We Rig It Right!

THE PROFESSIONAL RIGGER

Volume 19 Number 2 August 2004

TECHNICAL WORKSHOP

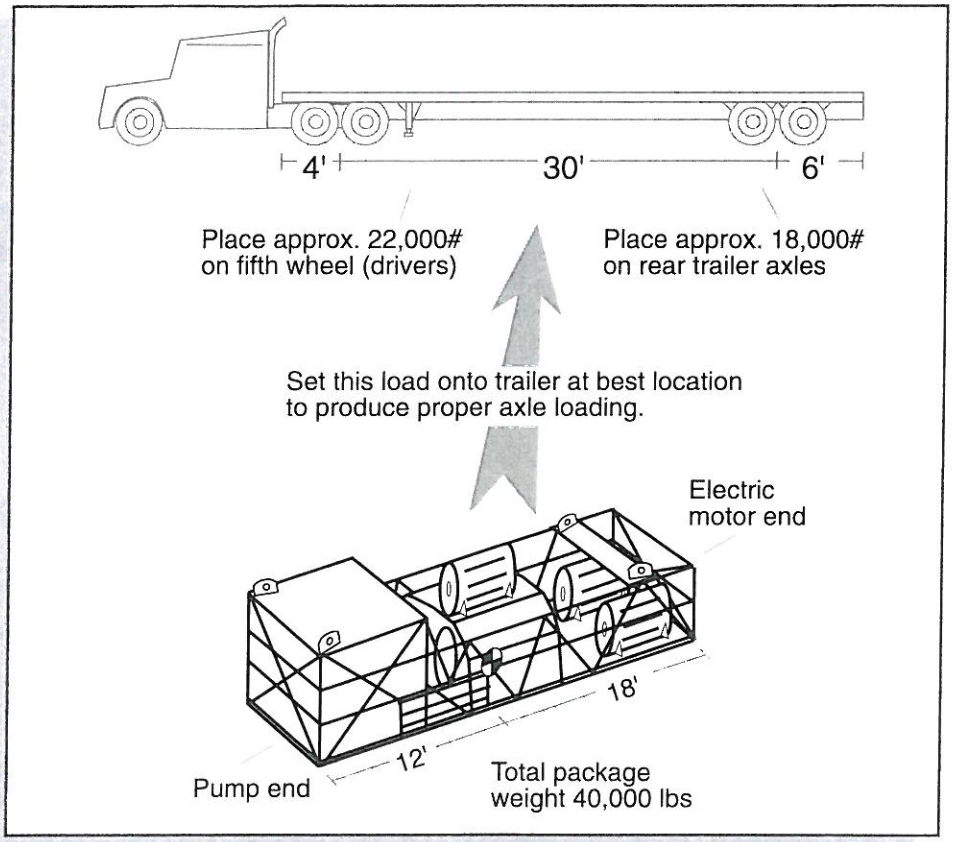
Rig Right, Load Right!

This workshop requires the reader to consider the CG (center-of-gravity) of a load and the desired weight distribution to the tractor and trailer axles respectively. Often a rigger and truck driver must work together to land a load which produces a desired axle loading, allowing the truck and trailer to legally travel over the road. In this example, the truck driver would like to end up with 22,000 lbs. on the driving axles and 18,000 lbs. on the trailer axles. The questions is: Where do you place the load, and in which orientation, to achieve the loading requirements? Check your answer on Page 3 Column 3.

Study the information at the right, referring to panels from the Journeyman and Master Rigger Reference Cards. See if you can arrive at the best solution of the three loading options provided.

Hint: Refer to the JRRC-P2 and MRRC-P9. Assume a frictionless system.

The above workshop #9 was taken from Mike's Rigging Mysteries, Green Book. You can get all 110 workshops by ordering at: www.mikesriggingmysteries.com.



Assignment: Place the package where it produces proper loading for the rear and driver axles.

Loading Options

A) Place the electric motor end of the package 1.5' from the trailer's rear bumper.

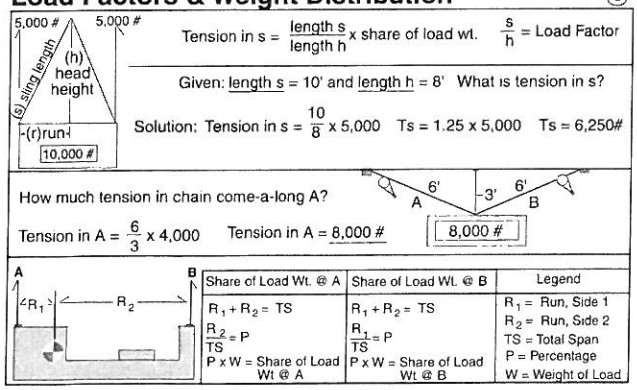
B) Place the pump end of the package 2.5' from the trailer's forward end.

C) Place the electric motor end of the package 4.5' from the trailer's rear bumper.

The best solution to achieve proper axle loading is option # _____.

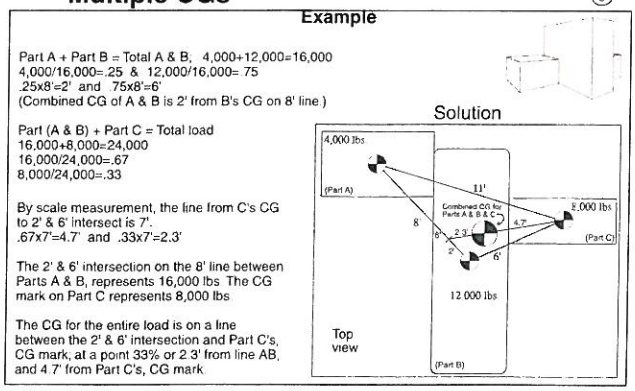
JRRC Section 2

Load Factors & Weight Distribution



MRRC Section 9

Multiple CGs



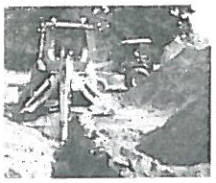
ITI CLIENTS • ITI CLIENTS • ITI CLIENTS • ITI CLIENTS

BP Alaska

ITI's Devon Beasley conducted a variety of training programs at BP's Milne Point site in Prudhoe Bay, AK. Programs presented included Journeyman Rigger, Overhead Crane Operator and Overhead Crane Inspector. The 32 individuals who attended were able to put directly into practice the workshops and concepts taught in the classroom. "Live-load" lifts during the hands-on workshops were a vital part of each of these programs.

The Boeing Company

A total of 97 individuals attended 12 1-day Backhoe Operator Programs at four Boeing plants in WA. The training focused on increasing operator skill levels and safe and efficient use of the machines.



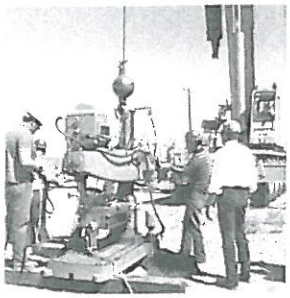
King County DNRNP

27 mechanics and maintenance personnel attended two 2-1/2-day Advanced Comprehensive Rigging Programs at their Renton, WA location. This in-depth program addressed basic rigging principles such as load weight estimation, sling & rigging hardware selection and finding the center of gravity (CG). Advanced workshops included; rigging with multiple CG's, load drifting and off-level pick points.

Throughout the hands-on portion, participants were able to apply the various rigging techniques and concepts taught in the classroom.

Hensel Phelps Construction

Over a three week period, ITI Instructor Russ Donaldson conducted 1-day Rigging Fundamental Programs at seven Hensel Phelps locations throughout the U.S. A total of 84 individuals attended the programs which addressed hitches & pick points, load factors for sling legs, load weight estimation and rigger's checklist. Skills were measured during the hands-on portion by having teams rig and move two loads using available gear and equipment.



Allegheny Energy Service

Fairmont, WV was the site of two 3-day Journeyman Rigger and Mobile Crane Operator Programs. 29 individuals attended the programs which focused on safe rigging procedures, load control using typical rigging techniques, and safe & efficient use of hydraulic boom type cranes.

The performance based hands-on sessions required participants working in teams to rig various loads. Student operators then moved the loads using the hydraulic boom crane.

Edward Kraemer & Sons

Farmington, UT was the site of a 2-day Journeyman Rigger Program. The course consisted of eight hours of classroom instruction followed by a series of "live-load" field rigging exercises.

Raflatac, Inc.

Two 1-day Rigging Inspection Basics and a 3-day Overhead Crane Inspector Program were conducted for individuals at their site in Fletcher, NC. Each course consisted of both classroom and hands-on training. An in-depth review of topics included determining frequency of inspections and items required for inspection. Removal criteria as outlined by OSHA & ASME Standards were also thoroughly discussed.

Fluor Hanford, Inc.

11 individuals attended a 2-day Forklift Inspector Program in Richland, WA. Participants received eight hours of classroom instruction followed by written testing and hands-on inspections of Forklifts. Students scoring an 80% or better and who successfully completed the hands-on exams received a 3 year certification.

Washington Group International

ITI Instructor Russ Donaldson conducted two 2-day Comprehensive Rigging Programs for 29 individuals at their Rocky Flats site in Golden, CO. The classroom and hands-on workshops were designed to increase each rigger's understanding of rigging gear selection, proper rigging procedures and load control using any vertical or horizontal rigging system. The use of dynamometers during the hands-on sessions helped to reinforce or correct the estimation method used to calculate the actual load weight.

INDUSTRY NEWS • INDUSTRY NEWS • INDUSTRY NEWS • INDUSTRY NEWS

The Association of Crane & Rigging Professionals will hold its National Assembly October 18-19, 2004 at the Radisson Hotel O'Hare in Chicago, IL. The ACRP is an innovative group of industry leaders who develop methods and means to improve crane and rigging activities in all industries. Members and guests explore how standards and regulations can be improved and review new and proven approaches to competent training and consulting processes related to cranes and rigging. A field trip to an area forging operation will highlight this year's event.

ACRP
P.O. Box 87907
Vancouver, WA 98687-7907
(800) 690-3921
email: info@acrp.net • website: www.acrp.net

The Crane & Hoist Conference & Exhibition will be held October 20-22, 2004, immediately following the ACRP meeting at the Radisson O'Hare Hotel in Chicago, IL.

This 2-1/2 day event will provide a series of educational and informational programs focusing on mobile cranes, overhead cranes, tower cranes and rigging. Session topics include:

- Recent Changes in ASME
- Considerations for Multi-Crane Lifts
- Management's Role in Crane Safety
- Lifting People with Cranes
- Lifting with Hydraulic Gantries
- Overhead Inspection Techniques
- Avoiding Rope Failure
- Cold Weather Crane Operations
- Below-the-Hook Lifting Devices
- Boom Truck Operating Hazards
- Accident Preparation and Investigation and many more...

A Who's Who of more than 30 industry speakers include:

- *Matthew Atherton*
  PAT America, Germantown, MD
- *James Cahill, P.E.*
  J.F. White Contracting Co., Stoughton, MA
- *Ritchie Castonguay*
  Hite Services, Sudbury, Ontario
- *David Duerr, P.E.*
  2DM Associates, Inc., Houston, TX
- *Mike Gelskey*
  Lift-It Manufacturing, Los Angeles, CA
- *Ron Kohner, P.E.*
  Landmark Engineering, Roseville, MN
- *Jon Lamrouex*
  Caldwell Group, Inc., Rockford, IL
- *Roger "Skip" Ohman, Jr.*
  Crosby Group, Inc., Tulsa, OK
- *David Sleightholm*
  Bridon American, Wilkes Barre, PA
- *Dennis St. Germain*
  I & I Sling, Aston, PA
- *Earl Swan*
  LiftEquip, Inc., Richmond Heights, OH
- *Brian Todd*
  Cooper Industries, Inc., Houston, TX

This year's conference will feature four program tracks:

- Management & Operations
- Lift Planning & Rigging
- Maintenance & Inspection
- Equipment & Technology

Within each track, sessions will focus on overhead cranes, mobile cranes, gantries, or general crane and rigging topics. In addition, there will be over 50 informational and hands-on exhibits displaying the latest advancements in mobile crane and rigging technology.

CHC 2004 will provide a unique opportunity for you to gain new knowledge and master new skills.

For the complete conference program and to register on-line, visit:
www. CHConference.com

Workshop Answer key (for page 1)

Trailer bed desired CG landing point from fifth wheel (drivers) =
22,000 + 18,000 = 40,000
18,000/40,000 = .45
.45 x 30' = 13.5'

Trailer bed desired CG landing point from rear trailer axles =
22,000 + 18,000 = 40,000
22,000/40,000 = .55
.55 x 30' = 16.5'

To properly load the axles, Option C.

The Professional Rigger
is a publication of
Industrial Training International, Inc.
It is distributed to those whose occupations require the safe and proper use of lifting and rigging equipment.

For more information contact
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(360) 225-1100
or
visit our web site: www.wrrc.com

RIGGING • INSPECTING • OPERATING TRAINING!

Attend one of our "Hands-On" Training Programs or schedule us to come to your site. Either way, we can increase your skill level and safety awareness.

Call **1-800-727-6355** to register for one of the following programs or to request a proposal for a customized program at your site.

UPCOMING TRAINING CENTER COURSES

Course Title	Date	Location
Crane & Rigging Management	September 1	Woodland, WA
Journeyman Rigger	September 2 - 3	Woodland, WA
Mobile Crane Inspector	September 14 - 17	Woodland, WA
Rigging Gear Inspector Level I	September 21 - 24	Woodland, WA
Rigging Gear Inspector Level III	September 28 - 30	Birmingham, AL
Journeyman Rigger	October 4 - 5	Birmingham, AL
Rigging Gear Inspector Level I	October 6 - 8	Birmingham, AL
NCCCO* Operator Certification	October 25 - 29	Woodland, WA
Qualified Boom Truck Operator	October 25 - 27	Birmingham, AL
Journeyman Rigger	October 28 - 29	Birmingham, AL
Rigging Inspection Basics	November 1	Woodland, WA
Master Rigger	November 2 - 5	Woodland, WA
Mobile Crane Inspector	November 16 - 19	Woodland, WA
Overhead Crane Inspector	November 17 - 18	Birmingham, AL
Overhead Crane Operator	November 19	Birmingham, AL
Rigging Gear Inspector Level III	December 7 - 9	Woodland, WA
Master Rigger	December 7 - 10	Birmingham, AL

See enclosed "2004-2005 Training Schedule" for more program details and registration.

or

Register online at www.wrrc.com or contact LeAnne at 1-800-727-6355.

* National Commission for the Certification of Crane Operators

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