We Rig It Right!

THE PROFESSIONAL RIGGER

Volume 21 Number 2 June 2006

TECHNICAL WORKSHOP

Find CG by Test Lift

With 4 quick lifts, raising the load only a few inches, a rigger can confirm:

a) The load's estimated weight.
b) The load's approximate center-of-gravity (CG).
c) The approximate load at each pick point.

At the right, please find the approximate weight and the location of the CG. Check your answers at the bottom of column 3 on page 2.

Bonus: Can you calculate the loading at each corner? E-mail mike@wrrc.com with your answers to see if you're right.

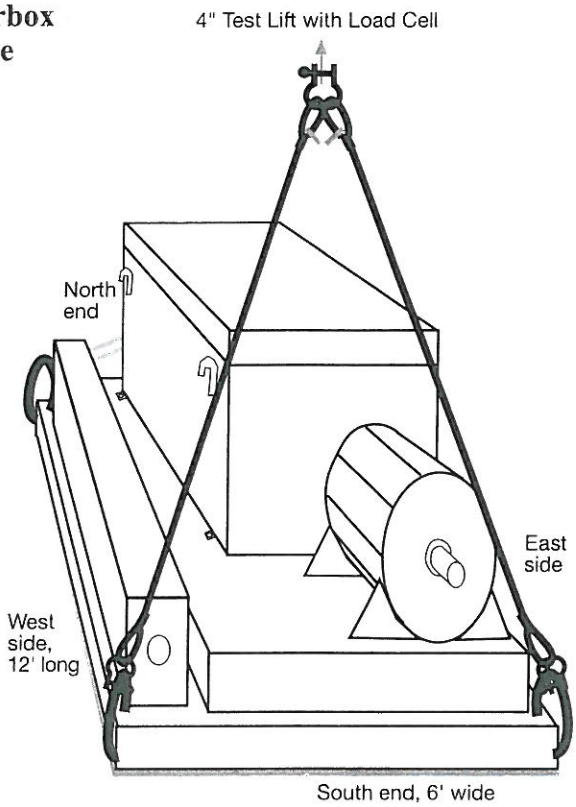
The workshop at the right was taken from Mike's Rigging Mysteries, Yellow Book.

All 110 workshops are available at: www.mikesriggingmysteries.com.

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
The Professional Rigger
PO Box 1660
Woodland WA 98674
(360) 225-1100
or visit our web site: www.wrrc.com

Motor, Gearbox and Driveline

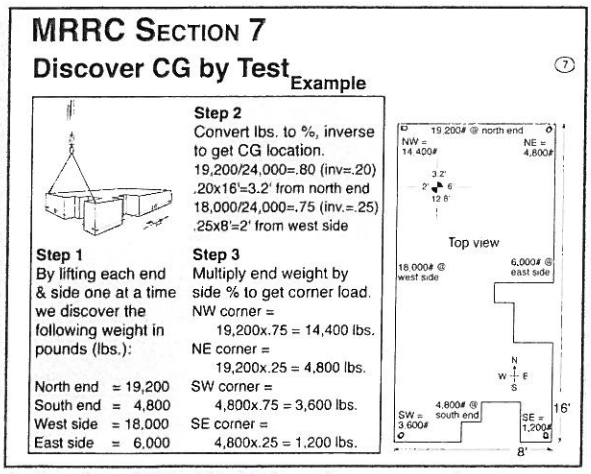


Determine the approximate location of the load's CG based on the four test lifts noted below.

Test lift 1, South end = 6,400 lbs.
Test lift 2, North end = 3,600 lbs.
Test lift 3, West side = 2,200 lbs.
Test lift 4, East side = 7,800 lbs.

The estimated load weight is _____#
The approx. location of the CG from the South end is _____'
and is _____' from the West side.

Hint: Review the MRRC-P7 as a working example, and determine the total load weight of the unit and its CG (center-of-gravity). The load is 6' wide (W/E) and 12' long (N/S).



MRRC SECTION 7

Discover CG by Test Example

Step 1
By lifting each end & side one at a time we discover the following weight in pounds (lbs.):

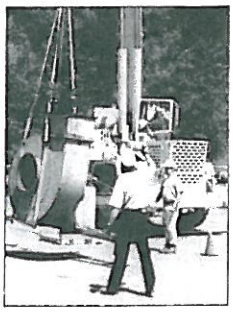
North end = 19,200
South end = 4,800
West side = 18,000
East side = 6,000

Step 2
Convert lbs. to %, inverse to get CG location.
19,200/24,000=.80 (inv=.20)
.20x16'=3.2' from north end
18,000/24,000=.75 (inv.=.25)
.25x8'=2' from west side

Step 3
Multiply end weight by side % to get corner load.
NW corner =
19,200x.75 = 14,400 lbs.
NE corner =
19,200x.25 = 4,800 lbs.
SW corner =
4,800x.75 = 3,600 lbs.
SE corner =
4,800x.25 = 1,200 lbs.

NEWS • NEWS • NEWS • NEWS • NEWS

20TH ANNIVERSARY & CUSTOMER APPRECIATION CELEBRATION!



Games Prizes

Come Join the Fun!

Thursday, September 28

11 am - 5 pm

Drawings Food

CEU Credits Now Available!

We are pleased to announce that Industrial Training International, Inc. has become certified as an Authorized Provider by the International Association for Continuing Education and Training (IACET). ITI is certified to offer IACET Continuing Education Units (CEU's) for all current training programs.

NCCCO Certification Available!

ITI is now offering NCCCO certification for Mobile and Overhead Crane Operators. See our 2006/2007 Training Schedule for a list of these programs.

For Sale

Digital Dynamometers
JCM Instrumentation
10,000 lb. Capacity
Small (8.5" long, 3.25" wide)
Light-weight (3.5 lbs.)
Includes Pelican Case and 2 Shackles.
These dynos have been used during our training programs and have been well-maintained over the years.
$895 each - quantity discounts offered.
Contact Darlene at 360-225-1100 or email darlene@wrrc.com.

Workshop Answer Key (for page 1)

Total wt. = 10,000#

CG from south end =
3,600 + 6,400 = 10,000
3,600 / 10,000 = .36, .36 x 12 = 4.32'

CG from west side =
2,200 + 7,800 = 10,000
7,800 / 10,000 = .78, .78 x 6 = 4.68'

INDUSTRIAL TRAINING INTERNATIONAL, INC. • 9428 Old Pacific Hwy • Woodland, WA 98674
Bus. (360) 225-1100 • Fax (360) 225-1122 • Email: rigitright@wrrc.com • Web site: www.wrrc.com