



Loading Dock Safety: Domtar's Recent Experience

PPSA, June 22nd, 2011

- **Drivers**
- **Process**
- **Findings and Conclusions**
- **Path Forward**

- **Two severe incidents drove focus and energy into evaluating loading dock safety:**
 - Separate incidents where employees fell out of un-locked trailers as the trailers were moving. The employees sustained severe hip & leg injuries
 - Both docks had locks, policies and procedures.
 - One was prior to activating the lock, the other was after it was unlocked.

Process

- **Safety Incident Investigations**
- **Team identified to study and develop minimum requirements for loading dock safety:**
 - Corporate Safety Manager
 - Corporate Converting Manager
 - Mill Safety Managers (2)
 - Mill Operations Managers (3)
 - Converting Plant Manager
 - Distribution Safety Manager

Incident Investigation

- **Employees involved lost focus**
- **Dependence on human intervention and/or compliance**
- **Reliance on a single safe guard**

Recommended Minimum Requirements

1. **Primary system (dock lock) required for all truck docks for tractor-trailer rigs**
2. **Secondary system required to prohibit employees from entering trailers when dock lock not engaged**
3. **Policy and Procedures w/ Job Safety Analyses**
 1. Loading and Unloading procedures with periodic reviews
 2. All employees require initial training with documentation
 3. Annual refresher training
4. **Minimum PPE: high vis vest, safety shoes, safety glasses, hearing protection**

Primary System

- **Dock lock system**

- Holds trailer to dock while loading
 - Ensures no trailer creep
 - Accepted industry standard
 - Actuated inside by the operator, does not rely on driver
 - Removes dependence of chocks, taking keys, etc.
- Most Mills & Converting sites have primary systems in place
- Less prevalent in warehouse/distribution operations

Secondary System

- **Targeted at losing focus, human compliance, single safeguard**
- **Two options:**
 1. Safety gate located in front of door – provides physical barrier
 - Hinged or mechanized lift gate
 - Allows dock doors to be open or closed
 - Better fit for mills where security is not a concern and where doors typically remain open in the summer
 2. Interlock existing dock door
 - Keep door closed, when truck not in place, for safety AND security
 - Better fit for converting sites & warehouses where doors provide added security

Secondary System

- **Secondary systems are to be interlocked with primary dock lock system**
 - Dock lock cannot be released unless safety gate or door is down (proximity switch interlock)
 - Gate or door cannot be raised unless dock lock engaged
- **These systems would prevent both “entering prior to trailer lock up” and “entering after dock lock released” incident scenarios from occurring**

“Thanks to Rite Hite!”



- **Dan Quarles and the entire Rite Hite team**
- **Hosted a visit to their Milwaukee facility and show room**
- **See actual units installed and operational**
- **Very beneficial visit**

Lift gate with light weight rails



Example of Dok Lok Guardian and Interlock



Safety lift gate with heavier rails



Hinged safety gate w/light weight plastic rails



Dock door panel with screen sections & cover



Dock door with screen section & screen cover



Lift Truck Dock Bays

- **Lift trucks have a back lift gate installed and can not be “locked up” with the primary dock lock system**
 - By comparison to trailer bays, very few truck bays dedicated to lift gate trucks
 - Some truck wheel lock systems, but expensive relative to traditional dock locks
- **At this point, administrative controls appear to be the most practical approach**





Other Considerations &/or Requirements

- **Maintenance – levelers & truck restraints**
 - Formal & documented preventive maintenance checks are in place
 - There is a “shelf life” associated with levelers and dock locks... equipment over 10 years should be routinely checked for weld & mechanical integrity

Summary

- **Primary and Secondary Systems**
- **Interlocked**
- **Procedures with annual refresher training**
- **Proper Maintenance**

Path Forward

- All sites to develop plans and install/retrofit to meet minimum requirements by facility
- Target 100% compliance by EOY 2011

Questions?

