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Inside this issue:

A WORD FROM TOPSIDE

Tim Blanton

As discussed in my last Word from Topside article (109th edition), there were two recent significant maintenance errors which resulted in major equipment damage and impact to mission. One of these events had the potential to impact delivery of the first Columbia-class ballistic missile submarine. In this instance, the maintenance team was assigned to remove the main hoist gear case "cover" in order to repair a leaking gearbox. This is a split gearbox design and the "cover" was actually the upper half of the gearbox that holds the bearings, gears, and pinions in place. The crane's very large hook block was not tied off or lowered to the deck (as required per the OEM manual) and once the upper half started lifting, the gearing dislodged resulting in the hook block rapidly lowering and damaging the gearing beyond repair. On a very positive note, a combined stakeholder team composed of Navy Crane Center (NCC), Norfolk Naval Shipyard, Naval Foundry and Propeller Center, PWD Pennsylvania, and NAVFAC Midlant personnel, along with the crane's OEM, were able to accelerate repairs and return the critical crane back to service. As with any significant event, there are a myriad of lessons learned that can be applied Navy-wide to mitigate the chance of similar events from occurring in the future. Review of the event identified several key issues, including:

- The work document lacked procedural directions other than "replace the main hoist gear case seal".
- The OEM manual was not referenced or on site.
- No supervision was on site at the time of the event despite this being a repair to a major load bearing component.
- There was an overall lack of supervisory and management involvement and engagement for a major maintenance evolution.

As a result of the above event, we reviewed our (NCC) internal processes with regard to execution of weight handling program evaluations and identified several areas where we can improve. Over the past decade, our evaluation teams expanded our equipment review to include observations of in-process maintenance, in addition to NCC past practices (e.g., inspections of equipment and reviews of equipment history files). In many cases, during the short duration of evaluations, there was little maintenance being conducted, particularly at small to medium sized activities. Even at the large activity level, evaluations focused on the maintenance that was underway and not necessarily the maintenance that was performed during the year or was planned for accomplishment. Going forward, NCC evaluators will be asking to see work packages from any major repairs that were conducted or are currently ongoing or planned.

I highly recommend you review NAVFAC P-307, section 3, particularly paragraph 3.3.1 (Work Documents), as this will be a focal point of future evaluations. Although we have always reviewed your processes and procedures and commented on them in reports, the bar has been raised (for good reason) and activities should expect a much more critical review in this area going forward.

We will also be looking harder at how you train and ensure your personnel are qualified to perform work beyond completing the compulsory NAVFAC P-307 web-based training. Again, I highly recommend that you review how you are currently validating qualification of your personnel to meet NAVFAC P-307, paragraphs 7.2 (Training), 7.2.1 (Qualification), and Appendix N, (personnel competencies), as this will also be an area of emphasis going forward.

Lastly, as always, review of monitor program data provides a lot of insight as to the level of supervisory and management oversight being provided on the deckplates. Although this area has always been a focal point of our evaluation teams, we will be reviewing and emphasizing this area (i.e., in-process oversight of ongoing work) even more so during upcoming evaluations. Additionally, with the easing of travel restrictions and improving HPCONs, we will resume normal travel for evaluations at CONUS activities.

In closing, I ask that weight handling program managers and other key activity weight handling program personnel start reviewing these areas ahead of your scheduled evaluations. Working together, we can take this significant impactful event, apply the lessons learned, and turn it into a positive for the Navy's weight handling program.

TIP OF THE SPEAR
THIRD QUARTER FY21 EVALUATION SUMMARY

Due the ongoing restrictions in travel and concern for the health of our personnel, as well as that of activity personnel, most evaluations in the third quarter of FY21 continued to be performed remotely. Reviews were limited to a review of activity-provided program management information, effectiveness of corrective actions taken since the previous evaluation, and discussions with activity supervision and management. Since the reviews did not cover all areas of an activity's weight handling program, the overall grade of satisfactory could not be provided.

26 Navy activities were given program reviews.

With the gradual easing of restrictions due to the pandemic, Navy Crane Center performed full evaluations of five activity programs.

Five non-Navy weight handling programs were also evaluated.

REVIEW ITEMS

Effective monitor programs result in better recognition of unsafe crane and rigging operations, which in turn result in better recognition of lower threshold accidents (avoidable contact with no damage) and near misses, thus helping to prevent serious accidents. In addition, the monitor program better enables development of a value-added self -assessment.

Many of the activities reviewed showed improvement in their monitor programs, but still have room for improvement, either in identifying the almost inevitable unsafe practices, near misses, and lower-threshold accidents (avoidable collision with no damage), or in monitoring non-operational functions, such as maintenance, inspection, and testing. Other activities are further behind or have not started this NAVFAC P -307-required function.

Issues with the self-assessment were noted in 22 of the reviews. A self-critical self-assessment, backed up by documented metrics, is a sign of a forward-looking mature weight handling program.

A lack (or very low number) of reported lower order crane or rigging accidents and near misses was indicative of failure to recognize these events, particularly at activities with higher operational tempos. Identification and reporting of such events has been shown to minimize the potential for significant accidents. Reviews of 10 weight handling programs identified this condition.

Common Review Items (three or more items):

- Lack of monitor program or established program that needs improvement or does not cover all program elements – 40 items.

- Weakness in (or non-existent) activity self-assessments, self-assessments not acted upon, not internally focused, not developed utilizing documented monitor or metrics data – 22 items.

- Lack of (or low number of) lower order crane or rigging accident reports and near miss reports – 10 items.

- Local WH instruction/SOPs non-existent or inadequate – 9 items.

- Training issues, including contractor personnel (training not taken, training weak or not effective, refresher training not taken or not taken within three months of license renewal, lack of inspector training, instructor not authorized by NCC, locally required training not taken, training course score less than 80 percent, non-Navy eLearning (NEL) certificates) – 9 items.

- Lack of, ineffective, or insufficient crane replacement/modernization plan – 6 items.

- Unrecognized/unreported accident, near miss, or unplanned occurrence (including damaged gear not investigated for cause) – 5 items.

- Poor oversight of contractor responsibilities (maintenance, test, operations) – 5 items.

- Lack of leading metrics/metrics not being properly analyzed – 4 items.

- No procedure for tagging equipment with known deficiencies and/or tagging equipment that is out of certification – 4 items.

- Poor maintenance planning and/or execution (parts not tagged/bagged, hazardous materials not properly stored, work documents not available, lubrication not per schedule, lack of long-range maintenance schedule, components not reassembled properly, activity deficient in structural bolt installation, missing screws, PPE not utilized) – 4 items.

- Internal audit issues (no audit program, not finding issues, not on schedule, overly thorough-hindering effectiveness, lack depth of analysis, responses not required to audit findings) – 3 items.

- Staffing issues (shortages in critical areas, no succession planning, APT staffing, high turnover of military personnel, inadequate engineering support, total reliance on remote contractor, one person performing too many functions) – 3 items.

- Inspection and certification documentation errors – 3 items.

SUMMARY OF WEIGHT HANDLING EQUIPMENT ACCIDENTS SECOND QUARTER FY21

The purpose of this message is to disseminate and share lessons learned from select shore activity weight handling accidents, near misses, and other unplanned occurrences so that similar events can be avoided and overall safety and efficiency of operations can be improved.

For the second quarter FY21, 54 Navy weight handling accidents (44 crane and 10 rigging) were reported, as compared to 45 in the first quarter of FY21.

Significant rigging accidents decreased from 5 to 2 in the second quarter, and significant crane accidents decreased from 10 to 7 but two were OPNAV class 'C' reportable events (one injury and one >$60,000 in damage). As discussed in Near Misses, near miss reporting showed noted improvement in the second quarter, indicating improved oversight and sensitivity to lower level issues are occurring more often and the lessons learned from these events will assist in lowering the severity of accidents. Near miss reporting still lags behind FY20 totals. Four contractor significant accidents (two crane and two rigging) were reported, which is an increase from three reported in the first quarter, including three dropped loads and a pinch point injury. In addition, weight handling contractor oversight personnel reported 16 crane and rigging near misses, an increase from the 10 reported in the first quarter.

INJURIES

Two injuries were reported, one from a crane accident and one from a rigging accident. This is a decrease from four in the first quarter. During removal of a bow plane fairing, two assisting mechanics were working to remove separate bolts in the cover when the load unexpectedly freed from both fasteners and shifted causing the hand of an assisting mechanic to be pinned between a large bolt and the fairing surface. The mechanic's hand required sutures and they were out three days for recovery. While removing a ship's ladder using a one-ton chain hoist, a rigger's finger was pinched between the ladder and the bulkhead, when the ladder shifted unexpectedly when it was manually manipulated by a second rigger. The individual returned to work the same day after receiving sutures to their finger.

Lessons Learned: In both events, multiple personnel were manipulating the load without proper communications to the entire team when unexpected movement occurred, resulting in injury. During the evolution to remove the fairing cover, the supporting mechanics did not maintain active communications of progress of bolt removal when freeing the fairing cover and the rigging team, lacking adequate visibility of the entire evolution, remained unaware of the need to engage. The injury during the ladder removal was the result of two riggers working to free a stuck ladder without adequately communicating the plan and the lead rigger was not in overall control of the evolution.

DROPPED LOADS

Three dropped load accidents were reported. During disconnection of rigging gear from an electric forklift, the operator, without direction, hoisted prior to all the slings being disconnected causing the forklift to tip onto its side. A propeller lift fixture failed causing the propeller to drop and hang unevenly in the fixture. There was no damage to the propeller. During shipboard rigging, a load slipped from the rigging and fell to the deck causing damage to an electrical cable.

Lessons Learned: The forklift operator misinterpreted a hand signal from the rigger disconnecting the gear attached to the forklift as a hoist up signal; however, all prior direction provided was by radio communication as discussed in the pre-job- brief. Regarding the lift fixture failure, the command did not have a procedure for the use of the lift fixture and the unqualified operator was working without supervision or a qualified rigger present. After both crane accidents, the commands have provided the operators with needed supplemental training to address the problem areas identified. Investigation of the dropped component during shipboard rigging identified that the team did not engage supervision. When encountering an interference during the evolution, the work team, confident in their abilities, relocated the pick points below the component's center of gravity and when the load was manually manipulated to prevent contact with a frame, the force applied compromised the component's center of gravity.

OVERLOADS

Two overload accidents were reported during crane operations, as compared to four overloads (two crane and two rigging) in the first quarter. During removal of a ship support flotation pod, the safe working loads of a strong back and rigging gear were exceeded. During a lift of a piece of equipment to a service platform, a strong back lifting attachment in the rigging arrangement was overloaded.

Lessons Learned: In the first accident, the activity identified that inexperienced riggers were assigned to perform work with limited oversight. This resulted in rigging gear (chain hoists) not being sized with the adequate capacity to address the potential load surge conditions and inadequate communication of the load indicating device read out. In the second accident, the overloaded strong back occurred when the rigger did not verify the weight of the load when making the gear selection prior to the lift. In both events, the activities provided additional training and mentoring to the personnel directly involved. NAVCRANECEN issued WHPB 21-08, Increase in Events during Under Instruction Operations, to reinforce the necessity for activities to evaluate and further develop the proficiency of less-experienced personnel through on-the-job training and mentoring.

TWO-BLOCK

One two-block accident occurred in the second quarter compared to one in the first quarter. During the ODCL check on a mobile crane, indications of a two-block condition were identified in the sheave assembly at the head of the boom.

Lessons Learned: Since the actual two-blocking event was not observed, the direct cause was not determined; however, distractions or loss of overall envelope control while operating an unloaded hook has often been the reported cause. In response to this and other events, NAVCRANECEN issued WHPB 21-05, Risks Associated with Unloaded Hook Operations, to remind all personnel involved in weight handling operations to remain vigilant until the operating envelope is completely disestablished.

SUBSTANTIAL PROPERTY DAMAGE

While securing the crane due to worsening sea conditions, the unloaded hoist block on a barge-mounted mobile crane struck the boom causing ~$60K in damage to the boom.

Lessons Learned: While the potential for rough seas and worsening wind conditions was briefed, it was determined that leadership did not proactively maintain a focus on safety during the inclement weather, particularly with the high risk operation using a barge-mounted crane.

NEAR MISSES

Activities reported 107 near misses (86 crane and 21 rigging) in the second quarter. This was a major improvement from the 65 near misses reported in the first quarter but near miss reporting still lags FY20 performance (an all-time historic high). The level of near miss reporting is indicative of the level of oversight, a major contributor to reducing the occurrence of significant accidents. NAVCRANECEN issued WHPB 21-05 and WHPB 21-08 (noted above), and WHPB 21-10, Control of Mechanical and Gravitational Energies, to provide awareness on current significant events and trends and to encourage oversight in these areas. NAVCRANECEN continues to recognize activities for reporting lessons learned through near misses, i.e., those where personal intervention prevented accidents, by issuing WHPBs 21-03, 21-06, 21-09, and 21-11.

Weight handling program managers, supervisors, and safety officials should review the above lessons learned with personnel performing weight handling operations and share lessons learned from other activities with personnel at your activity. In most reports, inadequate pre-job planning, inadequate pre-lift briefings and a lack of supervisory oversight were determined to be contributing factors. Your assistance is needed to provide management and supervisory oversight and to identify issues at the lowest possible level to achieve the goal of zero significant accidents. I encourage you to also challenge other weight handling professionals to continue, and all others to join, in their efforts on educating the workforce to self-report deficiencies via the monitor program. This will increase the opportunities to share lessons learned throughout individual activities as well as with the Navy's weight handling community. Please continue with your vigilant oversight of weight handling operations and stress the importance of situational awareness and utilizing thorough and interactive pre-job briefs.

CRANE SAFETY ADVISORIES AND EQUIPMENT DEFICIENCY MEMORANDA

We receive reports of equipment deficiencies, component failures, crane accidents, and other potentially unsafe conditions and practices. When applicable to other activities, we issue a Crane Safety Advisory (CSA) or an Equipment Deficiency Memorandum (EDM). A CSA is a directive and often requires feedback from the activities receiving the advisory. An EDM is provided for information and can include deficiencies to non-load bearing or non-load controlling parts. A complete list of CSAs and EDMs can be found on the Navy Crane Center's web site.

CSA 238D – Exceptions to NAVFAC P-307 requirements due to COVID-19 Pandemic

1. Revision: CSA 238C provided activities with exceptions to specific NAVFAC P-307 requirements in certain areas of weight handling equipment (WHE) management due to the ongoing disruption in operations from the COVID-19 pandemic. This revision supersedes and cancels CSA 238, 238A, 238B and 238C in their entirety.

2. Background: The purpose of this CSA is to cancel allowed exceptions to specific NAVFAC P-307 requirements in the areas of WHE maintenance, certification, engineering, training and licensing, rigging, accident reporting, and contractor crane operations due to the ongoing disruption from the COVID-19 pandemic and resume full NAVFAC P-307 requirements.

3. Direction: All WHE programs governed by NAVFAC P-307 shall resume full compliance with NAVFAC P-307 requirements no later than 1 June 2021. All previously granted exceptions to WHE maintenance, certification, engineering, training and licensing, rigging, accident reporting, and contractor crane operations due to the ongoing disruption from the COVID-19 pandemic may remain in effect. No additional exceptions are allowed without approval of an RCDR in accordance with section 1.9 of NAVFAC P-307. Contact Navy Crane Center prior to submitting a request for deviation.

WEIGHT HANDLING PROGRAM BRIEFS

Weight Handling Program Briefs (WHPBs) are provided for communication to weight handling personnel. The following briefs were issued during the past quarter.

The briefs are not command-specific and can be used by your activity to increase awareness of potential issues or weaknesses that could result in problems for your weight handling program. They can be provided directly to personnel, posted in appropriate areas at your command as a reminder to those performing weight handling tasks, or used as supplemental information for supervisory use during routine discussions with their employees. When Navy Shore Weight Handling Program Briefs are issued, they are also posted in the Accident Prevention Info tab on the Navy Crane Center's web site at http://www.navfac.navy.mil/ncc.

Navy Crane Center point of contact for requests to be added to future WHPB distribution is nfsh ncc crane corner@navy. mil.

Navy Shore **Weight Handling Program Brief**

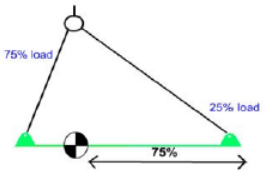
Title: Preventing Overloads

Target Audience: Weight Handling Program and Crane Oversight Personnel

There has been an increase in **significant accidents** attributable to **overloads**. Ten overloads have been reported in FY21, four occurring in the past month, two of which were attributable to configuration issues. It is imperative to always understand the load distribution and to double check the rigging configuration prior to lifting. Always verify proper sling angles and the orientation of shackles and other lifting gear within the configuration. **REMEMBER: The weight of the load does not change but the forces on the rigging can change significantly.** Forceful team backup is key. If there are any concerns, stop and contact your supervisor or engineering personnel for guidance.

1. **What is the weight of the load and does your crane or hoist have capacity to lift it?**
   - **Acceptable Methods:** Load-indicating devices, label plates, documentation, engineering evaluation and calculation are all acceptable methods of determining load weight.
   - **Unacceptable Method:** Never take word of mouth to establish load weight! Word of mouth should only be used as a **conservative** starting point for sizing the crane and rigging gear so the component can be weighed with a load indicating device (LID), but never shall word of mouth be used as the final determination of load weight.

2. **Select rigging gear with adequate working load limit based on configuration (e.g., sling angle, D:d ratio)**
   - Slings angles must be greater than 30 degrees from horizontal, unless specifically authorized by an engineering work document.
   - Capacity reductions may be required for slings used in basket or choker hitches, or where the body of the sling is bent around a hook, shackle, or other rigging gear.



3. **Determine the load's center of gravity and ensure the configuration is correctly loaded.**
   NAVFAC P-307, paragraph 14.7 addresses sizing of rigging assemblies for loading.
   - When the distances between the CG and attachment point are unequal, weight distribution is inversely proportionate.
   - Ensure the rigging configuration is designed for the worst case loading using the "two leg rule".
   - Equalizer beams automatically adjust for distribution of the load; however, the load may be equally or unequally shared.
   - Ensure adequate capacity of the all components within the rigging configuration.

4. **Is the load potentially constrained? Are binding conditions or loss of load (slack line condition) present?**
   - A portable LID with a readout readily visible to the signal person, RIC, or designated LID monitor shall be used. **NAVFAC P-307, paragraph 10.5.2 provides other allowances for the use of LIDs integral to crane systems.**
   - An appropriate stop point shall be established and the LID shall be carefully monitored to ensure the stop point is not exceeded.
   - Chainfalls or other control means (e.g., procedures, micro-drives, load positioner/buffer) shall be used to avoid sudden overload of the crane or rigging gear. These lifts shall be treated as complex lifts.

5 May 2021 **Navy Crane Center** *WHPB-21-12*

Navy Shore Weight Handling Program Brief

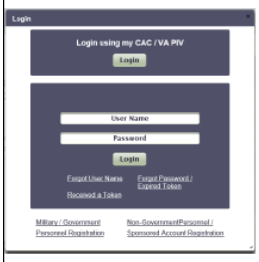
Title: General Crane Safety and Rigging Practices Courses on JKO

Target Audience: Contracting Officers and WHE Program Managers

General Crane Safety (USN-NCC-GCS-04.2) and Rigging Practices (USN-NCC-RP-05.2) are now available on JKO

The training courses can now be accessed at the web address below:

https://jkodirect.jten.mil/Atlas2/page/login/Login.jsf



Users can log into JKO using a Common Access Card (CAC), or User Name and Password provided upon Sponsor and Account Approval

The NAVFAC P-307 training courses **GENERAL CRANE SAFETY, USN-NCC-GCS-04.2**, and **RIGGING PRACTICES, USN-NCC-RP-05.2** are **now available** on Joint Knowledge Online (JKO), in addition to the training courses that were previously announced: Category 3 Non-Cab Operated Crane Safety, USN-NCC-C3CS-04.2, and Category 2 and Cab-Operated Category 3 Crane Safety, USN-NCC-C2CS-03.2,.

- **USN-NCC-GCS-04.2** is designed to acquaint prospective crane operators with Navy requirements for the safe operation of cranes.
- **USN-NCC-RP-05.2** is designed to acquaint personnel (professional riggers) with Navy requirements for safe weight handling operations.
- As noted in NAVFAC P-307, paragraph 7.2, all Navy Crane Center (NCC) training courses are available on Navy eLearning (NeL) at https://www.aas.prod.nel.training.navy.mil/
- **JKO allows other Department of Defense Commands, Government Agencies, and Government Contractor personnel without a CAC** to request access to training with sponsor approval. Request a JKO account by selecting the "Non-Government Personnel / Sponsored Account Registration" link at the bottom right of the Login screen to initiate the request. **The sponsor must be a U.S. Military or Federal Government Civilian,** and must have an e-mail address that ends in .gov, .mil, ndu.edu, nps.edu, or dodea.edu to validate the account. Personnel with a CAC should continue to access NCC training via NeL as normal.

20 May 2021 | **Navy Crane Center** | *WHPB-21-13*

Navy Shore Weight Handling Program Brief

Title: Near Miss Lessons Learned – May 2021

Target Audience: Weight Handling Program and Crane Oversight Personnel

Navy weight handling near miss reporting continues to trend upward and multiple near misses have been submitted which help prevent accidents. NCC commends activities for their efforts and continues to stress the importance of oversight and the identification and reporting of near miss events which can be used as lessons learned to improve weight handling performance. Well done to the following activities that identified and reported these near misses, where intervention prevented potential accidents:

- **NORFOLK NAVAL SHIPYARD** - Two separate potential personnel injury events were avoided when team members intervened. First, a worker went under a diesel engine platform being prepared to be lifted without the knowledge of the rigger-in-charge. Second, during a lift to mate a valve section, the operator placed their hand into a pinch point.
- A third event occurred when a lift was stopped after an Accident Prevention Team (APT) member identified the nylon used for frapping was not properly secured (only one clove hitch) and started to slip. NAVFAC P-307 defines frapping, also known as "body and soul" or "backlashing", as the tight wrapping around the load and support rigging gear utilized to keep the load attached or centered in the rigging. Additionally, NAVFAC P-307, paragraph 14.15.a. requires that frapping shall be used where necessary to ensure the load does not fall out of the rigging.
- **NAVFAC SOUTHWEST** - A lift of a ship's brow and shore power support equipment was halted by supervision due to improper crane set-up, inadequate pre-lift preparations/brief, and lack of appropriate and incorrectly placed personnel.
- **NAVFAC EURAFCENT (ROTA)** – The lift of a ship's pump was paused when the supervisor identified that the shackle attached to the slings and pump was not attached correctly.
- **NAVAL UNDERSEA WARFARE CENTER DIVISION NEWPORT** - During crane maintenance inspections, crane travel was stopped when a communication modem wire/assembly was observed in the travel path of one bridge crane and a security camera was observed in the travel path of another bridge crane.

24 May 2021 | **Navy Crane Center** | *WHPB 21-14*

Navy Shore Weight Handling Program Brief

Title: End of CSA 238 Exceptions to NAVFAC P-307 Requirements

Target Audience: All Weight Handling Program Personnel and Activity Management

Navy Crane Center issued **Crane Safety Advisory (CSA) 238D**, which cancelled exceptions to NAVFAC P-307 requirements permitted by CSA 238C in the areas of WHE maintenance, certification, engineering, training and licensing, rigging, accident reporting, and contractor crane operations. All previously granted exceptions due to the ongoing disruption from the COVID-19 pandemic may remain in effect. Effective 1 June 2021, no additional exceptions are allowed without approval of a RCDR in accordance with NAVFAC P-307, paragraph 1.9. Contact Navy Crane Center prior to submitting a RCDR.

- **Certification –** All certifications shall be performed within the certification requirements provided in NAVFAC P-307, paragraph 4.4. Activities may still use, as appropriate, the extension allowance in NAVFAC P-307, paragraph 4.5.1.
- **Maintenance –** NAVFAC P-307, paragraph 3.6 provides an allowance to defer maintenance inspections, lubrication, or servicing/maintenance.
- **Training –** Category 3 non-cab operator re-training shall resume as required in NAVFAC P-307, Table 7-1.
- **Operator Licensing –** Plan for license renewal by providing sufficient time to allow satisfactory completion of the required attributes of NAVFAC P-307, paragraph 8.11.1.1 before the expiration date.
- **Rigging –** Equipment requiring periodic inspection and test must be completed within the periodicity outlined within NAVFAC P-307, Table 14-1. As appropriate, activities may still use the deferral of inspection and test for emergent conditions as outlined in NAVFAC P-307, paragraph 14.4.4.
- **Accident and Near Miss Reporting –** All accident, near miss, and unplanned occurrence final reports are to be submitted to Navy Crane Center (Code 06) within **30 days.** The COVID-19 pandemic reduced an activity's ability to conduct thorough oversight, which resulted in less near misses and lower threshold crane accidents being reported. There is an urgent call for activities to report these lower level events in order to increase our ability to share lessons learned. By focusing on and learning from minor events, it is possible to reduce the probability or severity of all accidents.
- **Contractor Crane Operations –** The degree of oversight of contractor crane operations shall be based upon the risk to personnel and property; however, oversight shall be performed within the minimum periodicities of NAVFAC P-307, paragraph 11.2.a.

27 May 2021 | **Navy Crane Center** | *WHPB 21-15*

Navy Shore Weight Handling Program Brief

Title: Pinch Points and Hand Injuries

Target Audience: All Weight Handling Program Personnel

Pinch Point is defined as, "a point or area where a person or part of a person's body may become crushed or "pinched" due to being trapped against the load and a stationary object, or moving parts of the crane or other machinery and a stationary object (or object moving at a different velocity)."

Pinch Points

Over the past few months, several weight handling accidents and near misses have been reported that involved employees placing their hands in a pinch point, one of which **resulted in an OPNAV reportable injury.** A historical review of reported injuries identified that the majority of injuries occur to the hand and fingers. Examples of "pinch point" related hand injuries and how they can be minimized are discussed below:

- **A mechanic's finger was pinned between a large bolt and an adjacent fixed object while removing a fairing cover shipboard. Verification that the cover was not in a binding condition** would have resulted in implementation of additional controls to relieve the tension from the cover and alleviate the bolt from being bound.
- **A rigger's hand was pinched between a valve cover and bracket when the load shifted while removing the cover and in a separate event a rigger's hand was pinched between the ladder and a bulkhead when the load was manually manipulated by another rigger. Be aware of pinch points created** by objects that move and come into direct or close contact with relatively fixed objects (e.g., loads in close proximity to bulkheads or other fixed equipment, loads that are swept by the rigging, suspended loads near fixed or mobile equipment). Always pay attention to where your hands are when seating or manipulating a load.
- Specific pinch point hazards (i.e., occurring between what objects and at what stage of the evolution), and mitigating actions should be discussed at all pre-job briefs. **Simply stating that pinch points exist is not sufficient.** Briefs should identify the specific hazardous pinch point areas. Supervisors should stress the importance that individuals be careful where they place their hands to avoid the potential for injury. Lastly, always remember that if an operation cannot be completed without placing your hand in a pinch point, stop and notify your supervisor.

3 June 2021 | **Navy Crane Center** | *WHPB 21-16*

Navy Shore Weight Handling Program Brief

Title: Near Miss Lessons Learned – June 2021

Target Audience: Crane Operations, Rigging, and WHP Oversight Personnel

Navy weight handling near miss reporting continues to trend upward and multiple near misses have been submitted which help prevent accidents. NCC commends activities for their efforts and continues to stress the importance of oversight and the identification and reporting of near miss events which can be used as lessons learned to improve weight handling performance. Well done to the following activities that identified and reported these near misses, where intervention prevented potential accidents:

- **PORTSMOUTH NAVAL SHIPYARD** – An all stop was called by the rigger-in-charge (RIC) and a potential collision was avoided between a portal crane and a strongback. Poor communication among crane team members led to a strongback being placed in the crane's travel path. In addition, the crane walker was not in position to recognize the hazard.
- **NAVFAC FAR EAST (Yokosuka)** – Two events were reported. First, a lift of a mobile crane was stopped when the RIC identified that the slings were attached to tie-down rings rather than the approved lifting points. Second, during a pallet lift, the accident prevention team (APT) identified that the load (cables) on the pallet was not properly secured. Additionally, the wire rope slings were improperly installed by sweeping the pallet widthwise. The load should have been secured with blocking (wedges) and the slings should have been placed on the corners of the pallet to reduce the potential of the load shifting.
- **NAVFAC EURAFCENT (Rota)** – The RIC and operations supervisor both signaled an emergency stop during the ODCL when the main anti two-block device (limit switch) did not function. It is imperative that one does not assume a limit switch is operating properly. Remain attentive of the crane position at all times and always approach limit switches at a slow speed.
- **NORFOLK NAVAL SHIPYARD** – During mooring operations, the crane team maintained control of the brow and prevented collision with nearby scaffolding when inadequate job planning and communications led to poorly timed maneuvers. Port Services attached the tug mooring lines to a ship while the portal crane was still attached to the ship's brow.

23 June 2021 | **Navy Crane Center** | *WHPB 21-17*

Navy Shore Weight Handling Program Brief

Title: Load Test Director Training Course on JKO

Target Audience: Contracting Officers and WHE Program Managers

Load Test Director (USN-NCC-LTD-03.2) is now available on JKO

The training course can now be accessed at the web address below:

https://jkodirect.jten.mil/Atlas2/page/login/Login.jsf

Users can log into JKO using a Common Access Card (CAC), or User Name and Password provided upon Sponsor and Account Approval

The NAVFAC P-307 **Load Test Director**, **USN-NCC-LTD-03.2** training course is **now available** on Joint Knowledge Online (JKO).

- **Load Test Director** provides information that will allow trainees to: identify the people and paperwork needed for testing Navy cranes along with the purpose, explain the necessary preparations for conducting a safe load test, identify the required tests for different types of cranes, correctly perform and document a condition inspection, accurately calculate test loads and test weights, and identify the load test team members and their responsibilities.
- Additional NAVFAC P-307 training courses available on JKO include: Category 3 Non-Cab Operated Crane Safety (USN-NCC-C3CS-04.2), Category 2 and Cab-Operated Category 3 Crane Safety (USN-NCC-C2CS-03.2), General Crane Safety (USN-NCC-GCS-04.2), and Rigging Practices (USN-NCC-RP-05.2)
- As noted in NAVFAC P-307, Section 7 paragraph 7.2, all Navy Crane Center (NCC) training courses are available on Navy eLearning (NeL) at https://www.aas.prod.nel.training.navy.mil/
- **JKO allows other Department of Defense Commands, Government Agencies, and Government Contractor personnel without a CAC** to request access to training with sponsor approval. Request a JKO account by selecting the "Non-Government Personnel / Sponsored Account Registration" link at the bottom right of the Login screen to initiate the request. **The sponsor must be a U.S. Military or Federal Government Civilian,** and must have an e-mail address that ends in .gov, .mil, ndu.edu, nps.edu, or dodea.edu to validate the account. Personnel with a CAC should continue to access NCC training via NeL as normal.

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WEIGHT HANDLING PROGRAM SAFETY VIDEOS

Accident Prevention provides seven crane accident prevention lessons learned videos to assist activities in raising the level of safety awareness among their personnel involved in weight handling operations. The target audiences for these videos are crane operations and rigging personnel and their supervisors. These videos provide a very useful mechanism for emphasizing the impact that the human element can have on safe weight handling operations.

Weight Handling Program for Commanding Officers provides an executive summary of the salient program requirements and critical command responsibilities associated with shore activity weight handling programs. The video covers NAVFAC P-307 requirements and activity responsibilities.

Mobile Crane Safety covers seven topics: laying a foundation for safety, teamwork, crane setup, understanding crane capacities, rigging considerations, safe operating procedures, and traveling and securing mobile cranes.

"Take Two" Briefing Video provides an overview on how to conduct effective pre-job briefings that ensure interactive involvement of the crane team in addressing responsibilities, procedures, precautions, and operational risk management associated with a planned crane operation.

Safe Rigging and Operation of Category 3 Cranes provides an overview of safe operating principles and rigging practices associated with Category 3 crane operations. New and experienced operators may view this video to augment their training, improve their techniques, and to refresh themselves on the practices and principles for safely lifting equipment and materials with Category 3 cranes. Topics include: accident statistics, definitions and reporting procedures, pre-use inspections, load weight, center of gravity, selection and inspection of rigging gear, sling angle stress, chafing, D/d ratio, capacities and configurations, elements of safe operations, hand signals, and operational risk management (ORM). This video is also available in a standalone, topic driven, DVD format upon request.

All of the videos can be viewed on the Navy Crane Center website:

http://www.navfac.navy.mil/navfac_worldwide/specialty_centers/ncc/about_us/resources/safety_videos.html.

SHARE YOUR SUCCESS

We are always in need of articles from the field. Please share your weight handling/rigging stories with our editor nfsh_ncc_crane_corner@navy.mil.