

# Employees Suffer Hip and Pelvic Injuries

## **Purpose**

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To share “lessons learned” gained from incident investigations through a small group discussion method format.

To understand “lessons learned” through a Systems of Safety viewpoint.



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**Lessons Learned**

**Volume 06 Issue 6**

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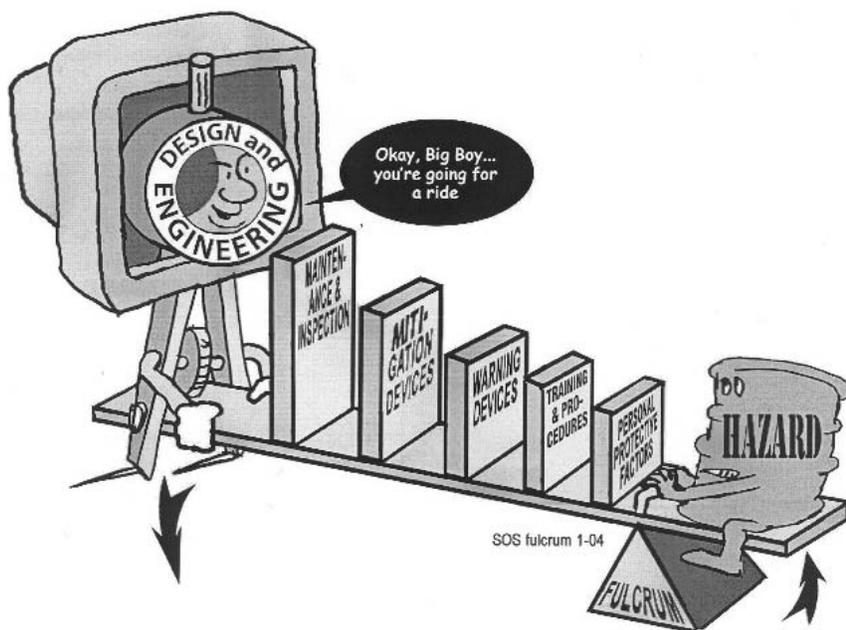
## Background Information

Before beginning this Lessons Learned, please review this and the next page which contain information that will introduce the concepts of Lessons Learned and Systems of Safety.

Creating a safe and healthy workplace requires a never ending search for hazards that sometimes are not obvious to us. These hazards exist in every workplace and can be found by using various methods. Lessons Learned are just as the name suggests: learning from incidents to prevent the same or similar incidents from happening again.

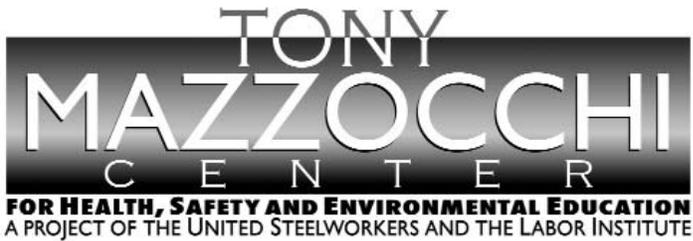
**Systems Are Not Created Equal: Not equal in protection and not equal in prevention.**

Using our Systems Focus to uncover system flaws or root causes is only one part of controlling hazards. We also need to look at the systems involved to decide on the best way to deal with the problem. The most effective way to control a hazard is close to its source. The least effective is usually at the level of the person being exposed. The system of safety in which the flaw is identified is not necessarily the system in which you would attempt to correct the flaw.



Safety Systems	Design & Engineering	Maintenance & Inspection	Mitigation Devices	Warning Devices	Training & Procedures	Personal Protective Factors
Level of Prevention	Highest — the first line of defense					Lowest — the last line of defense
Effectiveness	Most Effective					Least Effective
Goal	To eliminate hazards	To further minimize and control hazards				To protect when higher level systems fail.
Examples of Safety Sub-Systems*	<b>Technical</b> Design and Engineering of Equipment, Processes and Software  Management of Change (MOC)  Chemical Selection and Substitution  Safe Siting  Work Environment <sub>HF</sub>	Inspection and Testing  Maintenance  Quality Control  Turnarounds and Overhauls  Mechanical Integrity	Enclosures, Barriers and Containment  Relief and Check Valves  Shutdowns & Isolation Devices  Fire and Chemical Suppression Devices	Monitors  Process Alarms  Facility Alarms  Community Alarms  Emergency Notification Systems	Operating Manuals and Procedures  Process Safety Information  Process, Job and Other Types of Hazard Assessment and Analysis  Permit Programs  Emergency Preparedness and Response  Training  Information Resources  Communications  Investigations and Lessons Learned	Personal Decision Making and Actions <sub>HF</sub>  Personal Protective Equipment (PPE) and Devices <sub>HF</sub>  Stop Work Authority
	<b>Organizational</b> Staffing <sub>HF</sub>  Skills and Qualifications <sub>HF</sub>  Management of Personnel Change (MOPC)  Workload  Work Organization and Scheduling  Allocation of Resource  Codes, Standards and Policies**					

HF - Indicates that this subsystem is often included in a category called **Human Factors**.  
 \* There may be additional subsystems that are not included in this chart. Also, in the workplace many subsystems are interrelated. It may not always be clear that an issue belongs to one subsystem rather than another.  
 \*\* The Codes, Standards and Policies and Management of Change subsystems listed here are related to Design and Engineering. These subsystems may also be relevant to other systems, for example, Mitigation Devices. When these subsystems relate to systems other than Design and Engineering they should be considered as part of those other systems, not Design and Engineering.



## Lessons Learned

**Title:** Employees Suffer Hip and Pelvic Injuries

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### Lessons Learned Statement

In this particular Lessons Learned you will be able to see how using a *Systems of Safety* approach to an incident investigation can prevent repetitive work, heavy lifting and improper worker/equipment interface injuries that become evident only over time.

Applying *Systems of Safety* to the hazards that cause these injuries is the most effective means of addressing these hazards. **Designing and Engineering** a workplace that mitigates these hazards will prevent these types of injuries from occurring. Designing a new automatic bailer or lowering the bagger table and adding a new strap handle are **Design and Engineering** recommendations for this particular process.

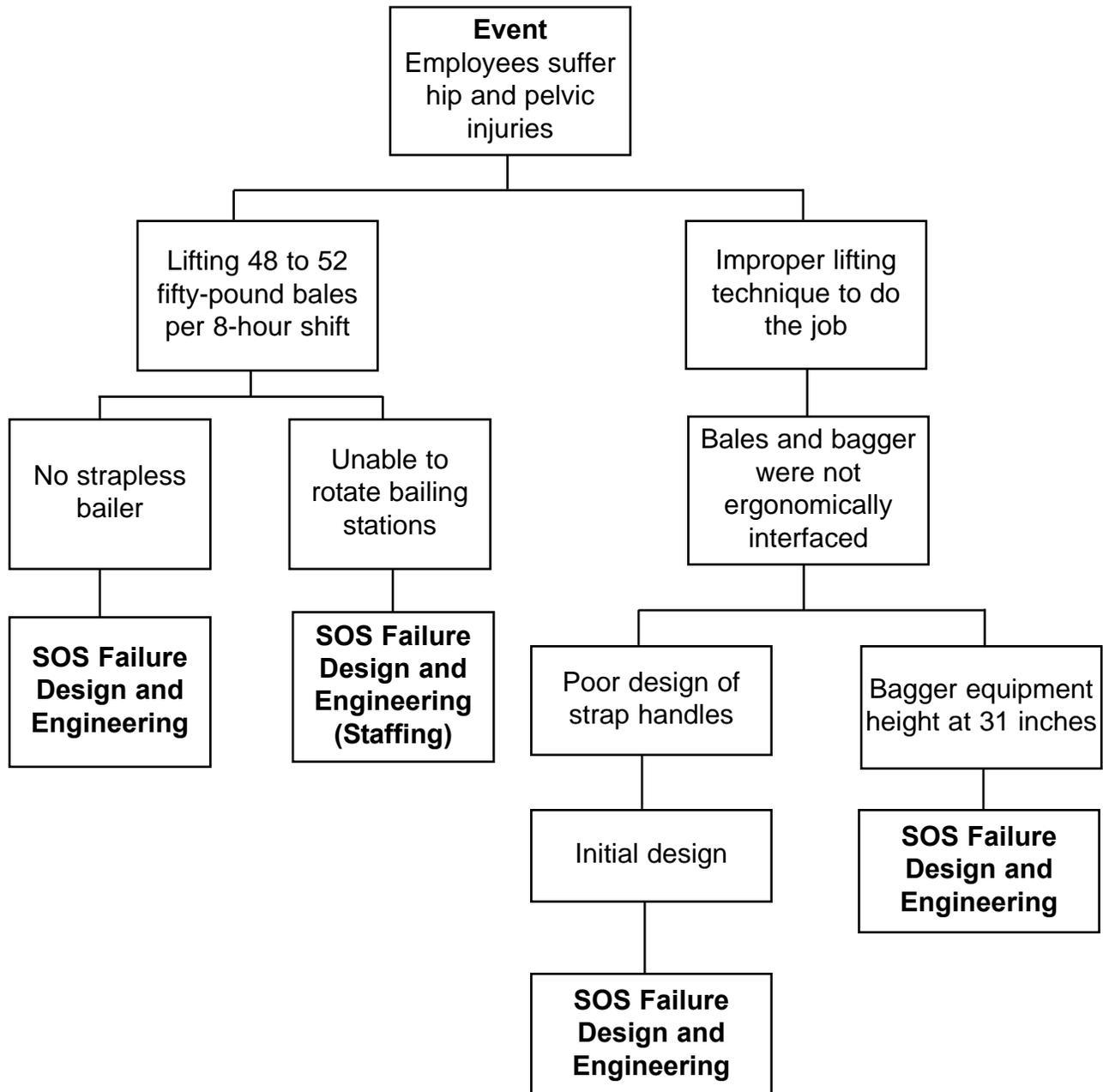
Limiting the amount of time workers are exposed to repetitive stress hazards by rotating workers on these jobs is applying the **Design and Engineering System of Safety** with a sub-system of *Staffing*.

**Discussion**

Several workers at a glass fiber plant have reported pelvic and hip strains caused by lifting as many as 48 to 52 fifty pound bales of fiber in an 8-hour period. The bales were being lifted by a strap handle from the bailer and placed into a bagger. The bagger from which the workers are performing this task is at a height of 31 inches above the platform. Lifting the bales into the baler requires the use of their legs to make the lift.

**Analysis**

**The Logic Tree** is a pictorial representation of a logical process that maps an incident from its occurrence, “the event,” to facts of the incident and the incident’s root causes.



### **Recommended Actions**

1. Lower the bagger table so the employees won't have to use their legs to assist in loading the bagger.
2. Design new strap handle.
3. Rotate workers on the bailing station to prevent excessive lifting of bales.
4. Design automatic bailer.

**Education Exercise**

Working in your groups and using the Lessons Learned Statement, Discussion, Analysis and Recommended Actions, answer the two questions below. Your facilitator will give each group an opportunity to share answers with the large group.

1. Give examples of ways to apply the Lessons Learned Statement at your workplace.

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2. Complete the chart below by:

- Putting an “X” beside the recommended actions you think your employer would implement at your workplace.
- Putting an “X” beside the recommended actions you think should be implemented at your workplace.
- Prepare to share with the group the reasons for your answers.

Employer	Recommended Actions	You
	1. Lower the bagger table so the employees won't have to use their legs to assist in loading the bagger.	
	2. Design new strap handle.	
	3. Rotate workers on the bailing station to prevent excessive lifting of bales.	
	4. Design automatic bailer.	

# EVALUATION

## Lessons Learned: Employees Suffer Hip and Pelvic Injuries

Please answer the two questions below:

1. How important is this lessons learned to you and your workplace? (Circle one.) Rate on a scale of 1 to 5, with 5 being the most important.

1	2	3	4	5
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2. What suggestions would you make to improve this Lessons Learned?

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**End of Training Trainer's Instructions**

Please complete the information below.

Trainer's Name \_\_\_\_\_  
(Please Print)

Date of training: \_\_\_\_\_

No. of Participants: Total \_\_\_\_\_ Hourly \_\_\_\_\_ Management \_\_\_\_\_

Location of Training: \_\_\_\_\_

USW Local # \_\_\_\_\_

Send this page **plus the Education Exercise and Evaluation for each participant** to:

**Doug Stephens  
United Steelworkers International Union  
3340 Perimeter Hill Drive  
Nashville TN 37211**

Thank you for facilitating the sharing of this  
Lesson Learned with your coworkers.