



STANDARD OPERATING PROCEDURE

Working Aloft Safety & Lashing Cages

Document Number: CSC-SOP-143
Date Created: 02 Jul 2021
Revision Number: 0
Last Revised By: G. Whitford
Date of Revision: 20 Dec 2022
Next Review Date: 28 Feb 2024

PURPOSE:

In an attempt to eliminate workers' exposure to the hazards associated with riding the spreader bar in close proximity to hoist sheaves on the STS cranes, and to the residual hazards associated with working aloft using the WINSAFE fall-arrest system, Charleston Stevedoring Company (CSC) purchased and put into use safety cages that allow personnel to work aloft on containerships without (in most cases) the need for workers to perform their tasks from directly on top of the containers.

SCOPE:

This document pertains strictly to the proper applicability, use, and function of CSC's safety / lashing (work) cages. It is incorporate by reference in CSC-SOP-130, *Rescue, anchored aloft*, and in CSC-SOP-043, *Fall Arrest*.

PROCEDURE:

Preparation

- The work cages will be available for use at all times, on all terminals.
 - **HLT** – mounted in a cradle on the rear sill of the cranes
 - **NCT** – either grounded and transported by CHE or on a designated cradle trailer, to be moved by a UTR.
 - **WWT** – either grounded and transported by CHE or on a designated cradle trailer, to be moved by a UTR.
- The work cages will be transported to the lead via the appropriate mode of transport, under the controlled of a certified PIT operator.
- The Superintendent in Charge (SIC) will:
 - Be present in the lead (or on the dock if multiple cages are used simultaneously, with the Assistant Vessel Foreman helping) whenever a work cage is in use.
 - Ensure that the landing area for the work cage and the approaches to that area for the applicable mode of transport are kept clear until the arrival and final placement of the work cage on the dock.
 - The area will be kept clear until any equipment used to transport the work cage to the lead has departed the area.



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- notify all dock stevedores of the impending use of the work cage, instructing them to divert their truck traffic into patterns that will keep trucks from interfering with the use of the work cage or from jeopardizing the ground personnel who are preparing the work cage for use.

CAUTION NOTE: at NO time will the work cages be lifted to or from a storage position with personnel inside.

- The SIC will:
 - Select the optimal operating mode (20', 40', or 40' gondola) considering the scope of the work to be performed, the conditions at the work site, the tier of the work site, etc.
 - Conduct an inspection of the work cage for any visible damage and will check all equipment (included safety chains and fall arrest gear) for proper functionality.
 - Any defect in the work cage or equipment will be reported immediately to a member of the terminal management team and, when appropriate, tagged out of service.
 - The inspection will ensure that there are four (4) safety chain attachments installed, and that **the SWL for any two diagonally opposed chains is sufficient to support twice (2x) the weight of the entire work cage's tare weight.**
- Secondary safety chain attachments will be connected to each corner of the spreader bar.
 - The SIC will confirm for the crane operator, via radio, that the safety chains have been attached and show no signs of defect, malfunction, or unsuitability.

CAUTION NOTE: Any time the lashing cage is used to transport personnel to a below-deck position, the 20' section *must* be used. The full 40' cage can be used below deck *ONLY* if it has no people aboard or is being used in a hatch that is longer than 40 feet.

CAUTION NOTE: The work cage is never to be lifted without the safety chains attached while the work cage is occupied.



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- For safety / rescue purposes, a minimum of two people will occupy each separated section of the work cage to be used to perform the work
 - (2) in the 20'
 - (2) in the 40'
 - (4) in the 40' gondola
- All personnel working in the work cage will fully and properly don a fall-arrest harness *before* getting in the cage.

CAUTION NOTE: Personnel may only enter the work cage from the dock. **AT NO TIME** is a person to board the work cage from the deck or side of the ship.

- Each user's carabiner at the end of the SRL's or static line's tether shall remain attached to the dedicated anchor point at all times when the cage is in operation.
 - WCS's MFG-12-R296, 2.0: *"Both the 20ft and 40ft modules are equipped with safety lines, galvanized wire ropes installed longitudinally along the lengths of the modules. The wire ropes are designed to be used with safety harnesses equipped with fixed lanyards or retractable reels. The safety wire system is designed to support two persons per line in the 20ft module and one person per line in the 40ft module."*
 - MFG-12-295, 9.0: *"Alternatively, safety anchor points are provided throughout points inside the cage."*
- The SIC – if not going aloft themselves – will designate a Person in Charge (PIC) and positively identify that individual to the crane operator.
 - The PIC will be in possession of a working radio while directing the use of the work cage and will have direct communication capability with the crane operator at all times while the work cage is in use.
- Personnel will stand fast, feet shoulder-width apart, and maintain a positive grip on the handrails at all times while the work cage is in motion.
- Personnel will never lean out or reach out of the work cage while it is in motion between the wharf and the container stow.

Available Work Actions from the Work Cage

- Access to twistlocks left on top of a container can be safely collected through the specially designed openings in the deck of the work cage.



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- Any loose fitting collected from atop a container will be stowed in the bins provided, which are to be emptied when the work cage returns to the dock.
- An actuator pole can be used over the rail to open twistlocks between containers below
 - Whenever using actuator poles, care must be taken to ensure that other occupants are not struck as the pole is run out taken in.
 - Personnel working over the rails will keep their feet planted firmly on the work cage's deck, and NEVER use the frame structure to obtain an extended reach.
- Working on stuck twistlocks between tiers by restowing adjacent containers in order to provide working space for the lashing cage to get alongside the work area.

CAUTION NOTE: At no time will the work cage be used as part of a lifting bridle / rig. As such, the work cage may not be used to rig lifting slings in preparation of an unusual lift (CSC-SOP-169, CSC-SOP-172)

Work Instructions

- The PIC will determine whether the cage is to be landed on or suspended above the work area to create the safest possible working conditions before directing any work to proceed.
- The crane operator will ensure that the crane is operated at a slow speed (maximum 25%) at all times while the work cage is attached to the spreader bar.
 - At no time will the operator detach the spreader bar from the work cage while the cage is occupied.
- If the work is to be performed on a single container / twistlock, the work cage is to be hovered above the container (or adjacent container when appropriate).
- If the work has a broader reach – such as unlocking full tiers of containers – the spreader bar may be hovered above containers at a minimum safe distance above the highest point / container on that tier, in order to move on as the work is performed.

CAUTION NOTE: At no time shall workers use the deck openings to access the top of the containers, or to perform work while the work cage is in motion. Additionally, at no time will workers use the deck openings to exit or enter the work cage.

Demobilization



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- Upon completion of the work aloft, the PIC will direct personnel to properly stow any gear or collected debris in a proper location permitting safe travel conditions inside the work cage.
- The PIC will direct the crane operator to lift the work cage (if landed) and to return to the dock.
 - The PIC will simultaneously advise the dock stevedore and / or SIC to clear the lead and hold adjacent truck traffic until the work cage has come to rest on the dock.
- The crane operator will not attempt to land the work cage directly back on the test weight and will instead land the work cage in another lane.
- Once the work cage has landed and the crane operator has slacked the cables workers may disconnect their SRL lanyards from the anchor point.
- The PIC will relinquish control of the operation to the SIC, and positively identify having done so to the crane operator.
- The SIC will:
 - Direct personnel to detach / disconnect the secondary safety chain attachments and disembark from the work cage.
 - Visually inspect that all four secondary safety chain attachments have been properly disconnected and stowed, and that all personnel have vacated the work cage.
 - The SIC will confirm for the crane operator via radio that the safety chains have been removed and that the work cage is unoccupied.
 - Ensure that the travel path of the spreader and immediately adjacent areas are clear.
 - Direct the crane operator to lift the work cage and either return it to the stowage cradle (HLT) or to bring it over the back sill in order to clear the lane for the truck holding the cradle trailer to be flagged in.
 - Relinquish command of the lead to the Dock Stevedore.
- The Hatch Tender / Helper will spot the truck for the return of the work cage to its cradle.
- The Dock Stevedore will direct the truck driver on returning the cradle trailer, and themselves returning to the lead in preparation for their next evolution.
- The Hatch Tender / Helper will direct the truck to “go” once the work cage has been returned to its cradle and the spreader bar has been detached from the work cage.
- Normal operations resume.