



## **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

May 19, 2022

### **Group Chair's Factual Report**

# **SEARCH AND RECOVERY**

DCA21FA174

Attachment 5 - DBSV Stability Letter  
(14 pages)



Certificate No.: 8003642-3715322-001

Deadweight: 1165.89 LT

# INTERNATIONAL LOAD LINE CERTIFICATE

Issued under the provisions of  
the International Convention on Load Lines, 1966,  
as modified by the Protocol of 1988 relating thereto  
under the authority of the Government of

United States of America

Commandant, U.S. Coast Guard

by American Bureau of Shipping

Particulars of Ship

Name of Ship		Distinctive Number or Letters	
DB SALTA VERDE		622241	
Port of Registry	Length(L) as defined in Article 2(8)	IMO Number <sup>1</sup>	
Long Beach, CA	177 Feet 7-3/16 Inches	N/A	

Freeboard Assigned as: New

Type of Ship: Type B

Freeboard from Deck Line:			Load Line	
Tropical	4 Feet 7-3/4 Inches	(T)	1-13/16 Inches	above (S)
Summer	4 Feet 9-9/16 Inches	(S)	Upper edge of line through center of ring	
Winter	4 Feet 11-3/8 Inches	(W)	1-13/16 Inches	below (S)
Winter North Atlantic	5 Feet 1-3/8 Inches	(WNA)	3-13/16 Inches	below (S)
Timber Tropical	N/A	(LT)	N/A	above (LS)
Timber Summer	N/A	(LS)	N/A	above (S)
Timber Winter	N/A	(LW)	N/A	below (LS)
Timber Winter North Atlantic	N/A	(LWNA)	N/A	below (LS)

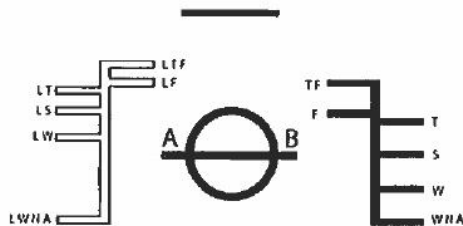
Allowance for fresh water for all freeboards other than timber: 1/8 Inches

For timber freeboards: N/A

The upper edge of the deck line from which these freeboards are measured is:

Opposite The Top of Upper Steel

deck at side.



This certificate is valid only so long as the operating restrictions in the vessel's stability letter, issued by ABS and dated 16 August 2019, are observed.

<sup>1</sup> In accordance with the IMO Ship Identification Number Scheme, adopted by resolution A.600(15)

**THIS IS TO CERTIFY:**

1. That the ship has been surveyed in accordance with the requirements of article 14 of the Convention.
2. That the survey showed that the freeboards have been assigned and load lines shown above have been marked in accordance with the Convention.

This certificate is valid until 31 May 2021<sup>2</sup>

Subject to the annual surveys in accordance with article 14(1)(c) of the Convention.

Completion date of the survey on which this certificate is based: 04 June 2016

Issued at Los Angeles, CA on 16 August 2019  
*(Place of issue of certificate)* *(Date of issue)*

Electronically Signed By  
Koller, Daniel, Los Angeles Port  
*(Surveyor, American Bureau of Shipping)*



**NOTES**

1. When a ship departs from a port situated on a river or inland waters, deeper loading shall be permitted corresponding to the weight of fuel and all other materials required for consumption between the point of departure and the sea.
2. When a ship is in fresh water of unit density the appropriate load line may be submerged by the amount of fresh water allowance shown above. Where the density is other than unity, an allowance shall be made proportional to the difference between 1.025 and the actual density.
3. It is the owner's responsibility to furnish the master with approved information and instructions for loading and ballasting this vessel to provide guidance as to stability of the vessel under varying conditions of service and to avoid unacceptable stresses in the vessel's structure, as defined in 46 CFR 42.09-1.
4. The Winter North Atlantic Load Line applies only to vessels of 328 ft. in length or less, which enter any part of the North Atlantic Ocean during the winter months as defined by the Load Line Regulations in 46 CFR 42.30-5 and 42.30-35. The periods during which the other seasonal load lines apply in different parts of the world are stated in the Load Line Regulations 46 CFR 42.30-5 to 42.30-30, inclusive.
5. This Load Line Certificate will be cancelled by the Commandant, U. S. Coast Guard, if...
  - a) The annual surveys have not been carried out within three months either way of each anniversary date of the certificate.
  - b) The certificate is not endorsed to show that the ship has been surveyed as indicated in (a).
  - c) Material alterations have been made to the hull or superstructures such as would necessitate the assignment of an increased freeboard.
  - d) The fittings and appliance for the protection of the openings, guardrails, freeing ports, or the means of access to the crew's quarters have not been in as effective a condition as they were when the Certificate was issued.
  - e) The structural strength of the ship is lowered to such an extent that the ship is unsafe.
6. When this Certificate has expired or been cancelled, it must be delivered to the Assigning Authority.



<sup>2</sup> Insert the date of expiry as specified by the Administration in accordance with article 19(1) of the Convention. The day and the month of this date correspond to the anniversary date as defined in article 2(9) of the Convention, unless amended in accordance with article 19(8) of the Convention.

**ENDORSEMENT FOR ANNUAL SURVEYS**

**THIS IS TO CERTIFY** that, at an annual survey required by article 14(1)(c) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Annual Survey:

Signed:

Place:

Date:

**REQUIRED SURVEY CARRIED OUT PREVIOUSLY**

Annual Survey:

Signed:

Place:

Date:

**REQUIRED SURVEY CARRIED OUT PREVIOUSLY**

Annual Survey:

Signed:

Place:

Date:

**REQUIRED SURVEY CARRIED OUT PREVIOUSLY**

Annual Survey:

Signed:

\_\_\_\_\_  
*(Surveyor, American Bureau of Shipping)*

Place:

Date:

**ANNUAL SURVEY IN ACCORDANCE WITH ARTICLE 19(8)(c)**

**THIS IS TO CERTIFY** that, at a survey in accordance with article 19(8)(c) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Signed:

\_\_\_\_\_  
*(Surveyor, American Bureau of Shipping)*

Place:

Date:

**ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR  
LESS THAN 5 YEARS WHERE ARTICLE 19(3) APPLIES**

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with article 19(3) of the Convention, be accepted as valid until \_\_\_\_\_



Signed:

\_\_\_\_\_  
*(Surveyor, American Bureau of Shipping)*

Place:

Date:

**ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED AND ARTICLE 19(4) APPLIES**

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with article 19(4) of the Convention, be accepted as valid until \_\_\_\_\_

Signed: \_\_\_\_\_  
*(Surveyor, American Bureau of Shipping)*  
Place: \_\_\_\_\_  
Date: \_\_\_\_\_

**ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF SURVEY OR FOR A PERIOD OF GRACE WHERE ARTICLE 19(5) OR 19(6) APPLIES**

This certificate shall, in accordance with article 19(5)/19(6)<sup>3</sup> of the Convention, be accepted as valid until \_\_\_\_\_

Signed: \_\_\_\_\_  
*(Surveyor, American Bureau of Shipping)*  
Place: \_\_\_\_\_  
Date: \_\_\_\_\_

**ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE WHERE ARTICLE 19(8) APPLIES**

In accordance with article 19(8) of the Convention, the new anniversary date is \_\_\_\_\_

Signed: \_\_\_\_\_  
*(Surveyor, American Bureau of Shipping)*  
Place: \_\_\_\_\_  
Date: \_\_\_\_\_

In accordance with article 19(8) of the Convention, the new anniversary date is \_\_\_\_\_

Signed: \_\_\_\_\_  
*(Surveyor, American Bureau of Shipping)*  
Place: \_\_\_\_\_  
Date: \_\_\_\_\_



<sup>3</sup> Delete as appropriate



**Task – T1886461**  
**“DB SALTA VERDE”, Class No.: 8003642**  
**Kaiser Steel Corp. Hull: 640**  
**Flag: United States of America**

Attention: Mr. Darren Twanmoh, Jensen Maritime Consultants Inc. (WCN: 303800)

The document shown in the attached list is reviewed in accordance with the applicable requirements of the following:

- Navigation and Vessel Inspection Circular (NVIC) 3-97
- 46 CFR Subchapter S, Subpart F – Determination of Lightweight Displacement and Centers of Gravity
- International Convention on Load Lines, 1966

Please note our review is based on the following conditions:

1. This review has been performed due to the addition of accommodation modules, winch, winch house and replacement of the crawler crane.
2. The vessel is not fitted with permanent ballast.
3. The lightship does not include the Manitowoc 4600 S-3 crawler crane with a 140 feet boom (total weight of 226.483 LT).
4. The deadweight results, when compared to the weight estimate, were outside the acceptable tolerances. Therefore, the unaccounted weight was placed at an indisputably conservative vertical location.
5. ABS is not responsible for the operation of the vessel. It is the Owner's responsibility to provide training, supervision, and guidance to ensure that the vessel is operated within the limits of applicable Regulations.

The following lightship characteristics have been found acceptable:

Item	Weight (LT)	LCG (ft) Aft of Fr. 0	TCG (ft) Stbd of CL	VCG (ft) above BL
Lightship	596.12	102.11	2.79	13.12

For any clarifications, contact Ms. Jenine Careen at (281) 877-6454 or [jcareen@eagle.org](mailto:jcareen@eagle.org).

Very truly yours,

Roy H. Bleiberg  
Vice President of Engineering

Electronically Signed by: William (Bill) Leyrer

Documents List

Drawing No.	Rev. No.	Title	Status
193126-843-02	1	Deadweight Survey Results and Lightship Calculation	Examined

Electronic copies of the documents, appropriately stamped, are available in the ABS My Eagle Portal through Engineering Manager.



**Task – T1890994**  
**“DB SALTA VERDE”, Class No.:8003642**  
**Kaiser Steel Corp. Hull: 640**  
**Flag: United States of America**

Attention: Mr. Darren Twanmoh, Jensen Maritime Consultants Inc (WCN: 303800)

The documents shown in the attached list are reviewed in accordance with the applicable requirements of the following:

- 46 CFR Subchapter S, (170.170, 174.015, 173.020, 173.025)
- Navigation and Vessel Inspection Circular (NVIC) 3-97
- International Convention on Load Lines, 1966

Please note our review is based on the following conditions:

1. This review has been performed due to the addition of accommodation modules, winch, winch house and replacement of the crawler crane
2. The vessel is to be loaded in accordance with the operating restrictions contained in the attached stability letter. It is the owner's responsibility to ensure that a copy of this letter is posted under glass or other transparent material in the pilothouse so that all pages are visible for the guidance of the Master
3. It is the Master's responsibility to verify the vessel's stability in all loading conditions including liquid transfer operations, ballasting and deballasting and ballast water exchange conditions.
4. ABS is not responsible for the operation of the vessel. It is the Owner's responsibility to provide training, supervision, and guidance to ensure that the vessel is operated within the limits of applicable Regulations.
5. The following statement shall be placed on the face of the Load Line certificate:

“This certificate is valid only so long as the operating restrictions in the vessel's stability letter, issued by ABS and dated 16 August 2019, are observed.”

For any clarifications, contact Mr. Sharat Reddy at + [REDACTED] or [REDACTED].

Very truly yours,

Roy Bleiberg  
Vice President of Engineering

Electronically Signed by: William (Bill) Leyrer



**Documents List**

Drawing No.	Rev. No.	Title	Status
193126-843-03	1	Stability Calculations	Examined
193126-843-04	1	Stability Information Report	Examined

Electronic copies of the documents, appropriately stamped, are available in the ABS My Eagle Portal through Engineering Manager.

**With Enclosures:**

ABS Stability Letter for "DB SALTA VERDE" dated 16 August 2019



## STABILITY LETTER

16 August 2019

Master, "DB SALTA VERDE" ON: 622241  
Kaiser Steel Corp, Hull 640  
185'-0" x 50'-0" x 12  
Manned Deck Cargo Barge [!]

You are responsible for maintaining this vessel in a satisfactory stability condition at all times and for following the instructions and precautions listed below. All log entries required by 46 CFR 97.35-3 shall be made prior to getting underway for each voyage.

A Deadweight survey witnessed by American Bureau of Shipping (ABS) on behalf of the U.S. Coast Guard was conducted on the "DB SALTA VERDE", ON: 622241 in Long Beach, CA on 9 July 2019. On the basis of this deadweight survey, stability calculations have been performed. Results indicate that the stability of the "DB SALTA VERDE", ON: 622241, as presently outfitted and equipped, is satisfactory for operation on Exposed Waters, provided that the following restrictions are observed.

### OPERATING RESTRICTIONS

1. **ROUTE:** Operation on Exposed Waters is permitted. Since the vessel's route is based upon other considerations in addition to stability, you are cautioned that the route may be further limited to that specified on the Certificate of Inspection (COI).
2. **FREEBOARD AND DRAFT:** A freeboard of at least 4 foot 9-9/16 inches from the main deck measured amidships must be maintained. This corresponds to an extreme draft of 7 feet 3-3/16 inches. Trim shall be minimized and should not exceed 4 feet forward and 4 feet aft.
3. **PERSONNEL:** Since the personnel capacity is based upon other considerations in addition to stability, you are cautioned that the number of persons carried is governed to that specified on the Certificate of Inspection (COI).
4. **DECK CARGO:**
  - a. All deck cargo, including the Manitowoc 4600 S-3 Crawler Crane with 140 foot boom must be positively secured against shifting prior to leaving protected waters.
  - b. All loading conditions must be as per the attached loading diagrams "Maximum Deck Cargo VCG vs Draft Lifting Prohibited" and



"DB SALTA VERDE"  
Kaiser Steel Corp, Hull 640  
O.N 622241  
16 August 2019  
Page: 2 of 3

"Maximum Deck Cargo VCG vs Draft Lifting Permitted", both bearing the ABS Americas approval stamp dated 16 August 2019.

- c. The height of cargo above main deck in any loading condition shall not exceed two times the allowable VCG above the deck. However, in no circumstance shall the cargo height above the deck exceed 40 feet, excluding the crane boom.
- d. The Manitowoc 4600 S-3 Crawler crane is considered part of deck cargo.

5. **TANKS:**

- a. Any cross connections between port and starboard tank pairs shall be kept closed at all times when underway.
- b. Water ballast may be carried. No more than one port/stbd tank pair may be partially filled at any one time.
- c. The Fwd and Aft centerline voids shall remain empty at all times.

6. **HULL OPENINGS:** Any openings that could allow water to enter into the hull or superstructure should be kept closed when rough weather or sea conditions exist or are anticipated.

7. **WATERTIGHT BULKHEADS:** No watertight bulkheads may be removed or altered without the authorization and supervision of the Cognizant Officer in Charge, Marine Inspection (OCMI) or ABS.

8. **WEIGHT CHANGES:** This stability letter has been issued based upon the following lightship characteristics:

Weight:	596.12	Long Tons
LCG:	102.11	Feet Aft of Fr.0
TCG:	2.79	Feet Stbd of CL
VCG:	13.12	Feet above Baseline

The vessel is not equipped with any permanent ballast. Any alternations resulting in a change in these parameters will invalidate this stability letter. No fixed ballast or other such weights shall be added, removed and/or relocated without the authorization and supervision of the cognizant OCMI or ABS. The above values do not include the Manitowoc 4600 S-3 Crawler Crane with 140-foot boom (total weight of 226.483 LT)

9. **BILGES:** The vessel's bilges and voids shall be kept pumped to minimum contents at all times consistent with pollution prevention requirements.

10. **LIST:** You should make every effort to determine the cause of any list of the vessel before taking corrective action.



"DB SALTA VERDE"  
Kaiser Steel Corp, Hull 640  
O.N 622241  
16 August 2019  
Page: 3 of 3

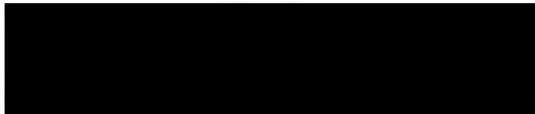
11. **LIFTNG:** Lifting operations are permitted for the Manitowoc 4600 S-3 Crawler Crane with a 140 ft boom and shall be operated in accordance with attached liftcrane boom capacities chart bearing the ABS American examined stamp dated 16 August 2019. A copy of this chart shall be posted in the crane cab in view of the crane operator

This stability letter (with attachments), along with the Load Line Certificate, shall be maintained in a suitable protected location onboard the barge. It supersedes any stability information previously issued to the vessel.

Very truly yours,

Roy H. Bleiberg  
Vice President of Engineering  
ABS Americas

By:

  
William (Bill) Eyster  
Managing Principal Engineer  
ABS Americas – Houston SED

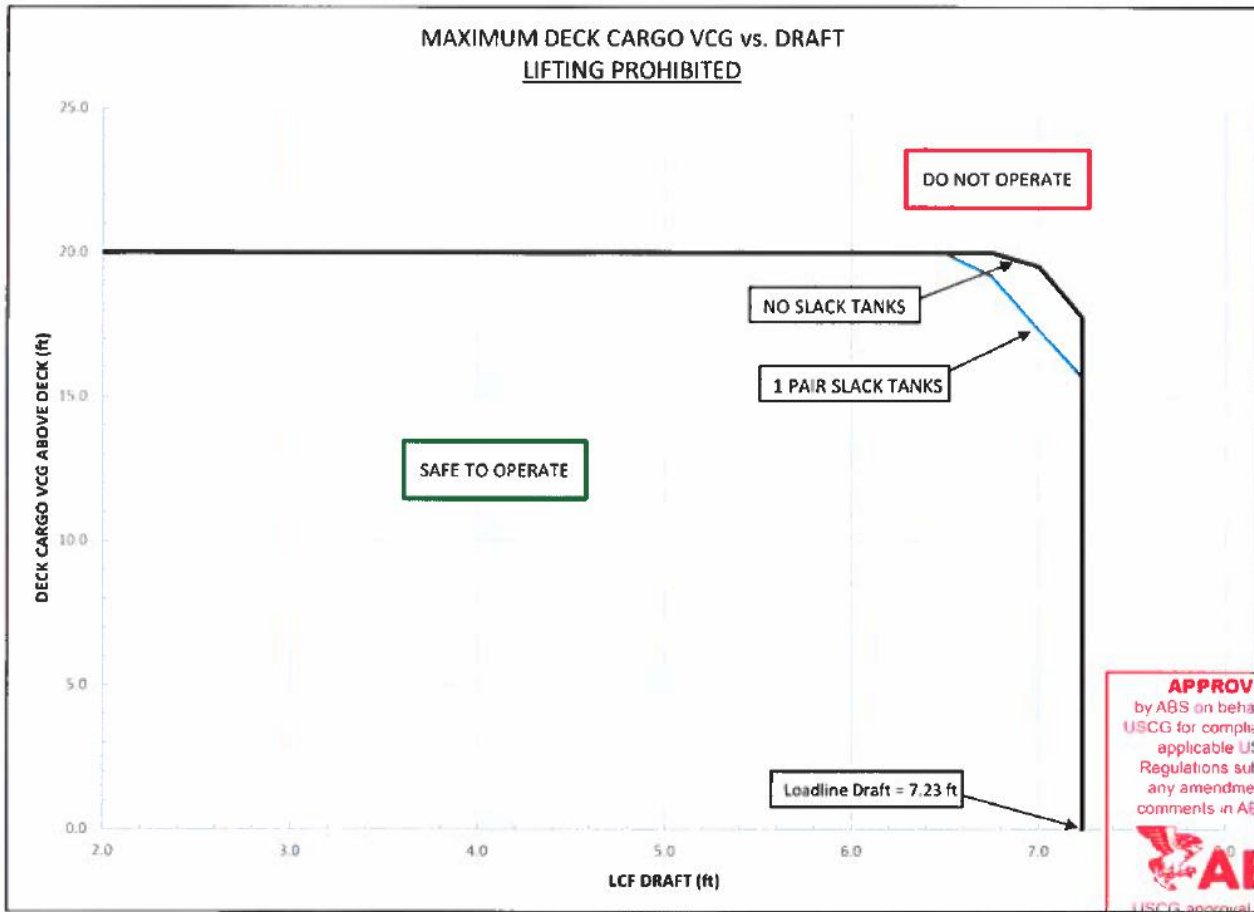
With Attachments:

1. "Maximum Deck Cargo VCG vs Draft Lifting Prohibited" bearing ABS Approval stamp dated 16 August 2019.
2. "Maximum Deck Cargo VCG vs Draft Lifting Permitted" bearing ABS Approval stamp dated 16 August 2019.
3. Manitowoc 4600 Liftcrane Boom Capacities, bearing ABS Approval Stamp dated 16 August 2019



### Stability Calculations

Job No. 193126  
Author: DHT  
Printed: 8/14/2019



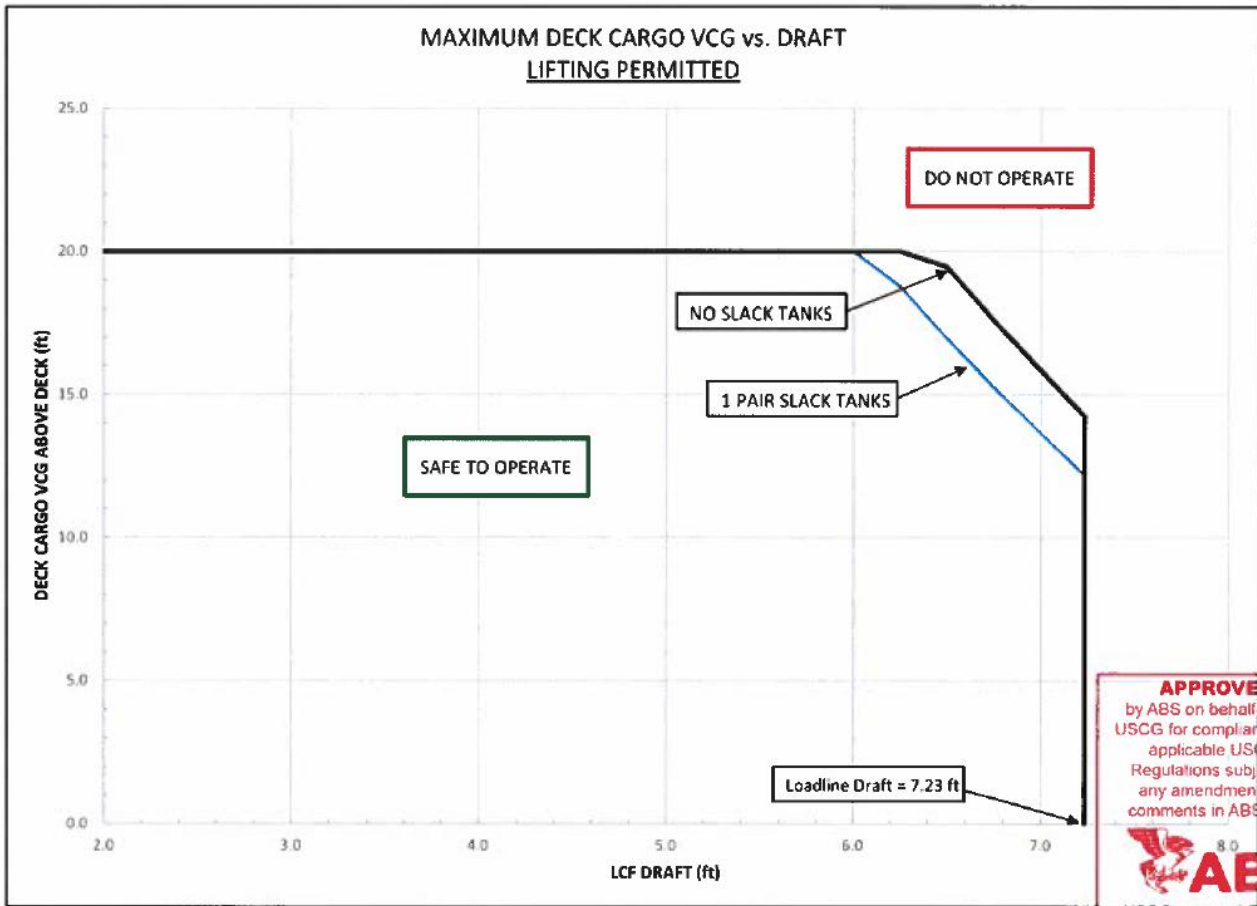
**APPROVED**  
by ABS on behalf of the  
USCG for compliance with  
applicable USCG  
Regulations subject to  
any amendments or  
comments in ABS letter

USCG approval applies  
only to specified vessel(s)



### Stability Calculations

Job No. 193126  
Author: DHT  
Printed: 8/14/2019



**APPROVED**  
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USCG for compliance with  
applicable USCG  
Regulations subject to  
any amendments or  
comments in ABS letter

USCG approval applies  
only to specified vessel(s)

**Manitowoc Cranes, Inc.**  
Manitowoc, Wisconsin 54220 U.S.A.



# Liftcrane Boom Capacities

Boom No. 7 With Open Throat Top  
without Vicon Independent Boom Hoist  
112,000 lb Counterweight  
Crawler Machine on a Barge  
0 Degree thru 3 Degree Machine List  
No Travel - 360 Degree Rating

**Boom Capacities shall not exceed the values shown under 3 Degree List Column.**

Oper. Radius Feet	Boom Angle Deg.	Boom Point Elev. Feet	0 Degree List Boom Capacity Pounds	1 Degree List Boom Capacity Pounds	2 Degree List Boom Capacity Pounds	3 Degree List Boom Capacity Pounds	Oper. Radius Feet
<b>140 Ft. Boom</b>							
27	81.4	146.2	238,800				27
28	81.0	146.1	225,800				28
29	80.6	145.9	214,100				29
30	80.2	145.7	203,500	178,300			30
32	79.4	145.4	184,900	163,800	146,700		32
34	78.5	145.0	169,300	150,900	136,200	123,800	34
36	77.7	144.6	155,900	139,900	127,100	116,000	36
38	76.9	144.1	144,400	130,300	118,900	109,100	38
40	76.0	143.6	134,300	121,900	111,700	102,800	40
45	73.9	142.3	113,900	104,500	96,600	89,700	45
50	71.8	140.8	98,400	91,000	84,800	79,200	50
55	69.6	139.0	86,300	80,300	75,300	70,700	55
60	67.4	137.0	76,500	71,600	67,400	63,600	60
65	65.2	134.8	68,400	64,400	60,800	57,600	65
70	62.9	132.4	61,700	58,200	55,200	52,500	70
75	60.5	129.7	56,000	53,000	50,400	48,000	75
80	58.2	126.7	51,000	48,500	46,300	44,200	80
85	55.7	123.5	46,700	44,500	42,600	40,800	85
90	53.2	119.9	43,000	41,100	39,400	37,700	90
95	50.6	116.0	39,700	38,000	36,500	35,000	95
100	47.9	111.7	36,700	35,200	33,900	32,600	100
105	45.1	106.9	34,000	32,700	31,600	30,400	105
110	42.1	101.7	31,700	30,500	29,500	28,400	110
115	39.0	95.9	29,800	28,500	27,500	26,600	115
120	35.6	89.3	27,500	26,600	25,800	25,000	120
125	31.9	81.8	25,700	24,900	24,200	23,500	125
130	27.8	73.1	24,000	23,400	22,700	22,100	130
135	23.0	62.6	22,500	21,900	21,400	20,900	135
140	17.1	48.9	21,100	20,600	20,200	19,700	140

**APPROVED**  
by ABS on behalf of the  
USCG for compliance with  
applicable USCG  
Regulations subject to  
any amendments or  
comments in ABS letter



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only to specified vessel(s)