

<b>Worksite:</b> Squamish Terminals	<b>Approved By:</b> H&S Committee	<b>Date Issued:</b> April 29, 2020	<b>Full Procedure Reference:</b> PRO-007, version 5.0
--	--------------------------------------	---------------------------------------	--

Key Site Safety Requirements:	Personal Protective Equipment (PPE)
<ul style="list-style-type: none"> <li>Wear required PPE</li> <li>Attend Tool Box talk - mandatory</li> <li>Site Speed Limits 20km on dock, 10km in sheds</li> <li>Seatbelts mandatory</li> <li>No use of electronic devices while in active working areas</li> <li>No smoking on site (designated area only)</li> <li>Drug and Alcohol use strictly prohibited</li> </ul>	<ul style="list-style-type: none"> <li>Hi-viz Vest</li> <li>Safety Boots (6")</li> <li>Type 2 Hard Hat (while on vessel, under boom, working with reach stacker)</li> <li>Eye protection, hearing protection, gloves - recommended</li> <li>Dust mask – if needed</li> </ul>

### Job Hazards Present:

- Slips, Trips, Falls on slippery / uneven surfaces; accessing and exiting vehicles
- Pedestrians exposure to being struck by site traffic; moving rail cars
- Site vehicles / materials handling equipment striking other vehicles or stationary obstacles / equipment
- Poor ergonomics – overexertion, musculoskeletal injuries (laboring, rigging, lifting, banding, pulling, pushing)
- Falling objects (equipment, cargo, debris, broken equipment, tools) – risk of being struck or crushed
- Overhead hazards, reachstacker – hook, frame, slings, cargo, equipment, gear, tag lines
- Moving cargo - Collapsing load - risk of being struck or crushed
- Materials handling equipment - unstable load – tipping/rolling
- Walkway positioning – slips, trips, falls
- Pinch Points, Sharp edges / slivers
- Exposure to elements (wind, sunburn, heat index, cold, dust)

### Procedure – Loose Pipe Delivery to Railcar

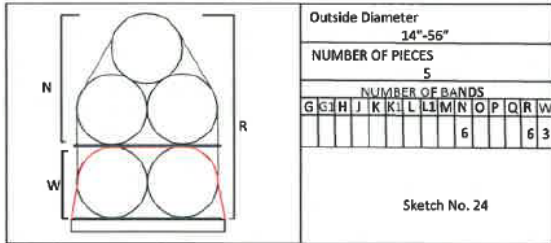
1. Prep railcar decks by inserting dunnage channels into pockets if available, properly spaced for length of pipe being loaded. Contoured dunnage installed in channels and nailed in place with 5" spikes.
2. Use forklift to transport pipe from laydown area, driver moves pipe onto bunks in the staging area near the railcar
3. OR/ If collecting pipe from the Dhatec Storage system, the Reachstacker will be used, pipe may be moved to pre-staged bunks or moved direct to railcar.
4. Reachstacker lines up in front of pipe in staging area, lowers frame, and labourers connect pipe fingers to pipe
5. When clear, Reachstacker adjusts frame if necessary and raises the pipe, moves pipe to railcar location.
6. Before loading the first two pipe, contoured dunnage will be placed on top of the pipe ready for the next lift
7. Reachstacker is directed into position, and lowers the pipe onto the dunnage on the railcar
8. Load pipe to railcar using the specified configurations – see over page, main SOP or AAR Manual
9. 6 belts are supplied with the railcar, secure the lower tier in place before loading next tier
10. Labourers use pike poles to line up the contoured dunnage on top of the pipe with the dunnage on the railcar deck
11. When loading second tier, use a live backstop on the backside of the railcar to prevent pipes rolling off
12. For the second lift of pipe, Reachstacker moves the pipe from bin or staging area to the railcar, lowers the pipe for labourers to add tag lines.
13. For the second and subsequent tiers, the Reachstacker is used as a live backstop, by positioning as close to railcar as possible and use boom extension to position load in place,
14. Subsequent tiers are placed on contoured dunnage, or if top tier is nested, no dunnage is used.
15. On final tier of a 5 stow, the Reachstacker remains connected to pipe while two long straps are placed around entire load, once pipe is strapped, tag lines are pulled to remove fingers from pipe
16. On final tier of 4 stow, Reachstacker moves away, labourers secure two straps from the side of the railcar with the backstop
17. Railcar is moved to separate location to complete lashing
18. Strapping is placed according to AAR Guidelines, based on number of pipe loaded
19. If required, a man lift or walkway will be used to secure the upper tier strapping
20. Once lashing is complete, ensure all strapping is tight, re-tension as required.
21. Dunnage, wedges and pipe locks from laydown area are stacked neatly/ sorted into bins. Ensure wedges and pipe locks are continually placed on the leading edge of the pile left on the ground.

#### Safety Precautions:

- While loading railcar, never stand in front a pile that could topple – stay out of the bight**
- Workers on foot around the working pile maintain 10ft distance from front and back of pile**
- All workers to stand at end of railcar while loading, and stay out of the bight in case the pipe falls off the back side of the railcar**
- Ensure reachstacker frame is centered over the pipe, so that the load is lifted vertically and not pulled horizontally**



**AAR Guidelines**



**Loading Specifications – See AAR Guidelines in full SOP**  
 For 48" diameter x 40' length pipe load pattern to be used for 89' railcar flats is two piles of five pieces stacked 2,2,1 (10 pieces total)