

THE PROFESSIONAL RIGGER®

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WIRE ROPE & RIGGING CONSULTANTS, INC.
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CROWN ZELLERBACH

West Linn, OR will be the site for two Advanced Rigging Courses for maintenance crews of Crown Zellerbach Corp. Mr. Irwin "Tiny" Dier, Maint. Supt., requested that WRRRC develop and present a program for his people specifically addressing the applications in a paper mill setting. We appreciate the opportunity to be involved with another mill of Crown Z's and salute their ongoing efforts to build a safer work environment via training and education.

COMPANIES USING WRRRC TRAINING PROGRAMS (partial list)

Municipality of Anchorage	Lockport Marine
Boise Cascade Corp.	Longview Fibre Co.
Bonneville Power Admin.	Martin Marietta Aerospace
Bridger Coal Co.	Nat. Oceanic & Atmos. Ad.
Clackamas County D.O.D.T.	NORPAC
Crown Zellerbach Corp.	Reynolds Aluminum
Hercules Aerospace, Inc.	Seattle City Light
Hewlett-Packard	Smurfit Newsprint
Homestake Mining Co.	S.W. Portland Cement Co.
Johnson Bros. Constr.	Trojan Nuclear
Kaiser Aluminum & Chem. Corp.	U.S. Ecology, Inc.
Kansas City Power & Light	Washington Water Power
Kiewit Pacific	Willamette Industries

UNION CARBIDE

WRRRC will be conducting an 8-hour training course for maintenance personnel of the Industrial Chemical Division of Union Carbide Corp., Washougal, WA facility. Mr. Terry Sassaman, Electrical Maintenance Supervisor, requested the program which will cover wire rope, sling and rigging hardware inspection, D/d ratios for lifting applications, sling angles, hitch types, rigging procedures, and much more. We look forward to being part of Union Carbide's safety education program.

ACCIDENT INVESTIGATIONS and EXPERT WITNESS TESTIMONY

We hope it never happens. However, if an accident occurs within your facility involving rigging / rigging procedures, please call our office should you need assistance in the following areas:

Accident Investigation—Rigging accident investigations involve on-site inspections, interviewing, documentation, photography, data collection, load / equipment and error / failure analysis.

Expert Witness Testimony—Seasoned WRRRC veterans can provide depositions and courtroom Expert Witness Testimony for clients involved in rigging accident litigation.

RIGGING WORKSHOP CONTEST

Case Study #132

(READ AND COMPLETE ACCORDING TO DIRECTIONS)

An open top container made of 1/4" steel plate (10 lbs./sq. ft.) measuring (3'H x 6' W x 10' L) was being used at a construction site to transport scrap materials off the top of an 80' building. A rented mobile crane (when outriggers are extended, they form a 20' x 34' stand) would lower the container to the ground twice a day for unloading. The container's pad eyes had been damaged beyond use.

Two synthetic web, eye & eye 20' slings (each having a safe working load capacity of 2,000 lbs. in a single vertical hitch) were basketed around the container. All of the sling eyes were gathered in a 1" shackle with the pin down, and the shackle bail was attached to the crane hook. Each sling was in a basket hitch slung around the broadsides of the load, straddling the approx. center of gravity, and the slings were approx. 4' from each other at the underneath side of the load.

The container held 2 half full 55 gal. drums of water and 3300 lbs. of steel cutting scraps.

Immediately after the shackle had been put on the hook, the operator picked up the load. The container swung and made slight contact with the crane's boom structure. The operator then swung the boom 90 degrees to his left. The conclusion of his swing placed the load off the rear of the crane.

Reacting to a ground signalman, the operator was "booming down" to place the container at a greater radius. The operator soon felt the crane getting "tippy." He reversed the action and began "booming up" while lowering the load. He felt the tires settle back down to their original position.

One sling began to slide towards the other. Immediately the "moving" sling parted and the load tipped almost on end and started to slide out. Then the second sling parted, dropping the load to the ground.

How many OSHA violations can you find given the above information?

What actions would you consider to be poor, improper or dangerous rigging practices?

Who was at fault for losing the load; the building top workers, the crane rental company, the construction company owners, the crane operator, the ground level signalman, the sling manufacturer or someone else?

Send your findings to: WRRRC, Case Study #132, PO Box 728, Vancouver, WA 98666

All those responding will receive a written analysis of the above case study from WRRRC.

A Board of Review will examine all findings, and a winner will be selected based on the given information, Federal violations cited, and reader's identification of poor rigging practices involved in the case study. The winner's name and summary of his / her findings will be printed in our next issue.

[[The above case study is fictional and is not based on any known real life situation. It has been developed strictly for problem solving and instructional purposes by the publishers of WRRRC's newsletter, THE PROFESSIONAL RIGGER.]]

Comprehensive rigging courses were presented on March 4th and 5th for over 70 millrights and maintenance people at the Cosmopolis, WA mill of Weyerhaeuser Paper Co. Safety Coordinator, Mr. Rich Epperly, made arrangements for WRRRC to present information on rigging procedures and a complete rigging workshop. We thank Mr. Epperly and Weyerhaeuser for using WRRRC's training services.

JIM BRIDGER COAL CO.

Mr. Jack Blair, Director of Safety for Jim Bridger Coal Co., Rock Springs, WY contracted WRRRC to present a series of Advanced Rigging Courses to mechanical and maintenance crews located throughout the mine. In addition to subjects such as rigging geometry, sling tensions, shock loading effects and a rigger's checklist, WRRRC also covered a specifically requested portion concerning cribbing and blocking loads. We are pleased to have been a part of the ever growing safety and health program of the Jim Bridger Coal Co.

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WRRRC announces its fifth film:

"HAND SIGNALS: Instruction and Quiz"

Twenty-one signals are described, performed and the corresponding crane response is illustrated in an easy-to-learn format. A review, quiz and an additional review go the distance in helping the viewers to comprehend and retain this vital information. This is one of the most effective films ever produced to instruct individuals in standard hand signals used for safe crane operation. Quiz booklets and field cards are available. "HAND SIGNALS" helps round out WRRRC's Video Tape Training Program:

"WIRE ROPE—*Inspection Maintenance & Application*"

"SLINGS & RIGGING HARDWARE—*Inspection, Maintenance & Application*"

"BASIC RIGGING—*Rigger's Checklist & Sling Leg Loads*"

"RIGGING—*Rigging Geometry & Case Study Workshop*"

Contact: WRRRC, P.O. Box 728, Vancouver, WA 98666.

TEST RESULTS

WRRRC administers to seminar participants a 28 question pre-test at the beginning of its standard 7—1/2 hour rigging course, and the same test at the seminar's conclusion. Below are a few highlights:

GREATEST ONE-DAY IMPROVEMENT

Bonneville Power Administration—The Dalles, OR (11 / 86)
Pre-test 46% Post-test 80 (74% increase)

HIGHEST PRE-TEST SCORE

Jim Bridger Power Plant—Rock Springs, WY (12 / 86) 70%

HIGHEST POST-TEST SCORE

Rural Electric Co.—Burley, ID (1 / 87)	<u>87%</u>
Pacific Power & Light—Casper, WY (12 / 86)	<u>87%</u>
Bonneville Power Admin.—The Dalles, OR (1 / 87)	<u>87%</u>

TOTAL PRE-TEST SCORE

(Actual / Possible=Percent)
7916 / 13944 = 56.7%

TOTAL POST-TEST SCORE

(Actual / Possible=Percent)
10883 / 13720 = 79.3%

The above percentages reflect the test results for the course participants when scored as a group for their one-day program.

OOSHC

The theme for the Oregon Occupational Safety & Health Conference was "Profiting Through Education: We All Win". Attracting thousands of participants from many western states, the OOSHC is regarded as one of the largest in the nation. The conference was held at the Red Lion Inn—Lloyd Center in Portland, OR on March 24, 25, & 26, 1987. Conference programs covered such areas as ergonomics, stress, falling injuries, asbestos, drugs in the workplace, injury management, loss control, and safety educational systems.

WRRRC president Mike Parnell presented two programs at the conference:

"WIRE ROPE & SLINGS—*Inspection and Limitations*"

"RIGGING—*Checklist, Sling Geometry and Workshop*"

It was a pleasure for us at WRRRC to be involved with such a large group of professionals dedicated to the advancement and promotion of safety concepts and methods. A special thanks to Conference Manager Mr. Frank Collins, Oregon Accident Prevention Division and all of the committee people for their efforts in coordinating an excellent conference.