

SNIPE CLASS INTERNATIONAL RACING ASSOCIATION

3. Official Racing Number of boat on trunk. S-28146
4. Boat's Name Var god dröj
5. Full name(s) and address(es) of owner(s) (please print)
Fredrik Segerström
Vasagatan 9E 216 11 Malmö
Sweden
6. Name and charter number of the fleet in which this boat is expected to compete.
Skånes Snipe fleet 324
7. Give name and address of builder of boat Persson Marine
Denmark

WEIGHT LIMIT

51. THE BOAT COMPLETE MUST BE WEIGHED. THIS WEIGHT DOES NOT INCLUDE ANCHOR, PADDLE, WHISKERPOLE, LIFE PRESERVERS, BAILING EQUIPMENT (unless permanently attached), SAILS, OR ANY OTHER LOOSE GEAR. IT DOES INCLUDE MAST, BOOM, RIGGING, MAINSHEET, CENTERBOARD, RUDDER, AND TILLER. BOATS THAT DO NOT MEET THE WEIGHT LIMIT MUST HAVE WEIGHT PERMANENTLY ADDED BEFORE THEY CAN BE GIVEN MEASUREMENT CERTIFICATES.
52. The weight of this boat as outlined above is 173.2 kg
Amount of ballast 3.9 kg

MOMENT OF INERTIA TEST

78. All bare hulls, as defined in paragraph 54 must be subjected to the moment of inertia test. (For a full description of the method, see SUPPLEMENT TO THE MEASUREMENT DATA SHEET FOR MOMENT OF INERTIA TEST.)
The moment of inertia of the hull is calculated from the following formula:

$$I = \frac{CD^2T^2}{4\pi^2}$$

Where: I = Moment of Inertia
C = Spring constant, lb. per ft. (Kg per M.)
D = Distance to axis, Ft (M) 2.72
T = Time of one complete oscillation, seconds
 $\pi = 3.1416$

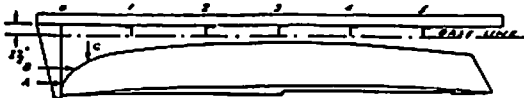
The minimum moment of inertia of the hull as determined from the formula above shall be:

English - 200 (slug ft²)
Metric - 27.6 (metric slug M²)

If the hull moment of inertia does not meet this minimum, weight shall be moved to or added to the ends to bring it up to the minimum. 28.2

The Moment of Inertia for this boat is 1: 2kg 2: 1.9kg
Amount of weight and location

HULL NO. 28146 DATE Sept. 1991
OWNER Fredrik Segerström



SUPPLEMENT TO THE MEASUREMENT DATA SHEET FOR MOMENT OF INERTIA TEST

All bare hulls including ballast, deck, centerboard trunk, floorboards, flotation, hull fittings and sailway equipment shall be subjected to and comply with the Moment of Inertia Test as described below.

Set the moment of inertia jig up on a hard level surface and check to see that it is reasonably level both lengthways and sideways. Also check the 104" dimension from the aft side of the riser to the front side of the 3/4" dia. balance rod.

Carefully balance the bare hull (defined in para 54) by moving it back and forth on the balance rod so that the top of the deck is level with the horizontal line on the riser. Be sure to use a thin metal plate (6" x 6" x 1/8" is recommended) between the balance rod and the keel. Also the spring attachment assembly minus springs should be in position on the fore deck. When the hull is balanced, attach the springs to the spring attachment assembly and then to the hooks on the riser, being careful to stabilize the hull while doing this operation. Adjust the spring attachment assembly so that the centerline of the spring bolt is 1" from the aft side of the riser and clamp the assembly to the deck with the hook bolt through one of the holes in the jib stay fitting. Recheck to see that the top of the deck is level with the horizontal line within plus or minus 1/4" and adjust the hull position if necessary.

The hull should now be free to oscillate about the pivot rod, being restrained only by the springs. Check this by displacing the bow approximately 3" to 4" above or below the horizontal and allowing it to oscillate. Please notice that an oscillation is one complete cycle, from starting point to farthest away point and back to starting point.

The moment of inertia of the hull is calculated from the following formula:

$$I = \frac{CD^2T^2}{4\pi^2}$$

Where: I = Moment of inertia
C = Spring constant, lb. per ft. (Kg. per M.)
D = Distance to axis, Ft (M)
T = Time of one complete oscillation, seconds
 $\pi = 3.1416$

For our purpose, $D = 104" - 1" + 9/32" = 103.281 = 8.6067(2.6233M.)$ The spring constant will be furnished with springs from SCIRA. We can now simplify the formula to:

$$(English) I = \frac{8.6067 \text{ ft}^2 C T^2}{4 \times 3.1416^2} = 1.8763 (C T^2) \text{ slug ft.}^2$$

$$(Metric) I = \frac{2.6233 \text{ m}^2 C T^2}{4 \times 3.1416^2} = .1743 C T^2$$

Proceed to time the hull oscillations through a minimum of fifty complete oscillations. Divide the total time by the number of oscillations to arrive at the average time for one complete oscillation. Repeat this procedure twice to check that the average oscillation time is correct to the nearest thousandth of a second, starting with 3" to 4" bow displacement each time. Please note that the stop watch is started at the beginning of the first oscillation but the number count is started at the end of the first oscillation.

Using the average time for one complete oscillation, solve the formula for moment of inertia.

The minimum moment of inertia of the hull as determined from the formula above shall be:

English - 200 (slug ft²)
Metric - 27.6 (metric slug M²)

If the hull moment of inertia does not meet this minimum, weight shall be added to the ends to bring it up to the minimum.

(Date) 1993-08-27 (Measurer's Signature) Thomas Ericsson
Recommended for Certificate Th.E (Initial)