



MANAGEMENT SYSTEM MANUAL

OCN 6.3 R/V Oceanus Crane Operations

Originator:	Approved By:
Anthony Mello	Albert F. Suchy

1. Purpose

The purpose of this procedure is to set forth the standards for the qualifications for crane operators on R/V Oceanus.

The safety of crane operations, whether in port or at sea, is of the utmost importance.

2. Responsibility

The Chief Mate is responsible for insuring that all operators are properly trained. The Bosun or Relief Bosun will direct the practical training and assessing of an operator.

3. References

- a. Crane Loading Capacity Information Manual
- b. 46 CFR 173.001 Sub Part B (Lifting)
- c. 3PS Operators manual

4. General

The R/V Oceanus is equipped with a TB 60-65 marine crane manufactured by Allied Systems. The crane is man rated. The crane lifting configuration is flexible with the normal use of 5/8 8 x 19 EIPS, IWRC non-spinning wire rope (36,200 # B.S.). The ship can provide options from single whip thru 6-part rigging covering a working load from 7,100 # thru 40,450 # static load. It is important to note that the lifting capacity is not limited by crane capacity but by heeling criteria as well as dynamic loading under certain conditions. All crane lifts at sea are therefore down rated accordingly.

The max loads permitted are shown on the Allied load capacity chart modified for Oceanus max moment as well as a sheet showing the moments at various radiuses. The Crane is fitted with a 3PS load monitoring system. This system gives the crane operator the ability to compare anticipated weights, boom angle and extension to actual measurements. This system does not calculate load capabilities but only assists operators in ensuring the load is within the capacities indicated on the load capacity chart. Before making any lift, all aspects of the movement must be evaluated to ensure that the load does not exceed rated capacity at any point in the operation. Additional and more comprehensive information is available on the bridge (see book entitled "Crane Loading Capacity Information"). Also see 46 CFR 173.001 Sub Part B (Lifting). A copy of the load capacity chart is in the crane cab for reference. This and supplementary information is also available from the Chief Mate and Bosun.

5. Operation/Training



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The crane shall be operated by a trained and qualified member of the deck department. They will operate under the direction of the ship's Bosun, Chief Mate or other designated qualified individual.

Training covers the basic concepts of operation and rigging along with a comprehensive understanding of hand signals, crane controls, load charts and applied dynamics. Hands on training usually begins dockside with observing a qualified operator together in the cab followed by coaching of the trainee and putting him/her "through the paces". This typically involves several hours of training including making pick-ups and placing objects as directed using all of the crane functions to the satisfaction of the Bosun/Chief Mate.

Upon certification for dockside operations, the next phase is to become certified for crane operations at sea. Since there is no easy way to do this, the preferred method is to ease into it beginning with light sea conditions and working up to heavier weather. The philosophy is predicated on trust and following signals and direction as given from the person in charge on deck. As always, the ultimate responsibility lies with the Master in determining safe conditions for crane operations.

Note: the crane operator, at times, has a distinct advantage in being able to see better from the control position. At other times, the crane operator's vision may be obstructed. It is of paramount importance to follow signals at all times. If the operator is confused, in doubt, uncertain or if he/she detects an unsafe condition occurring or about to occur, it is essential that immediate action be taken to avoid danger. This will be done by hand signals, stopping, blowing a Freon horn from the cab or by whatever emergency measures are available.

If the operator observes others directly involved in crane operations proceeding in an unsafe manner or not in compliance with required safety gear, the operator will stop operations as soon as is safe to do so and will not proceed until corrective action has been undertaken. This applies if there are others within the operating or danger zone that must be kept clear.

The ship's Deck Department shall maintain the crane's structure in addition to the crane wire, attendant fittings and hardware. The Engineering Department shall maintain all electrical, mechanical and hydraulic components of the crane system. Periodic, scheduled lubrication is conducted by the Deck Department. The lube points are identified and listed. Maintenance records are maintained by the respective departments and entered into NS5.

6. Record



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Upon completion of the above requirements to the satisfaction of the Chief Mate, "Crane Operator" qualification will be added to the Training Section of the crewmember's personnel record in NS5.