

Objective:

- To verify that the stands are sufficient stable for extended use
- To verify that Lambolely stand produces similar timings for the same boat
- To establish procedures for Lambolely testing of Finns on the danish Finn association
- To establish an action list that will enable the Danish Finn Association to Weigh and Swing Finns

Stand stability

With a Finn hung at the longest distance on the hooks and the boat swinging, the following flex was measured:

- Top of Stand 0,2mm in total
- At 'knives' 0,15 mm in total
- Conclusion: The stand is very stable and does not impact the measurement in any negative way

Lambolely testing:

- Boat 1: Vanguard 1992 with 6 kg lead removed no swing test since then Weight 118,0 kg
- Boat 2: Pata 2011 - Unchanged since delivery - Centerboard not at aft most position due to inability to loosen it Weight 116,5 kg
- Both boats has been stored indoors in a dry and warm place for the last 3 months (at least)
- Weight measured with non calibrated weight

Method:

- Remove all equipment from the boat in accordance with class rules
- Move the mast step and deck ring to the aft most position and wrap control lines around the thwart
- Mount the boat in the stand so that the centerboard case is in 'level'
- Measure lambda from top of transom
- Each swinging length in measured twice by two measurers over 20 oscillations with 3 to four time keepers and one 'counter'
- For each boat at least 2 swings has been performed
- The time is calculated as the average (excluding any outliers)

Test Team:

- Short description
- Christian Qvist Member of the board of the danish Finn Association
- Christian Stormark Mathematician and almost educated Danish Sailing organisation educated measurer
- Mogens Pettersson Owner of a engineering company
- Jan Verner Nielsen Engineer
- Jens Kristian Andersen Engineer
- Lars Europe Class measurement interested, and not Finn sailor

Results:

Boat 1	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Average	Timing
T1	74,03	73,96	73,94	74,12	74,03	73,97	74,01	3,70
T2	64,04	64,64	64,59	64,66	64,4	64,47	64,47	3,22
Lambda	2.185	Meter						
Radius	Not a Finn (to bad a copy of the rule book to determine exact radius etc(no reading glasses with the team :-))							

Boat 2	Test 1	Test 2	Test 3	Test 4	Test 5	Test 6	Average	Timing
T1	72,62	72,72	72,66	72,73	72,69	72,63	72,68	3,63
T2	64,52	64,47	64,47	64,72	64,59	64,31	64,51	3,23
CG from Datum point	2.100	Meter						
Lambda(from rulebook)	Within the tip of the diagramme, but close to minimum. Exact definition not made due to bad copy of diagram							

Conclusion: The swing test derives the same values in many tests for the same boat. Ie numbers can be reproduced

Actions:

- Mogens Pettersson to get Swing timing for Boat 2's measurement certificate to verify figures
- Christian Qvist to inform IFA (Richard Hart) of the stand and the results of the measurements (This report) and to get approval to move ahead by DFA
- Jan Verner to get the DFA's weight calibrated
- Christian Qvist together with the team and DFA board to make a plan for when test to the fleet in Denmark