

The Professional Rigger

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TECHNICAL NEWS

Rigging Blocks

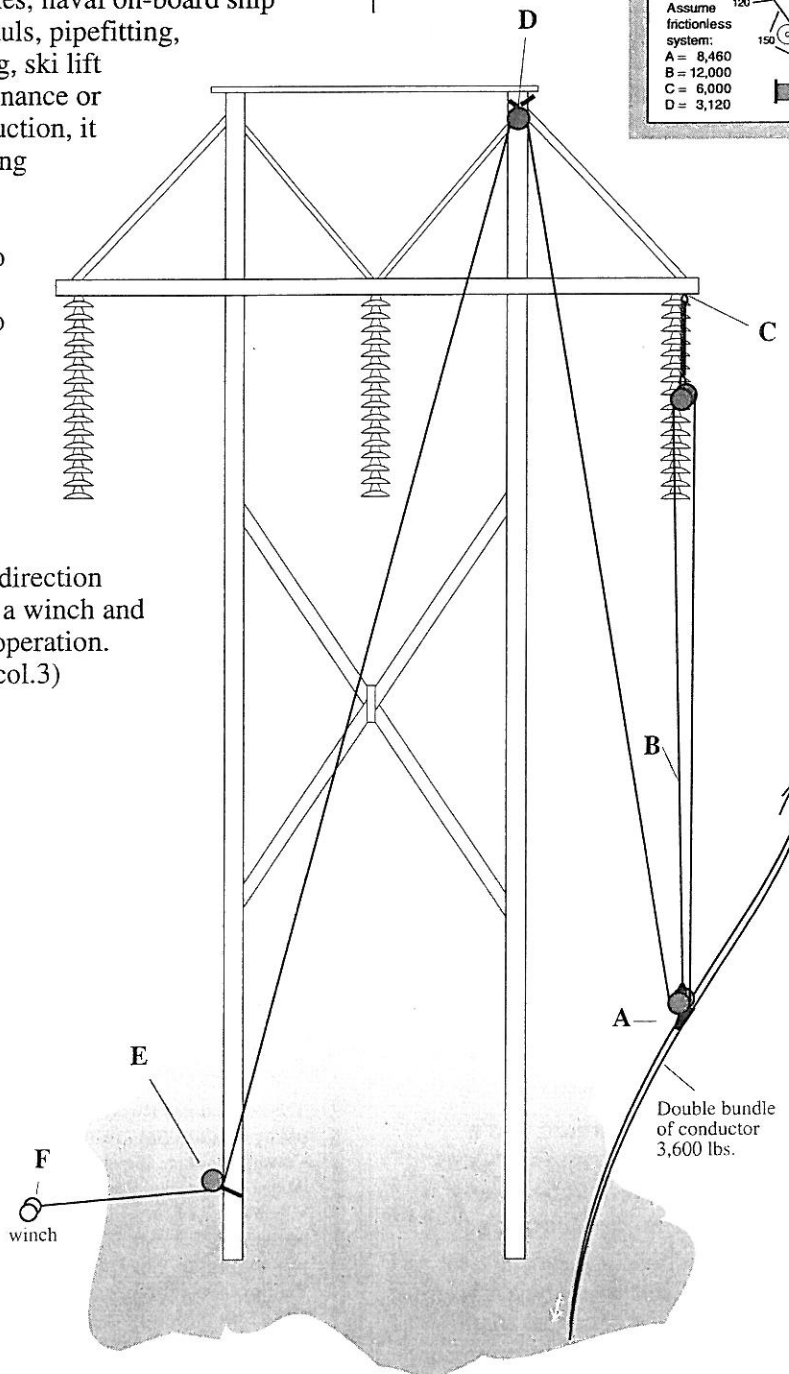
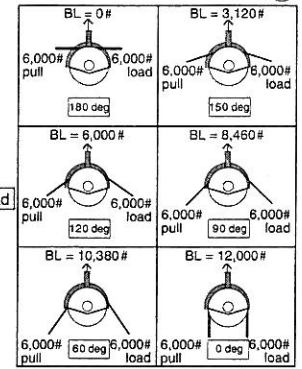
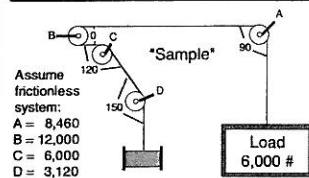
Whether you are involved with electric utility line work, underground or surface mining, millright activities, naval on-board ship overhauls, pipefitting, logging, ski lift maintenance or construction, it isn't long before you have to get back to basics and figure what loads are going which direction during a winch and block operation. (cont. col.3)

WRR's Rigger's Reference Card, Section 4 of 10

Block & Fairlead Loading

Angle full included	Block Factor	Line Pull in lbs.	Block Load in lbs.
180	0.00	6,000	0
150	0.52	6,000	3,120
120	1.00	6,000	6,000
90	1.41	6,000	8,460
60	1.73	6,000	10,380
0	2.00	6,000	12,000

Formula: Block Factor x Line Pull = Block Load



Workshop Assignment:

Please study the structure to the left. The "crew" is about to raise the electrical conductor up to the insulators for connection.

How much load will be introduced to the various points as identified by letters B through F?

Section 4 of the Rigger's Reference Card has been inserted above to help determine the answers. The solution can be found on page 3, column 3.

Approx. load on dead-end B =

Approx. load at block attachment point C =

Approx. load at block attachment point D =

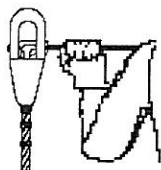
Approx. load at block attachment point E =

Approx. load at winch F =

CLIENT NEWS

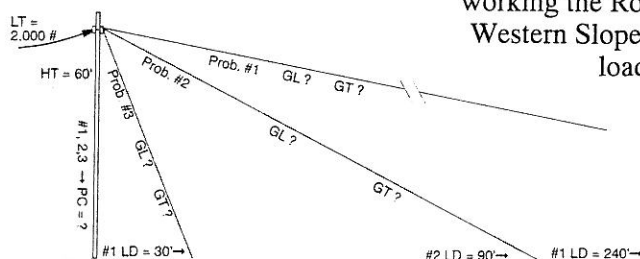
U. S. Navy

The U.S. Naval Radio Station near Arlington, WA was the site for a socketing instructional program. NRS's Mr. Paul Lazowski requested that the employees who perform zinc socketing of antennae cables receive classroom instruction including written exams, and perform socketing on sample sections of structural strand which must pass a destructive test, resulting in the strand failing, not the socket material.



Philadelphia Electric Co.

Messrs. John Clark and Leo Kelly asked WRRC to deliver a series of rigging courses for some of their construction and line crews. We appreciate PECO's Charlie Zebraski, an in-house instructor, for preparing pole and cross-arm structures which were used during the dead-ending and cross-arm loading exercises.



Klickitat County PUD

A line crew rigging course was conducted for county employees during their monthly safety meeting in August. Dynamometers were connected to various attachment points on their practice dead-ending structure to help teach crew members how to calculate actual loads when securing guys and anchors. Klickitat's Safety Manager, Al Sanders, asked that WRRC return in the future to conduct additional rigging workshops.

U.S. Army Corps of Engineers

Mr. Bruce Linkous, Safety Officer of the North Pacific Division, contracted WRRC to conduct a Crane and Rigging Risk Hazard Analysis during generator/turbine overhauls. The project included a survey of rigging practices and accidents, observing hoisting and rigging practices being conducted by COE employees at various dam sites, and interviewing maintenance crews and management personnel, which helped analyze the existing practices used during overhauls. The final report of findings and summary of recommendations was presented to the COE in early September.



Western Area Power Admin.

WAPA's Montrose, CO Safety Manager Mr. Jim Bandmann and Line Maintenance Supervisor Mr. David Aust requested a 2-day line crew rigging course for crews working the Rocky Mountain Western Slope. A combination of load rigging and line-crew specific workshops were conducted during the hands-on session, since their crews are called on to perform a wide variety of rigging tasks.

Ruralite Services

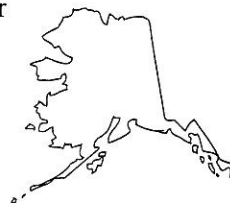
Mr. Mike Deason asked that a series of line crew rigging "short courses" be presented to crew members attending Ruralite's annual Linemen's Programs. WRRC's Devon Beasley travelled to Wells NV, Eugene OR, and Post Falls ID to conduct these courses.

Columbia Aluminum

Mr. Gene Toop asked WRRC to present two 1-day short courses for shop mechanics working in the Goldendale, WA plant. A concentrated 4-hour classroom session was followed by a 4-hour hands-on workshop using overhead bridge cranes and wall mounted jibs to perform a variety of rigging tasks.

Peak Oilfield Service

Mr. Wayne Walters of the Peak Oilfield Service Prudhoe Bay Safety Dept. requested a 2-day comprehensive rigging program to be conducted for crews based on Alaska's north slope.



The program focused on rigging a variety of loads ranging in weight from 2-60 tons (picked during the hands-on session) and also addressed rigging and crane activities concerning multiple crane lifts.

Dave Johnston Power Plant

DJ's Mr. K. Dale Williams asked that a series of millwright and maintenance rigging programs be conducted for crews working at the Glenrock, WY facility. WRRC's Russ Donaldson added hands-on workshops to the program which used bridge and mobile cranes as the primary hoist systems.

The Professional Rigger is a quarterly publication of Wire Rope & Rigging Consultants, Inc. It is distributed to those whose occupations require the safe and effective use of lifting and rigging equipment. For more information contact: Editor, The Professional Rigger, PO Box 728, Vancouver, WA 98666 (206) 256-5730.

Portland General Electric

Messrs. Lou Derting and Ray Fauth requested that a special rigging course be developed and presented for crews working in the Southern Division between Salem and Hubbard, OR.

The performance-based and activity centered training techniques used by WRRC included problem solving workshops and a variety of assigned hands-on rigging tasks.

WRRC NEWS

WRRC

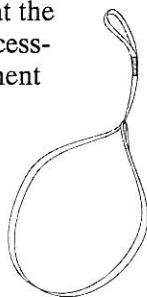
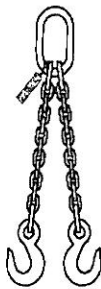
Certified Inspector Program

WRRC's September Certified Inspector Program was another huge success, filling 60 days in advance of the program!

We are currently taking registrations for the next scheduled program, which will be held **March 9-11, 1993** in Vancouver, WA. (Please see the enclosed CIP Flyer for more information.) Call WRRC today to register and reserve your seat for the next program! This program is also available to be conducted on-site at your facility.

The CIP program was developed to meet a client's request that their rigging gear inspectors be certified. Although OSHA does not require a "certified" inspector, WRRC met the challenge by developing the program we have today, which includes written exams and hands-on inspections.

Through this testing and documentation, we establish that the inspector who has successfully passed each segment has displayed competence to perform the inspections and is more confident to make decisions to remove gear from service as needed.

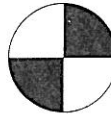


Rigging Conference 1993

RC '93 will be held April 20-22 in Wilmington, DE. (Please see enclosed flyer.)

Included in the 3-day conference will be hands-on sessions using WRRC's new Crane Simulator, Building Towers, Rigging Simulator, and a *real* mobile crane.

WRRC's Mobile Learning Center will also be used, allowing participants to jack, roll, lift, and turn loads, trying those difficult or innovative rigging techniques in a controlled environment.



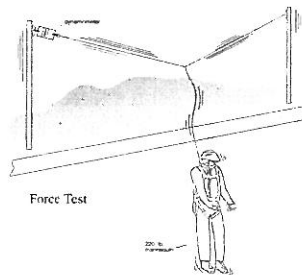
As we've been told from our past conference attendees, this truly is a great learning environment for old and new hands alike! Call us today to register for RC '93.

Fall Protection Testing

A new service offered by WRRC is Fall Protection Testing (FPT). A load test is administered to help prove the performability of the client's fall protection systems' anchorage and lifeline tie-off points.

This non-mandatory test should be considered by any company who has permanent fall restraint/arrest systems or temporary systems installed for maintenance or construction activities. The test could especially be helpful to companies who have independent contractors who use systems to perform work on-site.

The tests provided can range from 1000-5400 lbs., either static or dynamic loading, as best suits the system being tested.



Items Available from our Rigger's Tool Crib

**HANDBOOK
FOR RIGGERS**
\$11/ea.



**MOBILE CRANING
TODAY MANUAL**
\$35/ea.



HAT
\$8.45/ea.

For quantity discounts and ordering information, please call WRRC.

Rigging Block Workshop

[from pg. 1, answers in pounds (+ friction)]

**B = 1200 C = 2400+ D = 2400+
E = 1692+ F = 1200+**

MIKE'S CORNER

"Great Stuff!"

Great stuff! That's what we hear most often in a very enthusiastic voice at the conclusion of a WRRC or CET program. To us it means that the "stuff" presented hit the target.

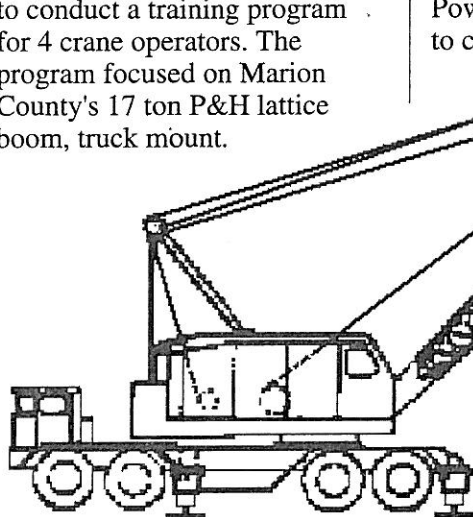
We focus on performance-based and activity-centered style training. Those may be buzz words in some circles, but to us they are real descriptions of how to conduct effective training events.

In addition to superbly designed programs, we have built a team of "great instructors". The best course can quickly be destroyed by a poor teacher. By combining quality people with solid course content, we've created a new level of superior instruction.

We make sure the ratio of hands-on activities to classroom instruction remains very high. When participants must "speak while doing", the opportunity for learning and retention is greatly increased. We promise that you will get nothing but "great stuff" from us.

Marion County P.U.D.

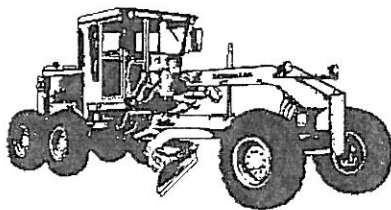
Marion County's Mr. Bruce Visser obtained CET's services to conduct a training program for 4 crane operators. The program focused on Marion County's 17 ton P&H lattice boom, truck mount.



The Salem OR based operators were qualified according to the Oregon-OSHA Crane Operator requirements.

Bureau of Reclamation

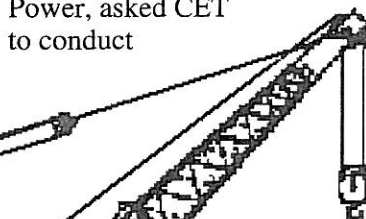
Mr. Jerry Rivera of the BR Socorro, NM office, requested that a Grader Operator Training Program (Cat 130G) be held for 9 employees.



The course addressed pulling shoulders, road maintenance, daily operational inspections and safe operating practices. CET's Harley Gist provided classroom and hands-on instruction during the two-day course.

Idaho Power Company

Mr. Leon Swensen, Line Training Instructor for Idaho Power, asked CET to conduct



a Mobile Crane Operator and Bridge Crane Operator Training Program for 20 new and seasoned operators. The

course was conducted at IPCo's Hell's Canyon Dam by CET's Devon Beasley and Bill Wall.

Equipment included rough terrain, truck mounted and boom truck types, both hydraulic and lattice boom. The instructional program was enhanced using CET's new Crane Simulator which helped the operators visualize loading transfer on a crane's structure and operating on outriggers vs. rubber tires.

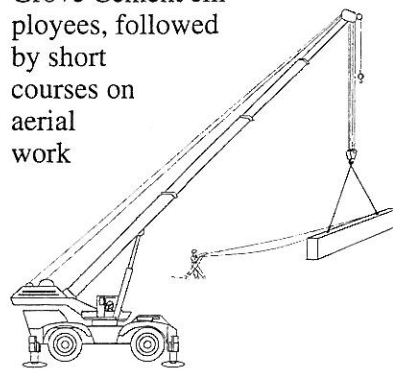
Weyerhaeuser Paper Co.

Mr. David Stout of Longview, WA contacted CET to present a Carrydeck and Boom Truck Operator Program for 8 equipment operators.

Load charts and operator responsibilities were 2 of 7 written exams administered during the classroom portion, followed by a series of evaluated hands-on lifts.

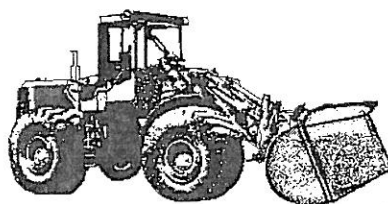
Ash Grove Cement Co.

A comprehensive Mobile Crane Operator Training Program was conducted for 6 Ash Grove Cement employees, followed by short courses on aerial work



platforms, bobcats and front-end loaders. The hands-on segments challenged operators to perform all types of load and material moving activities throughout the Seattle plant.

Ash Grove's Mr. Dan Peters coordinated the program, with CET's Harley Gist, Warren Mangel and Devon Beasley providing the instruction over a four week period.



Weyerhaeuser Co.

A series of training programs were requested by Ms. Kathy Graham of Cottage Grove, OR to update on-site Weyerhaeuser trainers and employees. Subjects addressed mobile cranes, forklifts, bridge cranes and monorails, manual hoists and elevated work platforms.

