We Rig It Right!

THE PROFESSIONAL RIGGER

Volume 16 Number 2 December 2001

TECHNICAL NEWS

BIG CRANE / Little Crane

Two-crane lifts can present plenty of challenges. One of the first questions to ask is, "can one crane make the lift?"

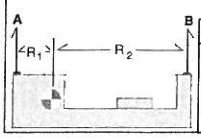
If we discover that two cranes must be used, due to capacity and radius, then attention must be paid to the load applied to each crane hook.

Let's determine the distribution of weight between Cranes A and B, based on the illustration provided. Use the Journeyman Rigger's Reference Card, Section 2 to help identify the loading to Cranes A and B.

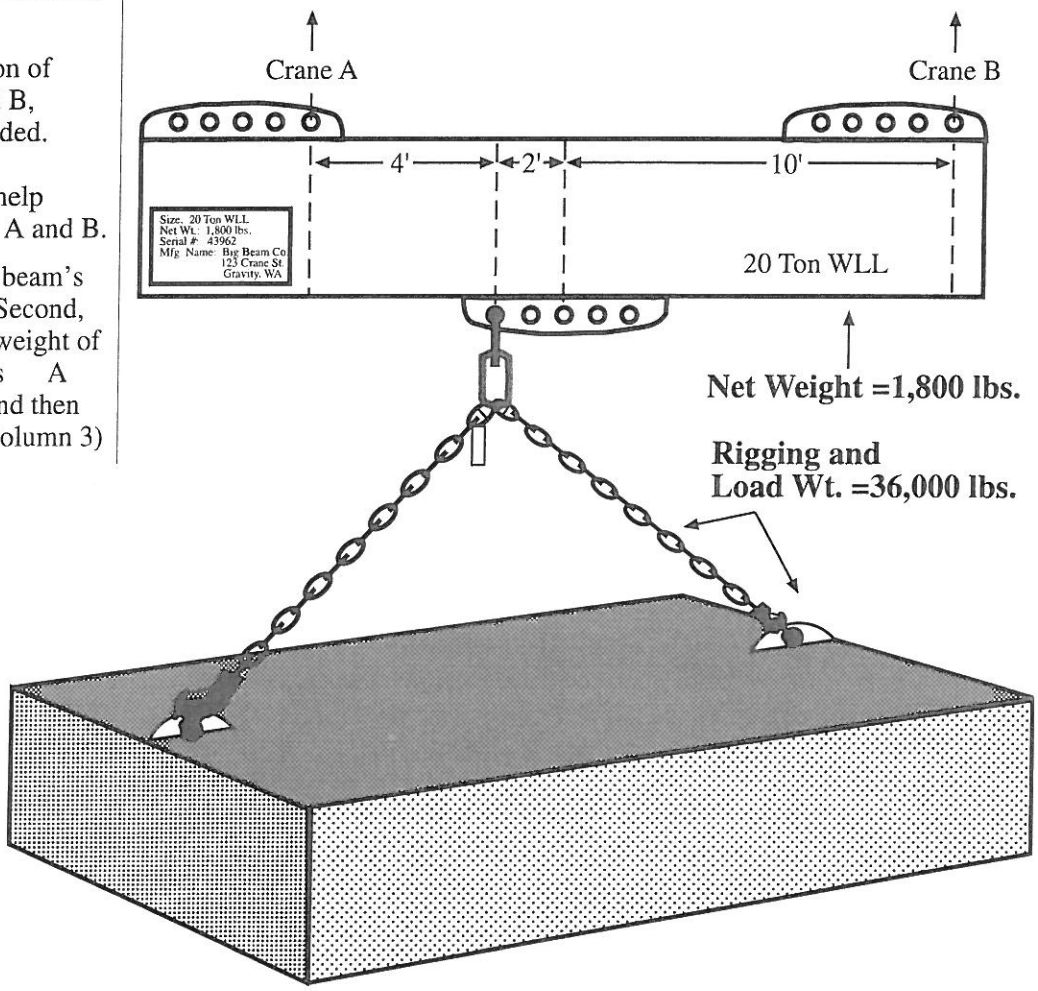
Tip: First, calculate the lifting beam's weight as applied to A and B. Second, calculate the load and rigging weight of 36,000 lbs. as applied to cranes A and B. Third, add A's values and then B's. (Answer key on Page 3, Column 3)

Journeyman Rigger's Reference Card
Section 2

Load Factors & Weight Distribution ②



Share of Load Wt. @ A	Share of Load Wt. @ B	Legend
$R_1 + R_2 = TS$	$R_1 + R_2 = TS$	R_1 = Run, Side 1
$\frac{R_2}{TS} = P$	$\frac{R_1}{TS} = P$	R_2 = Run, Side 2
P x W = Share of Load Wt @ A	P x W = Share of Load Wt @ B	TS = Total Span
		P = Percentage
		W = Weight of Load



Total load on Crane A = _____

Total load on Crane B = _____

CLIENT NEWS

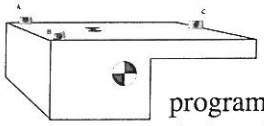
Comprehensive Rigging Programs

Hensel Phelps

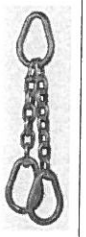
Two 2-day Comprehensive Rigging Programs were conducted for 30 carpenters and concrete finishers in Greely, CO. The classroom portion of the program included sling and rigging hardware selection, finding the center of gravity and rigging systems. Hands-on activities consisted of rigging and lifting rebar, scaffolding and forms.

Merck Co.

Rahway, NJ was the site of two 2-day Comprehensive Rigging Programs conducted by ITI's Instructor Jim Keener. These programs were designed to increase the rigger's understanding of rigging gear inspection, proper rigging procedures and load control using any vertical or horizontal rigging system.



Certified Rigging Gear Inspector Programs



Bechtel Idaho

Idaho Falls, ID was the site of a 3-day CIP Program presented to 15 individuals. This in-depth program addressed inspection and removal criteria for wire rope, wire rope slings, alloy chain slings, synthetic web slings and below-the-hook lifting devices.

During the hands-on portion, participants, used marlin spikes, microscopes and sheave gauges, to inspect a variety of used and damaged gear, identifying criteria for removal from service.

Pine Bluff Arsenal

ITI was delighted to return to Pine Bluff, AR to present a 3-day CIP Program for 15 participants. Written tests and numerous hands-on inspections were part of the requirements to pass the course.

Omaha Public Power

A total of 15 individuals attended a 3-day CIP Program at Omaha Power's Fort Calhoun Training Center in Nebraska. Broken wires and broken or worn stitches were just a few of the numerous inspection criteria discussed throughout the program. Students scoring an 85% or better on written tests and successfully completing the hands-on exams were issued Level I and II Certification Cards.

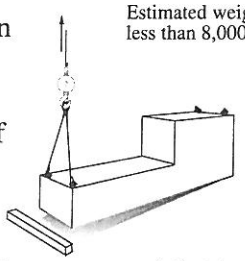
Master Rigger Programs

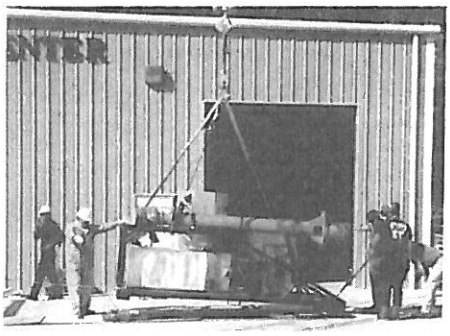
Cianbro

ITI Instructor Russ Donaldson presented a 4-day Master Rigger Program for 11 advanced riggers at their Pittsfield, ME location. Drifting loads, jacking and rolling and finding the CG were just a few of the numerous hands-on workshops included.

Southern California Edison

A 3-day Master Rigger program was conducted for 11 individuals at their San Onofre Nuclear Plant in San Clemente, CA. The classroom portion of the program included load turning, load control and multiple hitch systems. During the hands-on segment participants were able to determine the CG by weighing each end of a load.





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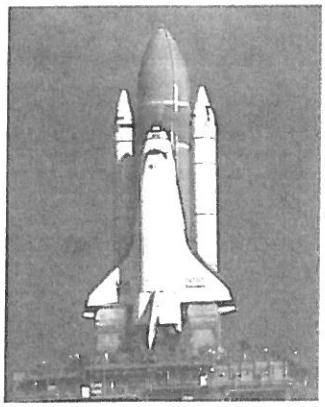
For more information contact
The Professional Rigger
PO Box 1660
Woodland WA 98674
(360) 225-1100

or visit our web site: www.wrrc.com

INDUSTRY NEWS

ACRP

The 2001 Association of Crane and Rigging Professionals National Assembly and Workshop was held in early June in Orlando, FL. A highlight of the 3-day event was a field trip to the Kennedy Space Center. ACRP members were provided a behind the scenes look at some of the rigging associated with the space shuttle system. A second tour provided by Certified Slings allowed members first hand insight into sling fabrication and testing. The general assembly and committee meetings followed additional workshops by Renfroe Plate Clamps, Web Sling & Tie Down Association and SLINGMAX.



Join the ACRP for its next national assembly in San Diego, CA June 2002 by calling 1-800-690-3921, or visit their website www.acrp.net.

ACRP
P.O. Box 61589 • Vancouver, WA 98666
Voice (800) 690-3921 • Fax (360) 834-3507
Email: acrp.net Web Site: www.acrp.net

ASME B30.9 Slings Subcommittee

A major revision of B30.9 Slings has been submitted to the ASME B30 Main Committee for their review. The proposed changes focus on reorganization of chapter sections, inspection criteria and operating practices.

The main committee will consider the proposed revisions and voting should be finalized over the next six months. The slings covered by B30.9 are: Alloy Chain Slings, Wire Rope Slings, Metal Mesh Slings, Synthetic Rope Slings, Synthetic Webbing Slings and Synthetic Roundslings. Check your company library to ensure you have the latest edition in use. (B30.9c-2000). To order a current copy, see the contact information below.

ASME INTERNATIONAL
The American Society of Mechanical Engineers
Three Park Avenue
New York, NY 10016-5990

PHONE
800-THE-ASME (843-2763), ext. 827
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ITI NEWS

Meet ITI's Newest Instructor

Keith Dickerson

Keith has served as a crane, rigging, forklift and heavy equipment instructor for the past 20 years. He developed and implemented a crane and rigging training program for American Potash employees. Keith brings a variety of special skills with him, including job planning, special rigging applications, heavy equipment operations, CDL and load securement.

WORKSHOP ANSWER KEY for Page 1

6 + 10 = 16
10 ÷ 16 = .625
.625 x 1,800 lbs. = 1,125 lbs. (Beam wt. on Crane A)

6 + 10 = 16
6 ÷ 16 = .375
.375 x 1,800 lbs. = 675 lbs. (Beam wt. on Crane B)

4 + 12 = 16
12 ÷ 16 = .75
.75 x 36,000 lbs. = 27,000 lbs. (Rigging & Load wt. on Crane A)

4 + 12 = 16
4 ÷ 16 = .25
.25 x 36,000 lbs. = 9,000 lbs (Rigging & Load wt. on Crane B)

Total Load on Crane A = 1,125 lbs. + 27,000 = **28,125 lbs.**
Total Load on Crane B = 675 lbs. + 9,000 = **9,675 lbs.**

Note: Unless otherwise marked, lifting beams with multiple connection points are generally rated to support the maximum rated load while rigged in the worse case hole position.

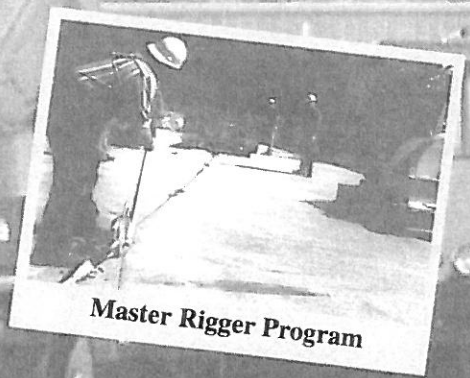
2002
ITI Training Center Programs

Woodland, WA

See Enclosed Flyer For More Details!

- Rigging Inspection Basics
- Journeyman Rigger
- Rigging Gear Inspector Levels 1 & 2
- Rigging Gear Inspector Level 3
- Master Rigger
- Mobile Crane Inspector
- Boom Truck Operator
- Mobile Crane Operator
- Advanced Mobile Crane Operator
- Crane & Rigging Management

Rigging Gear Inspector Levels I & II



Master Rigger Program

Mobile Crane Operator