



Task – T2514234
“MAKANI LOA”, Class No.: YY288584
Gunderson Marine, LLC, Hull: 133
Flag: United States of America

Attention: Mr. Lee Boltz, Hockema Group Inc. (WCN: 481896)

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

- ABS Rules for Building and Classing Steel Barges, 2022
- Navigation and Vessel Inspection Circular (NVIC) 3-97
- 46 CFR Subchapter S (170.120, 170.170, 174.015)
- International Convention on Load Lines, 1966, and its Protocol of 1988, as amended

Please note our review is based on the following conditions:

1. This vessel is receiving a load line for the first time.
2. The review was performed in association with a molded draft to the summer load line of 18'-11-9/16" (19'-0-3/16" extreme), corresponding to a 1966 ICLL Type "B-25% Reduced" vessel freeboard of 1'-6-13/16" measured from the deck line amidships, pursuant to regulation 10 of the International Convention on Load Lines, 1966, as amended, for unmanned operations. The deck line is located opposite the top of the steel main deck at side.
3. 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 maintained in a suitable location onboard the vessel, along with the Load Line certificate, for the guidance of the Person in Charge.
4. It is the Person in Charge's responsibility to verify the vessel's stability in all loading conditions.
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 Classification and applicable Regulations.
6. The following statement will 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 07 March 2024, are observed. This certificate is valid for unmanned operations only."

For any clarifications, contact Mrs. Lauren Sparks at (lsparks@eagle.org).

Very truly yours,

Leile Froufe
Vice President of Engineering

Electronically Signed by: William (Bill) Leyrer

Documents List

| Drawing No. | Rev. No. | Title | Status |
|-------------|----------|--------------------------------|---------------------------------------|
| 2239-100-20 | C | Stability Calculations Booklet | Reviewed / Examined on Behalf of USCG |

Electronic copies of the documents, appropriately stamped, are available in the ABS Client Portal.

With Enclosures: ABS Stability Letter for "MAKANI LOA", O.N. 1343941, dated 07 March 2024



STABILITY LETTER

07 March 2024

Person in Charge, "MAKANI LOA," O.N.: 1343941
Gunderson Marine, LLC, Hull No.: 133
438' (LOA) x 105' x 25'
Unmanned 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 shall be made prior to getting underway for each voyage.

A deadweight survey, witnessed by the American Bureau of Shipping (ABS) on behalf of the U.S. Coast Guard was conducted on the "MAKANI LOA", U.S. O.N. 1343941, at Gunderson Marine in Portland, OR on 03 March 2024. On the basis of that survey and conservatively estimated vertical center of gravity (VCG), stability calculations have been performed. Results indicate that the stability of the "MAKANI LOA", U.S. O.N. 1343941, 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 for unmanned operations only.
2. FREEBOARD AND DRAFT: A maximum molded draft of 18'-11-9/16" (19'-0-3/16" extreme) is permitted. This corresponds to a minimum freeboard of 6'-1-3/8" measured from the deck line at amidships. Amidships is located 1'-5-13/16" fwd of Frame 26, and the deck line is located opposite top of the steel main deck at side. Trim and heel shall be minimized.
3. WEIGHT CHANGES: This stability letter has been issued based upon the following lightship characteristics:

| | | |
|---------|----------|---------------------------------|
| Weight: | 4,501.49 | Short Tons (4,019.19 Long Tons) |
| VCG: | 17.44 | Feet Above Baseline |
| LCG: | 214.57 | Feet Aft of Frame 0 |
| TCG: | 0.33 | Feet Starboard of Centerline |

The vessel is not fitted with permanent ballast. Any alternation 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 prior authorization and supervision of the cognizant Officer in Charge, Marine Inspection (OCMI) or ABS. The VCG has been conservatively assigned based on weight moment calculations.

4. HULL OPENINGS: Any openings that could allow water to enter into the hull shall be kept closed at all times when underway.

5. DECK CARGO:

- a. All cargo must be positively secured against shifting before leaving protected waters.
- b. The maximum cargo height above main deck in any loading condition shall not exceed two times the allowable cargo VCG above Main Deck.
- c. Deck cargo shall be loaded in accordance with the table below:

| Extreme Draft (feet) | Max Cargo Height (feet above Main Deck) | Max Cargo VCG (feet above Main Deck) |
|-------------------------|--|---|
| 4'-11" and below | 306'-0" | 153'-0" |
| 6'-0" | 268'-1" | 134'-0" |
| 7'-0" | 238'-2" | 119'-1" |
| 8'-0" | 212'-6" | 106'-3" |
| 9'-0" | 190'-5" | 95'-2" |
| 10'-0" | 171'-5" | 85'-8" |
| 11'-0" | 155'-2" | 77'-7" |
| 12'-0" | 141'-2" | 70'-7" |
| 13'-0" | 129'-1" | 64'-6" |
| 14'-0" | 118'-8" | 59'-4" |
| 15'-0" | 109'-7" | 54'-9" |
| 16'-0" | 101'-7" | 50'-9" |
| 17'-0" | 86'-3" | 43'-1" |
| 18'-0" | 69'-7" | 34'-9" |
| 19'-0" | 52'-10" | 26'-5" |
| 19'-0-3/16" | 52'-6" | 26'-3" |

Cargo VCG's for intermediate draft values may be interpolated, or the maximum VCG value for the next higher draft may be used.

- 6. WATERTIGHT BULKHEADS: No watertight bulkheads may be removed or altered without the authorization and supervision of the cognizant OCMI or ABS.
- 7. BILGES & VOIDS: The vessel's bilges and voids shall be kept pumped to a minimum content at all times, consistent with pollution prevention requirements.
- 8. LIST: Every effort shall be made to determine the cause of any list of the vessel before corrective action is taken.
- 9. LIFTING: Lifting operations in accordance with 46 CFR, Part 173, Subpart B have not been evaluated.

This stability letter, along with the Load Line Certificate, shall be maintained in a suitable location onboard the barge.

Very truly yours,

Leile Froufe
Vice President of Engineering

Electronically Signed by: William (Bill) Leyrer