



Trolley Facilitation Guide

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Section 1

Facilitation Planning

- 1. Determine schedule of rail installation.**
 - a. Floor Plan Layout meeting with customer, rail installation contractor and VGK to determine how rail will need to be installed.**
 - i. Typically, one cooler at a time**
 - ii. Second, third shift and weekend install**
 - iii. Old trolley can run on new rail**
 - b. VGK will provide guidelines and education to rail installation contractor for proper rail installation.**
 - c. VGK will work with the rail contractor to facilitate the install according to established timeline and without downtime.**
 - d. VGK will inspect the rail system**
 - i. See rail installation section**
- 2. Determine delivery date of trolleys to the plant**
 - a. Based on rail installation deadline.**
- 3. Determine singer station modifications with customer. (Pork plants only see attachment)**
 - a. Water cooled rail through the singers**
 - b. Proper heat deflectors installed**
 - c. Installation of heat deflecting fans**
 - d. Installation of safety devices to stop line from running**
 - i. Water not flowing at recommended levels through water cooled rails**
 - ii. Fans are not functioning or partially working**
 - iii. Burners in the singer don't shut down**
 - e. VGK will help coordinate these efforts**

- 4. Determine cleaning tank changeover**
 - a. During weekend shutdown for trolley changeover, tanks cleaned and repurposed with proper cleaning solutions for VGK trolley**
 - b. pH Monitor system put in place**
 - c. Cleaning solutions identified and purchased**
- 5. Trolley changeover planning**
 - a. Develop weekend plan for trolley changeover**
 - i. Based on rail installation completion date**
 - ii. Equipment for cutting off old swivel**
 - iii. Equipment for closing new swivel**
 - iv. VGK has equipment for the above.**
 - v. Labor planning for changeover**
 - b. Rail cleaning**
 - i. During trolley changeover, all rail needs to be cleaned for installation of VGK trolley**
- 6. Implement the plan and install the trolleys in one weekend with no downtime planned.**
 - a. VGK signs off on rail install and facilitation to put warranty into place.**

Section 2

Rail Installation

1. General Guidelines

- a. Gravity declines should have a slope design of 5/8 to 3/4 inch per foot. Trolley returns, in feed lines, etc.**
- b. Recommend use of stainless steel fasteners for attaching rail to hangers.**
- c. Recommend stainless hangers to replace galvanized or plated hangers.**
- d. Use stainless steel switches that incorporate VGK stainless rail.**

2. Installation Guidelines

- a. Trim cut each length of rail on each end to get exact 20' lengths.**
- b. Welds can be mig or tig welded.**
- c. Welds must be smooth and continuous with joints smooth across the top of the rail joint.**
- d. VGK will inspect all rail joints for smoothness and sharp edges prior to plant startup.**
- e. Any rework will be marked and noted and will be given to the rail installation crew for their rework.**
- f. After rework, VGK will inspect those joints that have failed the initial inspection.**
- g. After final rail approval, VGK will sign off on the rail installation which will then allow for warranty to take effect.**

Section 3

Trolley and Rail Cleaning

- 1. Trolley Cleaning Chemicals**
 - a. Obtain trolley cleaning chemicals by VGK approved chemical suppliers.**
 - b. pH in tank should be kept between 8 – 9 no higher. This is a critical measurement and needs to be taken daily.**
 - c. General rule of thumb....if the trolley is needing more cleaning, up the pH to 10 for a short period of time and reduce back down to a pH that keeps the trolley clean.**
 - d. Cleaning tank temperature should be kept between 145 to 160 degrees F with air agitation of the cleaning solution recommended.**
 - e. Tank temperature should be monitored on a daily basis.**
 - f. A cold wash rinse with sanitizer with air blow off is recommended.**
 - g. Trolley should be entirely dipped in the cleaning solution.**

Critical measurements:

pH frequency:

- a. pH should be taken daily so solution modification can be done.**
- b. When tank is refilled.**
- c. Recommend at beginning and end of each shift.**

Tank temperature frequency:

- a. Daily when pH is measured.**

- 2. Rail Cleaning**
 - a. The SS rail should be cleaned on a regular maintenance schedule to allow for a clean, dry surface for the trolley to roll on.**
 - b. VGK recommends at minimum a weekly clean by use of your standard cleaners by your clean up crew.**
 - c. Spotlight areas might need more attention by hand cleaning.**

Section 4

Singer temperatures

(Pork Plants only)

- 1. Trolley wheel temperatures need to be kept between 140-150 degrees F or lower. Temperatures can be checked on the wheel on the exit of the singer with a laser temperature gun.**
- 2. VGK advises the use of water cooled rail, heat diverting shields, and fan forced air dams to keep the heat off the rail. (see attachment)**
- 3. Fail safe switches need to be incorporated into the water cooled rail for water flow, and air flow for the fans. If the water or fans are not working, the line shuts down.**
- 4. Temperatures should be monitored at minimum daily.**

Section 5

Repair

- 1. For the most part if the above monitoring systems are put in place and scheduled regularly, very little maintenance of the VGK trolley system is required.**
- 2. Proper cleaning of the trolley can be verified by looking at the entire trolley and evaluating the wash tank's effectiveness. If the trolley still carries some residues, (animal fat, blood, etc.) the concentration rate can be elevated per the above recommendations to allow for proper cleaning. The basic rule of thumb is to keep the pH at a level where the trolley stays clean.**
- 3. Disassembling a wheel can help evaluate the cleanliness of the stainless steel wheel bushing as another snapshot of wash tank effectiveness. If the bushing is greasy then the wash tank can be adjusted per the above recommendations.**
- 4. Trolley wheel repair should be limited to changing the brown wheel bushing if the running clearance becomes excessive. The ID of a new bushing is approximately .770". Running clearance on a new trolley is about .030 to .035 of an inch. If this gets beyond .070 of an inch, the brown bushing should be replaced. This is a matter of knocking the old bushing from the wheel by use of a new bushing. Careful hammer taps will accomplish this.**
- 5. If there are severe cuts or flat spots on the wheel, the wheel may have to be replaced or turned down. There is maximum depth of cut on turning a wheel down, please call us to advise the situation.**