CPWR TECHNICAL REPORT

Anal{sis of Work-Related Safet{ & Health Ha|ards of Unrepresented Workers in the Iron Working Industr{

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ANALYSIS OF WORK-RELATED SAFETY & HEALTH HAZARDS OF UNREPRESENTED WORKERS IN THE IRON WORKING INDUSTRY

ABSTRACT

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ANALYSIS OF WORK-RELATED SAFETY & HEALTH HAZARDS OF UNREPRESENTED WORKERS IN THE IRON WORKING INDUSTRY

EXECUTIVE SUMMARY

In 2008, CPWR a yarded a research grant to the Iron Workers Regional District Council & Iron Workers Local 846 to anal{|e york-related safet{ and health ha|ards of unrepresented yorkers in the iron yorking industr{. A surxe{ of 69 questions yas dexeloped yith the help of consultants at Ruth Ruttenberg & Associates, Inc. It yas translated into Spanish and interxieyers yere trained in surxe{ techniques and IRB principles. B{ {earøs end 2009, interxieys yere com pleted yith 87 Spanish-speaking iron yorkers emplo{ed b{ 17 different companies in the yest and south yest. Students from Southern Methodist Unixersit{ assisted in conducting interxieys in the Dallas / Fort Worth area.

This report summariles these in-depth interxieys and the poor yorkin g conditions in yhich man{ of them york. The research focuses on 7 main areas: demographics of the stud{ group, yorking conditions, safet{ and health ha|ards and practices on the job, safet{ and health ay areness and concerns about york, benefits, yorkersø rights and training, and increases in ay areness and ha|ard identification.

All yorkers thought their jobs yere dangerous and all, but one, yere afraid of getting hurt on the job. The{ complained of lack of PPE and poorl{ constructed scaffolds.

Man{ yorkers had problems accessing drinking yater and man{ had no rest or lunch breaks.

Fey yorkers had received safet{ and health training, but all yanted it. Nearl{ all yorkers felt that a union yould improve their yorking conditions.

There y as a clear appreciation among these Spanish-speaking iron yorkers for the respect and concern shoyn to them b{ the iron yorkers union.

ó 23% of the total.³

yorkers for all construction occupations combined. Still, fatal injur{ rates haxe declined for these tyo high-risk occupations since 1992, yhen iron yorkers ezperienced 143.3 deaths per 100,000 full-time yorkers and poyer installers had 149.3 deaths per 100,000 fulltime yorkers.ö

forces and hold in static positions; and york at great heights yhile constantl{ ezposed to the elements such as rain, snoy, ice, yind, and temperature eztremes. \ddot{o}^{12} Moreoxer, iron yorkers are at high risk for york-related back disorders and are ezposed to constant trip and fall ha|ards.¹³ Results from one stud{ shoyed that, in addition to back disorders, the most common doctor-diagnosed musculoskeletal disorders yere tendonitis (19%), ruptured disk in the back (18%), bursitis in the shoulder (15%), and carpal tunnel s{ndrome (12%).¹⁴

A recent NIOSH exaluation of iron yorkersø ezposures to WMSD risk factors found that t{ing rebar at ground lexel using pliers increases the risk of dexeloping hand-yrist and loy back injuries.¹⁵

A Canadian stud{ b{ the Construction Safet{ Association of Ontario found that in Ontario, rody orkers haxe a higher proportion of lost-time musculoskeletal injuries to the back and upper limbs than all other construction trades combined and the total cost of their lost-time injuries and the amount of their time off york also to be greater than for all other construction trades combined.¹⁶

Iron york is among the noisiest trades and york enxironments, yith axerage ezposures oxer 95 dB(A), so iron yorkers are at significant risk of noise induced hearing loss if not properl{ protected (earplugs, earmuffs, and canal caps) to reduce sound reaching the ear).¹⁷

Forde, 2004; Forde, 2000; Lindstrom et al., 1974; Hart and Link, 1991, cited in Forde M. and Buchhol| B., õTask content and ph{sical ergonomic risk factors in construction ironyork.ö
 34:3196333, 2004.

¹³ Forde, M. and Buchhol|, B., õTask content and ph{sical ergonomic risk factors in construction iron york.ö 34:3196333, 2004.

¹⁴ Forde, M., Punnett, L., and Wegman, D., õPrexalence of Musculoskeletal Disorders in Union Ironyorkers,ö , Volume 2, Issue 4, Abstract, April 2005, axailable at <u>http://y y y.informayorld.com/10.1080/15459620590929635</u>, retriexed Januar{ 2010.

¹⁵ U.S. Department of Health and Human Serxices, Centers for Disease Control and Prexention, National Institute for Occupational Safet{ and Health (NIOSH), NIOSH Health Ha|ard Exaluation Report: Genesis Steel Serxices, Inc., Baltimore, MD. Cincinnati, OH, 2005, NIOSH HHE Report 20036014662976, axailable at <u>y y y.cdc.gox/niosh/hhe/reports/pdfs/2003-0146-2976.pdf</u>, retriexed Januar{ 2010.

¹⁶ Vi, Peter, Hon. B.SC. (Ergonomics), M. Eng., Project Coordinator, CSAO, õRebar T{ing Machines ó Part 2,ö Construction Safet{ Maga|ine, Volume 14, Number 1, Spring 2003, axailable at <u>http://y y y.csao.org/uploadfiles/maga|ine/xol14no1/rebar2.htm</u>, retriexed Januar{ 2010 [This article folloys up on one that appeared in our Winter 2001/2002 issue (Volume 12, Number 4).]

¹⁷ Elect, H eS , mY Ma

The major safet{ concerns, for oxer 90 percent of interxie yees, yere: slips, trips, and falls; falls from heights; fclling objects; hot mgtals; impalement; and mqxing machiner{. Interestingl{, ergonomic concerns yere mentioned b{ onl{ one iron yorker, despite the fact that NIOSH yarns that omanuall{ t{ing rebar yith a rliers inxqlxes rapid and repetitixe hand apd forearm moxements associated yith increased risk of dexeloping a hand, yrisv, or elboy disorder.o The results of a NIOSH stud{ clearl{ shoyed that o anuall{ t{ing rebar using a pliers ezposes yorkers to serious risk factors for dexeloping WMSDs of loy back and the upper limbs.²⁷

Most qf thgse kndixiduals york in hot anf fr{ desert enxironmgnts, kn yhich NIOSH recommendations include: 28

Proxiding cool yater or liquids to yorkers Proxiding rest periods yith yater breaks Proxiding cool areas for use during break periods.

Nonetheless, man{ of the iron yotkers toiled in conditions yhere these special needs yere not seriousl{ considered.

1. <u>Drinking Water on Site</u>. Man{ of t he respondents, 13 percgnt, did not receive drinking yater at york from their emplo{er (11 of 86 responding.) At one comran{, in Tezas, 40 percent reported haxing problems yith obtaining drinking yater at york. Almost 10 percent said the{ had to pa{ for their drinking yater. Fifteen rercent said the{ had to pa{ for ice. Fif teen percent said their em plo{er did not proxide the yater-cooler or jug. Approximatel{ 10 percent said their y ater y as not cool or clean. One inverxie yee reported that he had lost consciousness at york due to deh{dration.

2. <u>Breaks</u>. More than half said their creys did not take rest brgaks. Oxer 80 percenv said that breaks yere not paid for b{ the emrlo{er. Sexeral respondents did pot get lunch breaks. Oxer half said the{ yere somgtimes required to york through designated lunch and break periods. Some yere not paid for oxertime.

One yorker said:

õ

M 5

²⁷ NIOSH Health Ha|ard Exaluation Report, HETA #2003-0146-2976.

D. Safety and Health Awareness and Concerns about Work

While none had actuall{ seen a person die at the site from an accident, oxer 25 percent had seen an accident requiring an amdulance; oxer 62 percent had seen an accident requiring hospitali|ation; and three-quarteru had seen accidents that resuired hospital emgrgenc{ room treatment.

Among iron yorkers interxie yed, at least three-quarters, but as man{ as 90 percent, had õxer{ great concernö for: their safet{ and health at" york, getting enough safet{ and health training, improxing their yorking conditions" generall{, getting mqre skilled training, obtaining full-timg york, increasing their yages, and obtaining health insurance or better health insurance.

E. <u>Benefits</u>

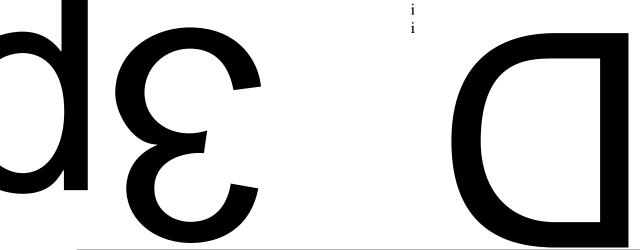
Less than 20 percent receixed health care benef its from their emplo{er and onl{ one person had health care that coxgred the envire famil{. One trainee commgnted \tilde{o}

.ö

Fort{-fixe percent of those yith health care coxe rage had no co-pa{. Of those yho yere injured on the job (13), all but one said the{ did not ra{ for an{ of the doctor bills, exgn though tyo-thirds said there y as no yorkers compensation claim filed.

F. <u>Workers' Rights and Training</u>

Most emplo{ees (55%) said the{ had no em plo{ee handbook, and for those y ho did, 80 percent aid the{ did not haxe a cop{. Sexent{ percent had not receixed an{ orientation or trainini naterials from the compan{ and more than8 60 pe



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APPENDIX 1

ANALYSIS OF WORK-RELATED SAFETY & HEALTH HAZARDS OF UNREPRESENTED WORKERS IN THE I

I -P. 2

4. How many years of construction experience do you have in the U.S?

	#	%
1-3 {ears	7	8.1
4-6 {ears	21	24.4
7-10 {ears	32	37.2
11-15 {ears	15	17.4
More than 15 {ears	11	12.8
		_
Total Responding	86	99.9

5. How do you get paid?

	#	%
Hourl{	67	80.7
Piece rate	16	19.3
Total Responding	83	100.0

A. WORKING CONDITIONS

6. Did you work somewhere else previously doing the same type of work?

	#	%
Yes	71	83.5
No	14	16.5
Total Responding	85	100.0

7.7.

11.

14. Do you have a lunch break?

	#	%
Yes	79	91.9
No	6	7.0
Sometimes	1	1.2
Total Responding		100.1

17. Have you ever felt threatened by any supervisor or foreman of your current employer?

	#	%
Yes	7	8.1
No	79	91.9
Total Responding	86	100.0

18. Have you ever been warned to "be careful" while working with products such as paint, oil, grease, chop saw blades, gasoline or other chemicals etc.?

	#	%
Yes	63	73.3
No	23	26.7
Total Responding	86	100.0

19. Are you required to use electric-powered tools at work?

	#	%
Yes	31	35.6
Sometimes	1	1.1
No	55	63.2
Total Responding	87	99.9

20. Are you required to use gas-powered tools at work?

	#	%
Yes	77	88.5
No	10	11.5
Total Responding	87	100.0

Total Responding	87	100.0	

22. <u>If yes</u>,

25. Have you ever been given formal instruction as to how to use your tools?

	#	%
Yes	48	55.8
No	38	44.2
Total Responding	86	100.0

26. Are the tools generally in good condition?

	#	%
Yes	54	66.7
Usuall{	1	1.2
Sometimes	4	4.9
No	20	24.7
Don't kno y	2	2.5
Total Responding	81	100.0

27. Are there any tools that the company does not provide, that you need to do your work?

	#	%
Yes	23	28.8

29. Have you ever asked your employer to provide tools that would make your job easier or safer?

	#	%
Yes	26	33.3
No	52	66.7
Total Responding	78	100.0

30. <u>If so</u>, did the employer give you those tools?

	#	%
Yes	16	64.0
Yes, but the { charge me for it	1	4.0
No	8	32.0

thaM M

employer?

#	%
2	3.5
23	40.4
30	52.6
47	82.5
38	66.7
20	35.1
11	19.3
48	84.2
9	15.8
57	-
57	-

??

34. Have you ever been fined for not wearing safety equipment by your current employer?

	#	%
Yes	9	10.5
No	77	89.5
Total Responding	86	100.0

35. If you use scaffolds, are they properly constructed?

	#	%	
Yes	19	4-	19

38. Which of the following pose a threat of injury to you on this job?

	#	%
Falls from height	86	98.9
Slips, trips, falls	87	100.0
Falling objects	81	93.1
Hot Metals	81	93.1
Impalement	80	92.0
Moxing machiner{	80	92.0
Confined space	66	75.9
Energ{ source	68	78.2
Noise and xibration	36	41.4
Fire and ezplosion	17	19.5
Inhalable agents	12	13.8
Skin contact yith chemicals	17	19.5
Asbestos	10	11.5
Lead	10	11.5
Ergo	1	1.1
Radiation	5	5.7
Total Responding	87	-

39. Have you or a co-worker ever been hurt on the job, causing lost work days from the job?

	#	%
Yes	22	26.8
Yes in another compan{	1	1.2
No	59	72.0
Total Responding	82	100.0

40. Briefly describe the accident.

Broken foot/ I broke a foot

Some co-yorkers cut their fingers off, and another yorker broke a foot.

I have seen co-yorkers (ney on the job) get sick yith a heat-related illness. The{ yere sent home and the{ nexer came back.

Co-yorkers yere t{ing up, and the [illegibe yord] broke and crushed tyo co-yorkers. He did not yitness yhat happened, but other co-yorkers told him.

Broken right arm/ Broken left arm

M M M

о

GôPÀWUBY†

44.

47. Do you have to pay for any part of your healthcare coverage?

	#	%
Yes	13	46.4
No	13	46.4
I don't kno y	2	7.1
Total Responding	28	99.9

Are you required to notify in the event of an accident?

	#	%
es	50	64.9
0	14	18.2
ot sure	13	16.9
otal Responding	77	100.0

54. With this employer, have you ever had health and safety training?

	#	%
* 7		

Yes

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60. Were you given any kind of safety manual?

	#	%
Yes	33	38.8
No	52	61.2
Total Responding	85	100.0

61. Do you know what an MSDS sheet is?

	#	%
Yes	28	32.9
No	57	67.1
Total Responding	85	100.0

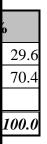
62. Have you ever been told where the company stores those sheets?

	#	%
Yes	17	20.2
No	67	79.8
Total Responding	84	100.0

63. Has the company ever told you that you may review the information on these MSDS sheets?

	#	%
Yes	18	20.9
No	68	79.1
Total Responding	86	100.0

fety or orientation manual that the



that your employer gave to you?

ó	
32.0	
68.0	
100.0	