has graciously offered to host a tour of their Tadano Mantis Plant in Richlands, Va. Julie Fuller, President & Chief Operating Officer, Tadano Mantis Corporation, is coordinating the tour and will be onboard for our arrival

We are researching the best accommodations logistically for the meeting. Reserve the dates for our first in-person meeting since October 2019. More details will follow in the next Newsletter.

The Certifying Crane Surveyor tests for all 3 disciplines are now online and available at any time. To register for the exams, go to the CCAA members section of the website. Click on the CCS icon and follow the instructions. You need a computer with a camera for the proctor and a location without reference material.

There are growing sources of business for Crane Surveyors. Occasionally we, as inspectors, have been asked to perform a Monthly Inspection to assure a GC or CM that the unit on their site is still in the same condition as it was during its last Annual. I find that this practice is becoming more and more prevalent. Our Monthly Inspection business is building in volume. Some State and City jobs are requesting Third Party Inspection in their bids. We are experiencing On Hire/Off Hire Inspections for barge-mounted devices that go on rental. The owner needs to assure the lessee of its worthiness, and they need to know if it is returned in the same condition. Be on the lookout for these opportunities to grow your business.

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OOPS report

OPERATING OUTSIDE PREDETERMINED SPECS

BY
HOWARD BRISTOW

07 No Time For All That

If you've ever wondered what would happen if you tried to move an all-terrain crane on uneven ground with no outriggers, boom fully raised, full counterweight and the house lock disengaged on a Friday at 4:00 pm, wonder no more. Here is your answer. Courtesy of, "I had no time for all of that nonsense"!

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THE ENDLESS SLING CONQUERS THE WORLD BY DENNIS J O'ROURKE

In the early days, "Endless" wire rope slings were quickly formed using old wire rope and rope clips to form a circle and pull logs, bull cargo, and lash loads to skiffs. Hastily contrived, the method was not used for overhead hoisting and was considered noncritical gear. However, the versatility of its form promoted increased use. Consequently, the "hand-spliced" and a metallic crimped version increased reliability. Splicing eliminated the troublesome rope clips or crimped style fittings from getting caught or damaging the object when tightening around a load.

Skilled maintenance personnel used these slings in manufacturing plants, machine shops, and powerhouses. Please note that load attaching activities are divided into Millwright/ maintenance rigging, Construction rigging, and Maritime cargo loading categories. These areas require different tools, methods, and employee skills to accomplish correctly.

Various hand splices methods arose as clever people sought to attach the two ends, ranging between 60 to 85 % efficiency (ropes breaking strength vs. sling failure.) The efficiency of the splice matters not when determining capacity if the 5 to 1 sling design factor is calculated on ultimate sling strength.

The reason for the endless sling popularity was three-fold. First, it is ideal and easy to be used in a double "choker" hitch configuration. The double choker increases the capacity of the single rope supporting a load. Also, the rope body contacts two radius diameters at the "bite," increasing the contact area and the D/d ratios (reducing wear.) And the load/hook contact area can be distributed through the entire sling's length eliminating the concentrated damage points in the eye-to-eye slings (arrows.) Fig.1

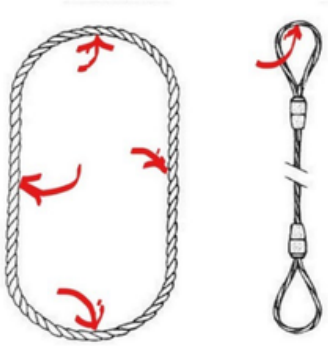

Fig. 1 The flexible grommet sling and eye-to-eye sling (right)

Today these slings are referred to by fabricators as Endless, Grommet, and with the advent of the synthetic fiber – round slings. I take exception to the description "round slings." They are never round in manufacture, cross-section, or in use. They are not even stored or displayed in a round aspect. They were called "round" when introduced as cheap fiber towing and tie-down connections. They were not on the American job site! At that time, who carried about this hardware store item?

What if they were stronger and made under stricter quality control standards? They could have a reliable capacity – be light – and as we moderns demand, cheaper. Almost too good to be true! So, who am I to quibble over terminology (however improper)? The birth of the synthetic fiber Round Sling, some color-coded no less, with a 5/1 capacity, was here! Fig.2

Fig. 2 Synthetic "round slings," Low cost, handleability, and lightweight – just user-friendly!

To explain the details of one of our Heavy Lift synthetic slings, from the left, in Fig. 3. The red arrows point to this Twin-Path sling's over-load "tattle tails" ends. The Yarn material is simply wrapped in an oblong till enough strength/capacity is achieved. Some manufacturers weave the ends back in the bundle in some manner. This Mfg. tapes them outside the bundle's protective

cover. If an overload occurs (approximate 150%), these ends would be pulled in – I have observed this occurring.

Next, we see a diagram on the capacity tag of the sling. The length is 13 feet, and the material it's made from was K – SPEC yarn. The capacity in a choker configuration is 120,000 LB. vertical – 150,000 LB. and in a basket increases to a – 300,000 LB. rating. The original proof testing was 150% of capacity by the Mfg. in December 1995. We load test all our slings to 125% of capacity every four years per OSHA 1919.

This photo was taken in February 2021 while drying after inspection and cleaning (brush and mild soap.) The sling was just used to perform a 125-ton load test at the Port of Georgia (basket hitch.) This 26-year-old sling is still reliably working for a living – a loyal servant. How is one worthy of such loyal? Following the rules of use, maintenance, and stored correctly - is the method deserving.

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