

Jumbo Boom Problems

To check stability, a weight of 10 tons is lifted with the jumbo boom whose head is 45 feet from the ship's centerline. The clinometer shows a list of 5° with weight suspended. Displacement including the weight is 9000 tons. The GM while in this condition is _____.

Answer 0.57 foot.

To check stability, a weight of 35 tons is lifted with the jumbo boom whose head is 35 feet from the ship's centerline. The clinometer shows a list of 7° with weight suspended. Displacement including the weight is 14,000 tons. The GM while in this condition is _____.

Answer 0.71 foot.

You are hoisting a heavy lift with the jumbo boom. Your vessel displaces 5230 Tons. The 35 ton weight is on the pier and its center is 60 feet to starboard of the centerline. The head of the boom is 105 feet above the baseline and the center of gravity of the lift when stowed on deck will be 42 feet above the base line. As the jumbo boom takes the strain, the ship lists to 5° . What is the GM with the cargo stowed?

Answer 4.98

You are hoisting a heavy lift with the jumbo boom. Your vessel displaces 18,000 Tons. The 50 ton weight is on the pier and its center is 75 feet to starboard of the centerline. The head of the boom is 112 feet above the baseline and the center of gravity of the lift when stowed on deck will be 56 feet above the base line. As the jumbo boom takes the strain, the ship lists to 3.5° . What is the GM with the cargo stowed?

Answer 3.56