

Demo PDF file. This file includes questions: 10 from 37. Full version of file looks the same as demo, but full version includes all questions. You may download file with all questions by link on bottom of this page

Q202 - Deck Safety: Stability Problems

1. You have 200 tons of below deck tonnage. There is no liquid mud aboard. If you have 140 tons of cargo above deck with a VCG above the deck of 4.2 feet, what is the maximum allowed VCG of the remainder of the deck cargo that is permitted

Attachment: LOADING DIAGRAM for the subject vessel bearing U.S. Coast
Guard approval stamp dated 8 April 1987

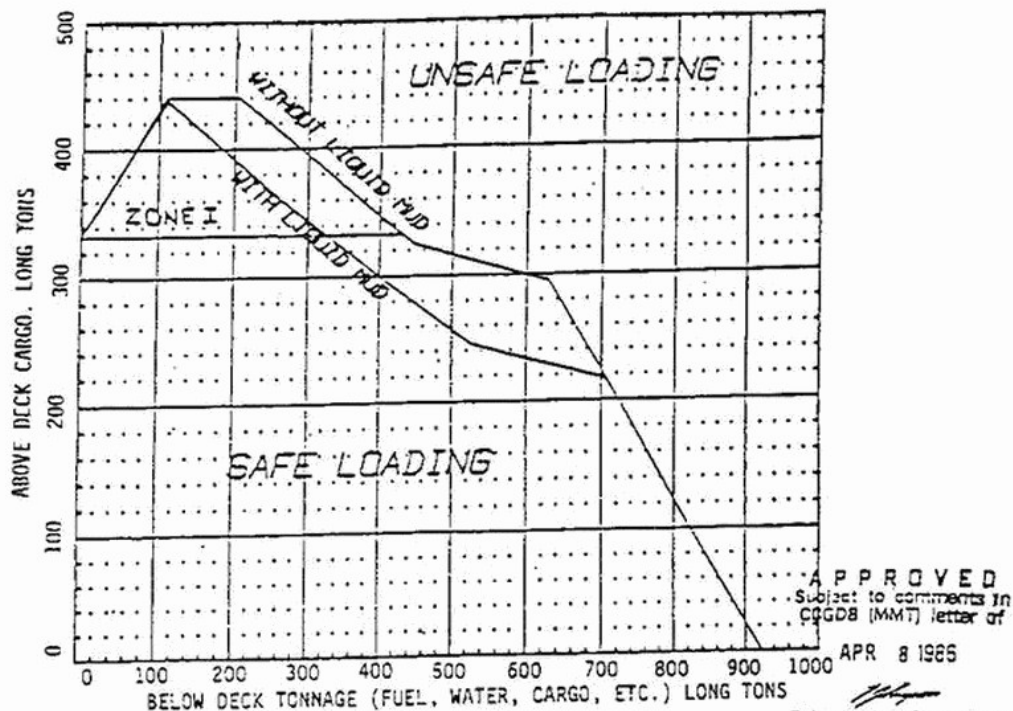
- 0.56 foot
- 0.87 foot
- 1.04 feet
- 2.44 feet

SEE NEXT PAGE FOR ATTACHMENT

Note:

The maximum VCG for the remaining deck cargo is 2.44 feet, calculated to ensure the combined VCG of all deck cargo does not exceed the 3.0-foot limit specified in the vessel's stability letter while remaining within the loading diagram's tonnage limits.

D036DG
Cont.



USCG STABILITY
LOADING INSTRUCTIONS

1. DRAW A VERTICAL LINE UP FROM 'BELOW DK' LOAD. DRAW HORIZONTAL LINE ACROSS FROM 'ABOVE DK' LOAD. IF THEY MEET BELOW THE CURVE THEN THE LOADING IS OK. IF THEY MEET ABOVE THE CURVE THEN YOU MUST CHANGE THE LOADING.
2. MAX. DECK CARGO VCG 3.00 FT ABOVE DECK.
3. WHEN OPERATING IN ZONE 1 (I.E. MORE THAN 334 LONG TONS OF DECK CARGO) THE FOREPEAK BALLAST TANK SHALL BE PRESSED FULL.

D036DG
Cont.

2. You have 260 tons of below deck tonnage including liquid mud. Your existing deck cargo is 150 tons with a VCG above the deck of 2.2 feet. What is the maximum additional cargo tonnage you are permitted to load

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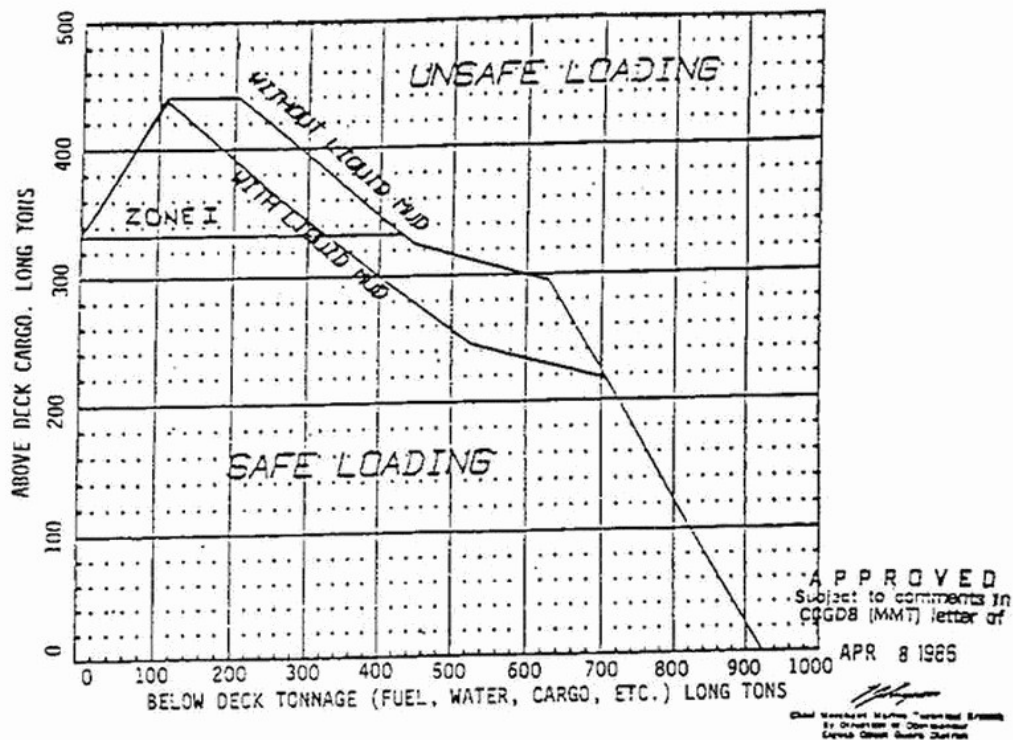
- 110 tons
- 140 tons
- 180 tons
- **210 tons**

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Note:

The loading diagram D036DG permits a maximum deck cargo of 360 tons with 260 tons of below-deck tonnage. Since 150 tons are already loaded, an additional 210 tons can be safely added.

D036DG
Cont.



USCG STABILITY
LOADING INSTRUCTIONS

1. DRAW A VERTICAL LINE UP FROM 'BELOW DK' LOAD. DRAW HORIZONTAL LINE ACROSS FROM 'ABOVE DK' LOAD. IF THEY MEET BELOW THE CURVE THEN THE LOADING IS OK. IF THEY MEET ABOVE THE CURVE THEN YOU MUST CHANGE THE LOADING.
2. MAX. DECK CARGO VCG 3.00 FT ABOVE DECK.
3. WHEN OPERATING IN ZONE 1 (I.E. MORE THAN 334 LONG TONS OF DECK CARGO) THE FOREPEAK BALLAST TANK SHALL BE PRESSED FULL.

D036DG
Cont.

3. You have 400 tons of below deck tonnage and 100 tons of above deck cargo on board. You must load 160 tons of liquid mud below deck. How much more deck cargo can you load

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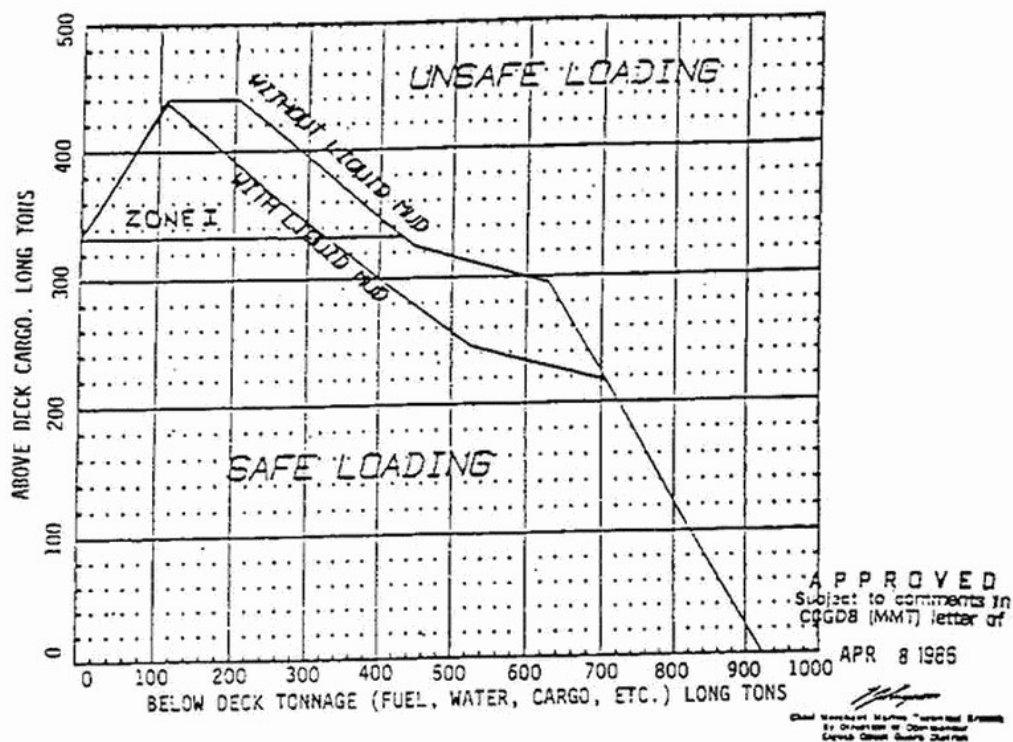
- 85 tons
- 135 tons
- 195 tons
- 245 tons

SEE NEXT PAGE FOR ATTACHMENT

Note:

After loading 160 tons of liquid mud below deck, the total below-deck tonnage becomes 560 tons. The loading diagram permits a maximum of 235 tons of deck cargo at this below-deck tonnage; therefore, 135 tons of additional deck cargo can be loaded (235 tons - 100 tons currently on deck).

D036DG
Cont.



USCG STABILITY
LOADING INSTRUCTIONS

1. DRAW A VERTICAL LINE UP FROM 'BELOW DK' LOAD. DRAW HORIZONTAL LINE ACROSS FROM 'ABOVE DK' LOAD. IF THEY MEET BELOW THE CURVE THEN THE LOADING IS OK. IF THEY MEET ABOVE THE CURVE THEN YOU MUST CHANGE THE LOADING.
2. MAX. DECK CARGO VCG 3.00 FT ABOVE DECK.
3. WHEN OPERATING IN ZONE 1 (I.E. MORE THAN 334 LONG TONS OF DECK CARGO) THE FOREPEAK BALLAST TANK SHALL BE PRESSED FULL.

D036DG
Cont.

4. You have 400 tons of below deck tonnage. There is no liquid mud aboard. If you have 225 tons of cargo above deck with a VCG above the deck of 3.4 feet, what is the maximum allowed VCG of the remainder of the deck cargo that is permitted

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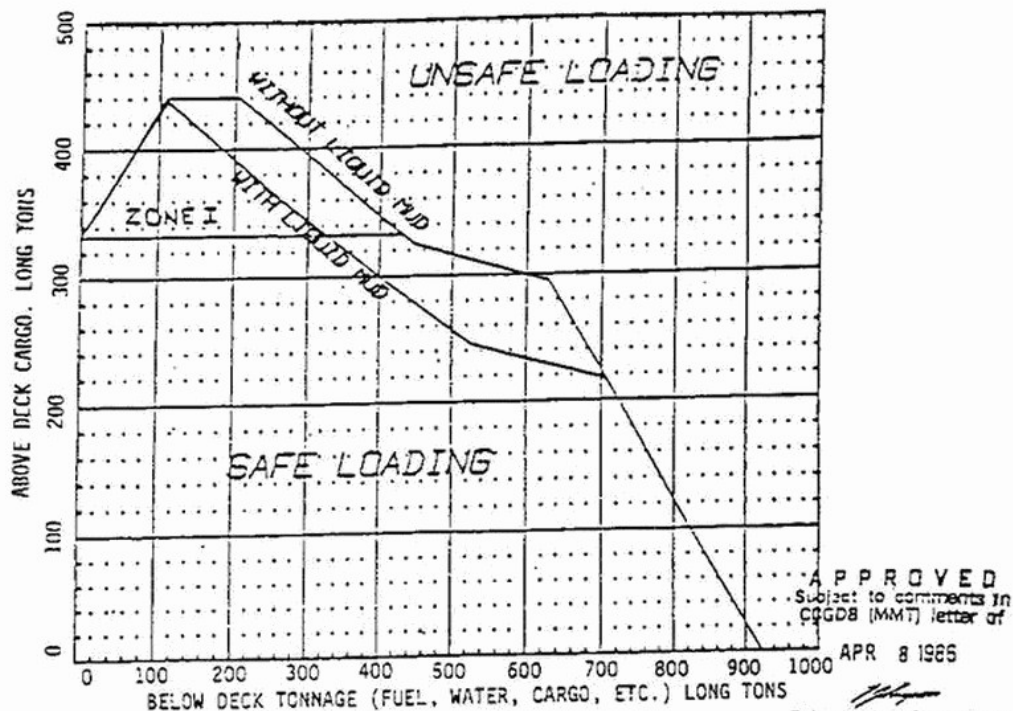
- 1.96 feet
- 2.28 feet
- 2.65 feet
- 2.93 feet

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Note:

The maximum VCG for the remaining deck cargo is 2.28 feet. This value ensures the total deck cargo moment does not exceed the limit of 1050 ft-LT, maintaining a combined deck cargo VCG of 3.0 feet and staying within the loading diagram's 350 LT deck cargo limit.

D036DG
Cont.



USCG STABILITY
LOADING INSTRUCTIONS

1. DRAW A VERTICAL LINE UP FROM 'BELOW DK' LOAD. DRAW HORIZONTAL LINE ACROSS FROM 'ABOVE DK' LOAD. IF THEY MEET BELOW THE CURVE THEN THE LOADING IS OK. IF THEY MEET ABOVE THE CURVE THEN YOU MUST CHANGE THE LOADING.
2. MAX. DECK CARGO VCG 3.00 FT ABOVE DECK.
3. WHEN OPERATING IN ZONE 1 (I.E. MORE THAN 334 LONG TONS OF DECK CARGO) THE FOREPEAK BALLAST TANK SHALL BE PRESSED FULL.

D036DG
Cont.

5. You have 590 tons of below deck tonnage. There is no liquid mud aboard. If you have 84 tons of cargo above deck with a VCG above the deck of 2.7 feet, what is the maximum allowed VCG of the remainder of the deck cargo that is permitted

Attachment: LOADING DIAGRAM for the subject vessel bearing U.S. Coast
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- 2.54 feet
- 2.85 feet
- **3.11 feet**
- 3.55 feet

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Note:

The maximum allowable VCG for the remaining deck cargo is 3.11 feet. This value ensures the combined VCG of all deck cargo does not exceed the 3.0-foot limit specified in the loading diagram, while utilizing the maximum permitted deck cargo weight of 310 tons given 590 tons below deck.

D036DG

6. What is the displacement of a barge which measures 85' x 46' x 13' and is floating in salt water with a draft of ten feet?

- 500 tons
- 1452 tons
- **1117 tons**
- 17.5 tons

Note:

The barge's displacement is calculated by dividing its underwater volume (length x beam x draft) by 35 cubic feet per long ton for salt water, resulting in a displacement of approximately 1117 tons.

7. Your drafts are: FWD 23'-03" AFT 27'-01". Use the blue pages of the Stability Data Reference Book to determine the vessel's displacement if you are in fresh water.

- 2,550 tons
- **12,900 tons**
- 13,200 tons
- 13,350 tons

Note:

The correct displacement is found by calculating the mean draft (25'-02") and referencing the fresh water displacement table in the Stability Data Reference Book, which corresponds to 12,900 tons.

BELOW DECK TONNAGE (FUEL, WATER, CARGO, ETC.) LONG TONS

APPROVED
Subject to comments in
CGGDB (MMT) letter of

APR 8 1985

Chief Merchant Marine Personnel Branch
U.S. Coast Guard

8. Your drafts are: FWD 24'-09" AFT 27'-02". Use the blue pages of the Stability Data Reference Book to determine the vessel's displacement if you are in salt water.

- 13,175 tons
- 13,350 tons
- 13,490 tons
- **13,620 tons**

Note:

The vessel's displacement is 13,620 tons. This is determined by calculating the mean draft from the forward and aft drafts, then referencing the corresponding displacement value in the salt water hydrostatic table within the Stability Data Reference Book.

D036DG
Cont.

9. Your drafts are: FWD 5'-08", AFT 6'-02". From past experience, you know that the vessel will increase her draft 1 inch for every 8 tons loaded. There is rig water on board and 11 tons of deck cargo. How many more tons of cargo can be loaded and still maintain the same trim

W. T. Door
W. T. DOOR
Lieutenant Commander
U.S. Coast Guard

- None
- 10 tons
- 18 tons
- **24 tons**

Note:

The stability letter limits deck cargo to 35 tons when rig water is present; with 11 tons already loaded, 24 more tons can be added without exceeding this limit or draft restrictions.

D037DC
Cont.

10. Your drafts are: FWD 5'-08", AFT 6'-04". From past experience, you know that the vessel will increase her draft 1 inch for every 7 tons loaded. There is rig water on board and 10 tons of deck cargo. How many more tons of cargo can be loaded and still maintain the same trim

W. T. Door
W. T. DOOR
Lieutenant Commander
U.S. Coast Guard

- 32.0 tons
- **25.0 tons**
- 14.8 tons
- 18.0 tons

Note:

The stability letter limits deck cargo to 35 tons when rig water is present; with 10 tons already loaded, 25 more tons can be added.

D037DG
Cont.