INSTITUTE OF INTERNATIONAL CONTAINER LESSORS

17 January 2024

IICL – Refrigerated Container Technical Bulletin – RTB 011.

Title: Review of Repair Limitations of Locking Bars of Refrigerated Containers.

Reference: IICL General Guide for Refrigerated Containers Inspection and Repair 4Th edition published in 2016.

Purpose: After review and further consideration by the Technical Committee, it has been decided to modify the repair limitations on locking rods shown in section 6.8.7 to allow sectioning of the locking rod.

Note: Damaged locking bars can be freed, straightened, sectioned, or replaced, depending upon the type and extent of damage.

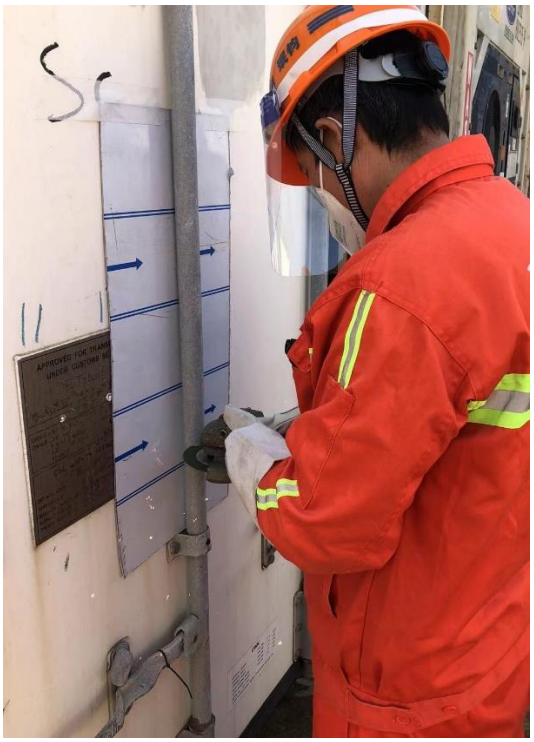
With immediate effect, the revised wording in section 6.8.7 should read as follows:

6.8.7
Locking Bars: Section & Replacement—Bent locking rods that cannot be straightened may be repaired by section while still mounted, see limitations and repair procedures in section **6.8.7.1.** If sectioning is not feasible the locking rod must be replaced. Remove damaged rod and fit replacement. Reattach locking rod to door. Check locking rod for proper operation. Use existing undamaged door handles, cams and mounting brackets when replacing damaged locking rods. Clean, prime and paint repaired area in matching colors where necessary.

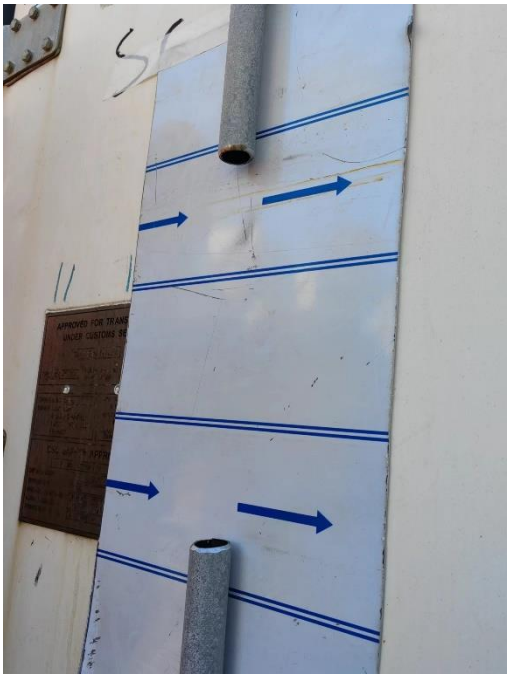
6.8.7.1 Sectioning of locking bars - Limitations and repair procedures.

- Sections must be at least 150 mm (6 in) in length.
- Sections are not permitted within 150 mm (6 in) of another full-profile weld in the locking rod.
- If the damage extends to an anti-rack ring, the rod should be cut 10 mm (3/8 in) from the anti-rack ring.
- Cut through the locking bar and remove the damaged section. Use a disc cutter to perform repair to avoid damage to surrounding areas and components.
- If the damaged section of the rod extends through or ends near a guide, the guide must be removed before removing the damaged rod. If the damaged section of bar is attached to the door handle, remove the handle by cutting the weld joining the door handle hub to the locking bar. If the entire section of rod between the bearing brackets require replacement, all guides must be removed before removing the damaged rod.
- Clean and smooth the cut areas and end of the remaining rod and bevel the edges.
- Measure and cut the replacement section. As for other component sections, allow a gap of no greater than 2mm (5/64 in) between the section and the remaining locking bar. The replacement material should be galvanized steel tubing of the same diameter, thickness, and strength as the original (like-for-like). Grind the cut ends of the replacement section clean and smooth, and bevel the edges for good weld penetration.
  Ensure alignment and proper positioning of the locking bar cams engagement with cam keepers before start welding steps.
  Tack weld the replacement section in position and check alignment. The locking rod cams must be fully engaged when the door is closed and locked.
- Open the door. Continuously weld one side of both ends of the locking rod section to the remaining bar.
- Turn the locking rod 180° and continuously weld the other side to obtain a 360° weld seam.
- If necessary, reinstall the locking rod guides previously removed. Check the locking rod for proper operation by rotating it though its full 180° arc.
- Perform necessary surface preparation and painting to restore affected areas back to their original conditions.

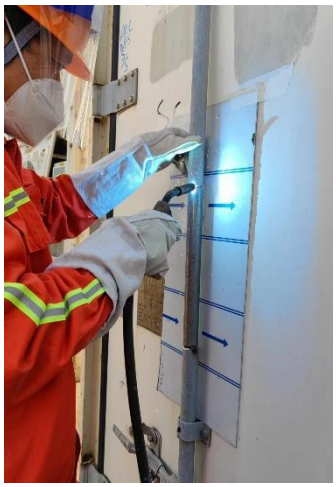
Shielded door panel / cutting disc being used.

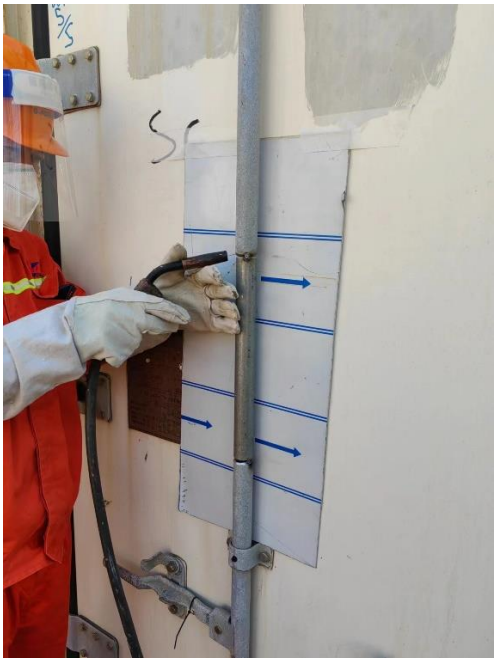


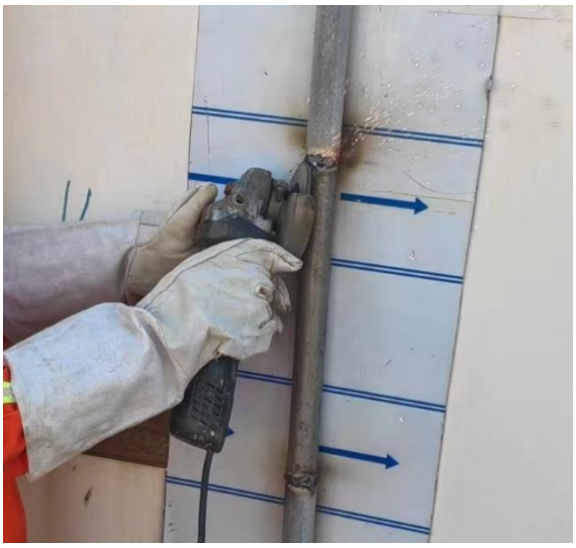
Beveling edges for good weld penetration.



<u>After proper alignment</u>, tack weld.







Galvanized locking bar section.