Training Solutions, Delivered!

STORED ENERGY:
The Hidden Hazard
(Concise)

Leader's Guide, Fact Sheet & Quiz

Item Number: 3914

This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.

PREPARING FOR THE MEETING

Here are a few suggestions for using this program:

a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.

b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.

c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.

d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes *before* the quiz itself, which is on the final page.

CONDUCTING THE PRESENTATION

a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.

b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.

c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.

d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

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FACT SHEET

LENGTH: 10 MINUTES

PROGRAM SYNOPSIS:
While most people think about lockout hazards when discussing "stored energy," potential and elastic stored energy can also be very dangerous. This new video is designed to raise your employees' awareness of all types of stored energy hazards in the work environments where they can be found. The program also explains the precautions viewers must take to protect themselves from these hazards. Topics include various types of stored energy, stored energy hazards in receiving areas, bulk storage dangers, loaded pallets & other warehouse hazards and stored energy in maintenance areas.

PROGRAM OBJECTIVES: After watching the program, the participant will be able to explain the following:
- What the various types of stored energy are and the hazards they present;
- Stored energy hazards found in receiving areas;
- The dangers of products that are stored in bulk;
- Hazards of loaded pallets and other warehouse equipment.

INSTRUCTIONAL CONTENT:

ELECTRICAL AND MECHANICAL STORED ENERGY
The narrator explains that equipment such as motors, control panels, conveyors and hydraulic systems contain electrical and mechanical stored energy.

WEIGHT = STORED ENERGY
But there's another kind of stored energy we might be less familiar with: The sheer weight of things in our workplaces, such as loaded pallets, heavy equipment, and bulk material such as grain, salt or animal feed. That weight is a type of stored energy, also called potential energy. The higher the object is from the ground, the greater its' stored energy.

ELASTIC STORED ENERGY
Another kind of stored energy to be aware of is called "elastic stored energy." For example, when a bungee cord is slack it contains no stored energy. But when it gets stretched out, the energy needed to stretch it is stored there until it's released. In the workplace, the same kind of energy – in much greater quantities – can be found in ropes and cables that are used to move heavy objects and equipment. Unfortunately, potential energy and elastic stored energy can be a source of serious injuries and fatalities at some facilities.

AWARENESS AND OBSERVATION
To protect ourselves we can increase our awareness of stored energy hazards and we can become more observant for them in our surroundings. But, every workplace is different and the hazards can change from day to day. The video next explores some actual workplaces to identify real stored energy hazards.

RECEIVING AREAS
The video illustrates various scenes in receiving areas, such as dock plates, trucks, railcars and forklifts moving product. Viewers are invited to identify the stored energy hazards in the scenes. The video next illustrates a mishap that could result from theses hazards. A worker raises a dock leveler as a truck backs up. A person on the dock is standing too close to the leveler. When the leveler drops, it lands on the toe of the worker's boot. Next, the right way procedure is illustrated. The operator makes sure the person is clear before lowering the leveler.

BULK STORAGE
The video illustrates several bulk storage areas, including flat storage grain, grain in large bins and salt in large mounds.
A. Weight of Bulk Product
At first glance, the products stored in bins or large mounds don't look especially dangerous. But think about the amount of weight – the stored energy – in the material. Just one cubic yard of salt or grain weighs about 1,300 – 2,000 pounds, or about 600 - 900 kilograms. This is an approximate amount for some types of salt and grain.

B. Salt Mound Collapse

A worker is walking past a large salt mound with a steep wall of salt where it has been excavated. Suddenly a section of the face collapses, knocking down and burying the worker. The narrator explains the importance of staying a safe distance from the face of a storage mound or bin. If the product appears unstable, notify your supervisor so the problem can be corrected.

WAREHOUSES

The video illustrates a variety of warehouse scenes, including forklifts moving and stacking pallet loads of product. Viewers are asked how many stored energy hazards they can see.

A. Loaded Pallets

Pallets loaded with product can be a serious stored energy hazard. What makes them a potential hazard is their weight; combined with the height they're stacked. For example, a pallet load of 50-pound (23 kilogram) bags can easily weigh 2,500 pounds (1,134 kilograms) – about the weight of a small car. The higher the pallet is from the floor, the more stored energy it contains.

B. Identifying and Correcting Pallet Hazard

The scene of the unstable pallet from the opening of the video is replayed. The person walking in the aisle is looking around the warehouse is being observant of his surroundings and he notices the leaning pallet. He calls to a forklift operator who drives up and adjusts the unstable pallet.

C. Moving Heavy Equipment

Another common stored energy hazard involves transporting heavy equipment or parts. To transport this material safely, use equipment that can safely handle the weight.

MAINTENANCE AREAS

The video illustrates a variety of scenes in a maintenance area, such as a worker using a hoist to lift a motor, shelves holding boxes of equipment, a large hammer resting on the top of a ladder, steel beams and rods on a rack, a big wood box on top of a rack, and a TV monitor sitting on a mezzanine above a desk. Viewers are asked to see how many stored energy hazards they can identify.

A. Computer Monitor Falls

A person on the mezzanine is moving some equipment. Nearby is the computer monitor sitting close to the edge of the mezzanine. A woman begins doing some work at the desk below. The worker on the mezzanine bumps the monitor while moving a pallet, sending the monitor crashing to the floor within inches of the woman working at the desk. Next, the correct procedures are illustrated, as the person working on the mezzanine sees the monitor and moves it to a safer location.

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ANSWERS TO THE REVIEW QUIZ

1. b

2. b

3. a

4. c

5. a

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REVIEW QUIZ

The following questions are provided to determine how well you understand the information presented in this program.

Name_____**Date**_____

1. Which of the following is NOT a type of stored energy?

a. Electrical
b. Digital
c. Mechanical

2. The type of stored energy related to the weight of objects such as loaded pallets, heavy equipment or bulk material such as salt, grain or fertilizer is called _____.

a. Electrical energy
b. Potential energy
c. Thermal energy

3. The higher an object is from the ground, the greater its stored energy.

a. True
b. False

4. The type of stored energy in a stretched bungee cord, or a steel cable that is pulling on a heavy object is called _____.

a. Mechanical stored energy
b. Thermal stored energy
c. Elastic stored energy

5. A pallet load of 50-pound (23-kilogram) bags can weigh as much as a small car.

a. True
b. False