THE HARTFORD

Loss Control TIPS

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*Innovative Safety and Health Solutions*SM

Manual Materials Handling

Preventing Injuries in the Food Processing Industry

Introduction

Manual material handling injuries are difficult to control in any industry. Therefore, the food processing industry is not immune to claims involving strains, sprains, back injuries, and other types of claims related to manual materials handling. The problem is somewhat exacerbated by the nature of the food processing industry, which encompasses widely diverse types of operations, including various forms of processing and distribution. The business of interest could be anything from a seafood processing plant, to a meat processing plant, to a fruit or vegetable processing operation, to the delivery and distribution of any of the above. Each offers individual loss potentials associated with manual materials handling.

Understand the Special Risks

To understand this diversity, let's examine two types of risks: a beef processor and a food distribution warehouse. The beef processor could fall into one of two classes: a meat packer or a meat processor. The difference is usually determined by the fact that a meat *packer* actually does the slaughtering, while a meat *processor* does not. Meat packers may do everything from slaughtering, to processing, to rendering, to distributing; material handling risks exist in all of these operations. Common material handling hazards might include:

- Controlling the livestock prior to and during slaughtering.
- Eviscerating the carcasses.
- Using heavy power tools to break the carcasses into smaller sections.
- Boning and breaking operations to reduce carcass sections into primal cuts or final cuts for retail.
- Storing and handling carcasses and smaller sections or cuts of meat (includes rack storage arrangements).
- Packing meat into boxes.
- Loading and unloading carcasses, sections, or boxes onto and off of distribution vehicles.
- Transporting and loading materials for rendering.
- Loading and unloading rendered product.

A food distribution operation may not include the operations listed above except storage, handling, and warehousing of the food products, such as boxes of dry foods or canned goods, or fresh produce or meat products. Common material handling hazards might include:

- Storing and handling food products (includes rack storage), which could be boxes of any type of product, drum storage of liquids, or bin storage of produce or meat.
- Loading and unloading food products onto and off of distribution vehicles.
- Repackaging food products into small quantities for retail.

When you compare the two types of operations, you notice that there are some similarities and some differences. Generally, the meat packing operation can have a much wider range of operations (and therefore, hazards) than the food distribution operation. However, there is a significant amount of manual materials handling associated with both operations.

Evaluate Manual Materials Handling Hazards

When evaluating manual materials handling hazards, consider the following:

- Ask the Six "W" questions.
- Evaluate what cannot be changed.
- Evaluate your hiring procedures.
- Evaluate your training procedures.

When evaluating the material handling tasks in your operation, ask the six "W" questions – Why, What, When, Where, Who, How – in the following order. (The sequence is important because it will lead you to a course of action.)

1. **Why is it necessary?** Why is it necessary to manually handle this material? Why are we not using some type of lifting aid? Why does the material have to be moved in the first place? Can this type of material handling be eliminated?
2. **What useful purpose does it serve?** What purpose is served by manually handling the material? Is this a case of "This is the way we have always done this"?
3. **When should it be done?** Is the timing of the material handling an issue? Is the operation done when people are rushing, or during peak operations? Would these factors pressure people not to take enough time to properly lift and move the items in question?
4. **Where should it be done?** Does the location of the lifting have an impact on the potential for injury? Where are things being stored: on the floor, high on shelves, in what type of container? Could cramped quarters create situations where proper lifting is more difficult?
5. **Who is best qualified to do the job?** Do employees' size and physical strength have an impact on the potential for injury? Are extremely short people being asked to place their bodies in awkward positions to retrieve materials from hard to reach areas? Are the weights of the objects to be lifted compatible with the employees' size and strength capabilities?
6. **How can it be done better, mare easily, and more safely?** How could this operation be modified to eliminate or significantly reduce the material handling hazards?

Asking “Why” and “What” first can provide information that can help eliminate a step or operation. If you ask “Why is it necessary?” you may learn that “It is not necessary.” Or, if you ask “What useful purpose does it serve?” you may find that “It serves no useful purpose.” This will lead you to consider why you are doing this operation in the first place. If an operation is not necessary and if it serves no useful purpose, it is without value and should be eliminated.

The next three questions (When, Where, and Who) are asked in the specified order to facilitate combining or rearranging steps or details. When material handling steps can be combined, the number of times the hazard exists is lessened. The fewer times the material is handled, the less often the hazard presents itself.

Asking “How” will lead to simplifying the process. Is there a better, more efficient way of accomplishing the same objective, without requiring someone to manually handle something? Think of automation, lifting aids, different mechanical ways to move materials. Also, think of where and why the materials are placed, especially if they are to be moved later. Is there a way to place them so that the number of times the material is moved is reduced?

Evaluate What Cannot Be Changed

There will be times when it just will not be possible to eliminate manual material handling. In such a case, evaluate this operation to determine if the risk can be mitigated. If something must be lifted and moved, can the weight and size of the object be reduced? Can the distance of the move or the height of the lift be reduced? If the material is moved manually, can it be placed mostly at waist level, rather than at extremely high or extremely low levels? Can lifting handles be built into the container? These steps may lessen the risk to some degree.

Evaluate Your Hiring Procedures

You can make progress in limiting potential injuries from manual material handling simply by hiring good people. This sounds simple, but it is often difficult to determine who will or will not be a good employee. Many companies, particularly smaller organizations, do not have a formal hiring process. This is a mistake. Formalizing the process will not eliminate every injury potential, but it will go a long way to reducing the accident frequency, simply because good employees offer fewer problems. Good employees do not have as many injuries as not-so-good employees. Good employees usually have a better work ethic, they are better at taking directions, and they usually follow procedures.

To facilitate hiring good employees, have a formal hiring process in place, including pre-placement physical exams. Have a trained interviewer on your staff, or make arrangements to engage one when needed.

The challenge of hiring good employees is exacerbated in a good economy, because the pool of potential candidates is smaller when unemployment is low. In times like this, hiring “anyone with a pulse” could create a significant risk, especially concerning manual materials handling.

Evaluate Your Training Procedures

Although training can help to mitigate many risk potentials, it will do nothing to eliminate the hazards inherent in manual material handling tasks. You can train people to use proper body mechanics when they lift materials manually, but you cannot guarantee that they will follow your advice. You certainly cannot stand over their shoulders all day to see that they do it right. This is why it is so critical to eliminate manual material handling as much as possible.

However, where changes are made (by eliminating material handling or by using automation or mechanical lifting aids), proper training can reduce the potential injury exposure. This is particularly true where powered lift trucks are employed. A formal, documented training program is required when implementing equipment of this type. Provide documented training with other types of systems, such as conveyors or lift-gates for vehicles. Where supervision or accident experience dictate, include refresher and remedial training in the training program.

Conclusion

Given the wide diversity of operations in the food processing industry, it is no surprise that manual material handling can create significant potential for employee injury. However, the unique risks of each operation must be evaluated. When evaluating the material handling exposures:

- Ask the Six "W" questions
- Evaluate what cannot be changed
- Evaluate your hiring procedures
- Evaluate your training procedures

Even if you do all this, you will probably still have some injuries related to materials handling, but the frequency and severity can be reduced.

For more information, contact your local Hartford agent or your Hartford Loss Control Consultant.
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