

ASE

Naval Facilities Engineering Command



Abstract of an Accident

93-10

ACCIDENT TYPE:	WEIGHT HANDLING EQUIPMENT
INJURY:	MULTIPLE BROKEN BONES (ARM, WRIST, LEG, RIBS, NOSE), DISLOCATED HIP, PUNCTURED LUNG, CONTUSIONS, ABRASIONS
TYPE OF WORK:	MATERIALS HANDLING (LOADING EQUIPMENT TO SHIP)
EQUIPMENT:	90 TON MOBILE TRUCK CRANE, 80 FOOT MANLIFT

DESCRIPTION OF THE ACCIDENT:

A 90 ton truck crane configured with 130 foot main boom and a 40 foot jib overturned while attempting to load a 44,315 pound manlift onto the stern gate of a ship. The crane flipped completely over, crushing the operators cab and damaging the corner of the pier, and fell into approximately 55 feet of water. The operator was rescued from the water and transported by ambulance to a local trauma center. A salvage operation was conducted to recover the crane and manlift. Both the crane and the manlift were destroyed. Property damage/replacement costs exceed one million dollars. The operator had eighteen years of experience in weight handling equipment operations. Partial permanent disability is possible.

DIRECT CAUSE:

The operator failed to determine the actual radius and boom angle necessary prior to executing the lift. The load exceeded the rated capacity of the crane for the required boom configuration.

CONTRIBUTING CAUSES:

- Crew did not hold a pre-lift meeting.
- Improper equipment was used for the job. A floating crane should have been used.
- Standard operating procedures were not established for crane operations. Roles and responsibilities of all members of the crane crew were not well defined.
- Inadequate custody and control of equipment. Manlift had been abandoned on the pier several days prior to the mishap by another ship and was improperly acquired by the ship being loaded minutes prior to the lift.
- Inadequate communication between the customer (ship), crane scheduling office, manlift rental office, supervisor, work leaders and the crane crew.
- Inadequate supervision; tacit approval of poor operating procedures.

LESSONS LEARNED:

- This mishap highlights the need for pre-job briefings to discuss jobs, crew functions and potential hazards.
- Standard operating procedures should be developed for weight handling equipment operations, including roles and responsibilities of all crew members and other departments, requirements for pre-lift planning and written lift plans signed by a supervisor for critical lifts within 25% of the safety work load of the crane.
- The fundamentals of weight handling equipment operations (e.g. known load weight and actual radius) are critical. Supervisors must ensure that all crews comply with established procedures and not take short cuts.
- Both navy-wide and local training plans identifying job-specific training requirements for riggers need to be developed and implemented.

Your **SAFETY** contact is...