

ANALYSIS OF PAST SAFETY INCIDENTS IN AND AROUND KILNS

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Agenda

- Dry kiln injury statistics
- Focus areas:
 - Forklifts
 - Overexertion
 - Struck by/Abrasions
 - Falls from elevation

Wood Products Industry

Incident Rates

The incident rate represents the number of injuries and illnesses per 100 full time workers and is calculated as:

$$(N/EH) \times 200,000$$

Where,

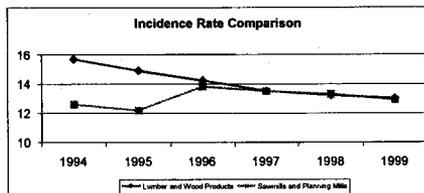
N= number of injuries of illness

EH= total hours worked by all employees during the year

200,000 = base for 100 equivalent full time workers

Incident Rates

SIC Code	Industry	1994	1995	1996	1997	1998	1999
24	Lumber and Wood Products	15.7	14.9	14.2	13.5	13.2	13
2421	Sawmills and Planing Mills	12.6	12.2	13.8	13.5	13.3	12.9



(BLS Statistics)

Class Code-Dry Kilns

Frequency Rate

The frequency rate represents the claims per \$100,000 in payroll.

$$\text{Frequency Rate} = \text{Claim count} / (\text{payroll}/100,000)$$

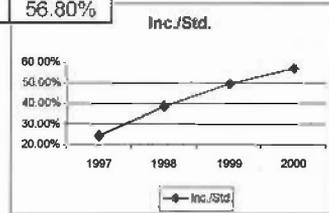
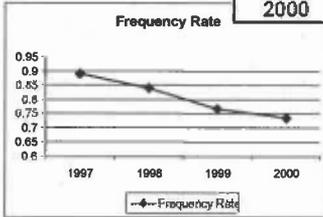
Incurred to Standard

The incurred to standard is a loss ratio that represents the incurred claims costs compared to standard premium paid.

Frequency Rates

Incurred to Standard

Year	Frequency Rate	Inc./Std.
1997	0.889	24.42%
1998	0.839	38.34%
1999	0.766	49.70%
2000	0.735	56.80%



Dry Kiln Injuries by Occupation		
Type	Percent	
Dry kiln operator	29	
Chain puller (pre/post)	13	
Forklift operator	9	
Stacker/sticker	11	
Kiln supervisor	5	
Boiler operator	4	
Millwright	3	
Fireman	3	
Others	23	

Dry Kiln Injuries by Type		
Type	Percent	Example
Overexertion	19	Sprained back
Rubbed or Abraded	18	Sliver, object in eye
Struck by	15	Struck by lumber
Struck against	10	Hit head on beam
Fall from elevation	9	Fell off ladder
Caught in/under	6	Fingers caught in stacker
Fall on same level	6	tripped and fell
Others	17	Steam burn
Dry Kiln Injuries by Cost		
Type	Average Cost Per Claim	
Falls from elevation	\$13,650	
Overexertion	\$4,760	
Extreme Temp. Contact	\$2,976	
Struck against	\$310	
Rubbed or abraded	\$101	
Average for kilns	\$2,854	
Dry Kiln Injuries by Source		
Source	Percent	Example
Wood items	34	lumber
Working surfaces	13	floor
Metal items	9	sheet metal
Hand tools	5	pry bar
Particles	5	sawdust
Bodily motion	4	awkward posture
Vehicles	3	lift truck
Others	27	noise, steam, etc.

What Can We Do About This?

Focus Areas:

Type of Injuries that are Frequency Drivers:

- Overexertion
- Rubbed or Abraded
- Struck by

Type of Injuries that are Severity Drivers:

- Overexertion
- Falls from Elevation
- Forklift

Overexertion

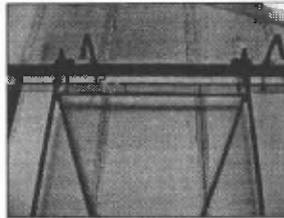
Exposures

- Sticker/Stacker
- Manual Material Handling
- Sorting/Pulling
- Moisture Meter



Examples of Common Injuries

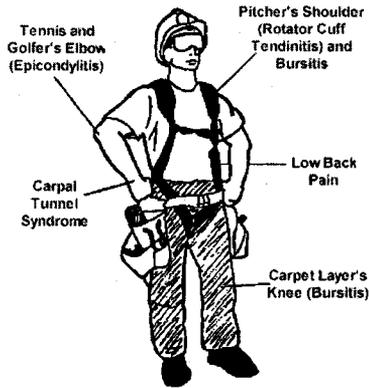
- Stickering lumber and sprained right hand
- Lifting board, strained back and left hip
- Handling lumber, inflamed left elbow.
- Tendonitis in elbow from using moisture meter



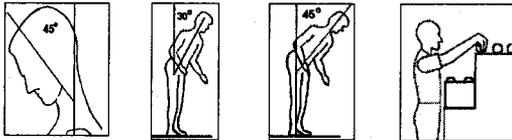
Nationally

Annually, 1.8 million workers report work-related MSDs such as carpal tunnel syndrome, tendonitis and back injuries.

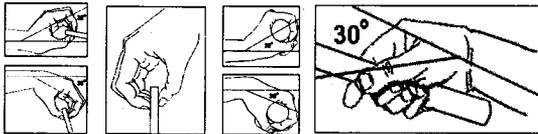
About 600,000 MSDs are serious enough to result in workers having to take time off work to recover.



Awkward Postures



Repetitive Motion:



Struck by or Abraded

Exposures

Material movement
Carts
Stacked lumber
Sawing



Examples of Common Injuries

Placing stickers, sliver in fingers
Wind blew sawdust into eye
Struck on head with falling board



Kiln Industry Statistics

Fingers and hands are the most commonly injured body part (17%).
12% of the injuries occur to the eyes

National Eye Safety Statistics

More than 1000 work-related eye injuries per day
Each year 100,000 eye injuries will result in loss of vision
Three out of five workers who suffered an eye injury wore no protection. And of those who did, 40% wore the wrong kind.



Hazard Assessments?

- ◆ Has your company conducted a Job Hazard Analysis to determine the proper personal protective equipment and work procedures?
- ◆ Do employees receive a copy of the JHA and training on how to protect themselves?
- ◆ Does your company have PPE rules?
- ◆ Are these rules being enforced by management?

Falls From Elevation

Exposures

- Stacked lumber
- Forklifts
- Working surfaces



Examples of common injuries

- Fell from forklift, pain in upper back
- Fell off cat walk onto a pile of lumber
- Fell off of roof of kiln



National Fall Statistics

- Fourth leading cause of occupational fatalities
- 540 work related fatalities a year are caused by fall from elevation
- 11% of the total work related fatalities are a result of falls from ladders
- On average, 146 fatalities are a result of falls form roofs

