We Rig It Right!

THE PROFESSIONAL RIGGER

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TECHNICAL WORKSHOP

Determine CG

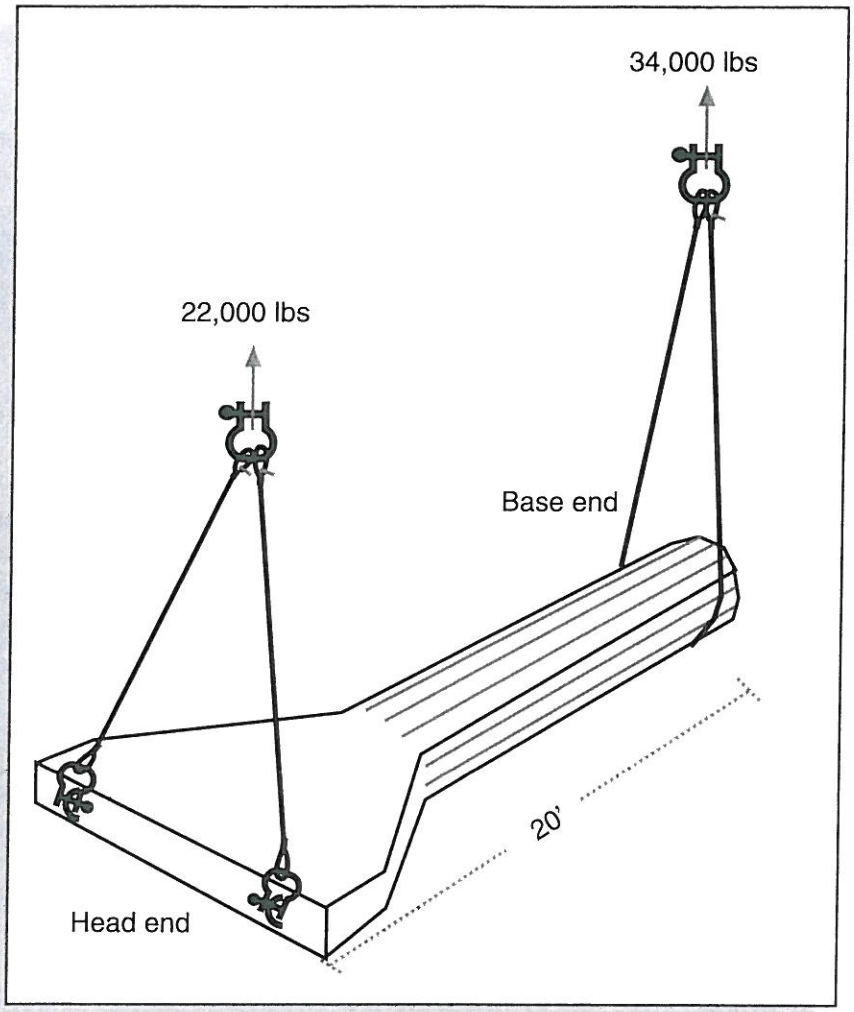
A crew must load out a short bridge column which will be used in a creek bed to support one end of a light bridge deck. The crew rigged the precast column at two locations about 20' apart. Using two cranes, they have decided to determine the location of the column's center-of-gravity so they can load the column onto an over-the-road trailer. By properly placing the column onto the trailer, the resulting axle loading allows the tractor trailer to not exceed any travel limits.

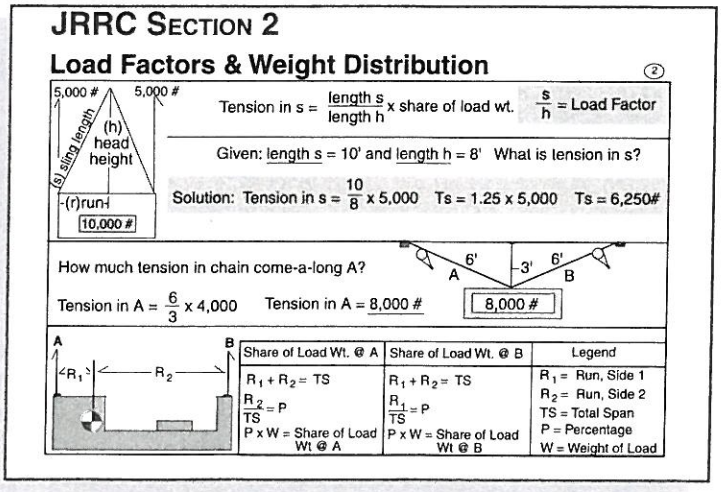
Use section two of the Journeyman Rigger's Reference Card to help solve the question about the column's CG. Instead of using Run1 and Run2, consider replacing them with Weight1 and Weight2, to arrive at the percent distribution, times the total span of 20'. To double check your work remember, "Short Stout, Long Light". Translated that means, the CG is a short distance from the stout (heavier) end, and a long distance from the light end.

Assignment: Estimate the location of the column's center-of-gravity from the "head end". (Check your answer on page 2, col. 3.)

The CG is _____ ' from the head end.

The above workshop #7 was taken from Mike's Rigging Mysteries, Yellow Book. You can get all 110 workshops by ordering at: www.mikesriggingmysteries.com.





ITI CLIENTS • ITI CLIENTS • ITI CLIENTS • ITI CLIENTS

MWH Constructors, Inc.

A total of 34 individuals attended two 4-day Master Rigger Programs in Sandusky, OH. Participants were involved in both classroom and hands-on workshops. During the classroom portion of the training, ITI instructor Keith Dickerson demonstrated how simple math formulas are used to calculate sling angles, load weight distribution, and level vs. off-level pick points. Participants were then able to apply those techniques while moving "live loads" during field exercises.

Crowley Marine Services

ITI's Training Center in Woodland, WA was the site of a specialized 2-day Journeyman Rigger Certification Program. Participants received eight hours of classroom instruction followed by a series of hands-on rigging exercises. In order to become certified, participants were required to pass both a written and hands-on exam with a score of 80% or better.

Hensel Phelps Construction

A 1-day Rigging Fundamentals Program was conducted for 10 participants in Greeley, CO. The program emphasized rigging gear inspection, load control and rigging to the center of gravity.

BWXT-Pantex

ITI instructor Devon Beasley presented a 2-day Journeyman Rigger Program, a 1-day Rigging Sling Inspection Recertification and a 1-day Mobile Crane Operator Recertification at BWXT's Amarillo, TX location. Subjects addressed included load handling, locating the center of gravity, hand signals, and rigging gear inspection. Each course consisted of classroom instruction followed by hands-on field exercises.

Workshop Answer key (for page 1)

CG from head end =
22,000 + 34,000 = 56,000
34,000 / 56,000 = .61
.61 x 20' = 12.2'

CG from base end =
22,000 + 34,000 = 56,000
22,000 / 56,000 = .39
.39 x 20' = 7.8'

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.

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