

Loading Dock Safety: Domtar's Recent Experience

PPSA, June 22nd, 2011



- Drivers
- Process
- Findings and Conclusions
- Path Forward

Drivers

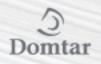


- Two severe incidents drove focus and energy into evaluating loading dock safety:
 - Separate incidents where employees fell out of un-locked trailers as the trailers were moving. The employees sustained severe hip & leg injuries
 - Both docks had locks, policies and procedures.
 - One was prior to 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 <u>AND</u> 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



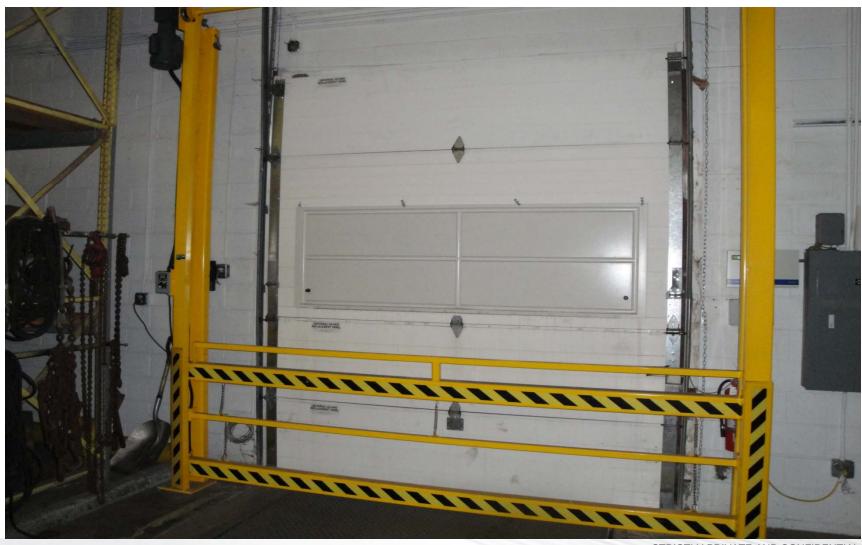


Example of Dok Lok Guardian and Interlock





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?

