



RINA

INCLINING EXPERIMENT

Boat type	rib xyz	Shipyard	
Category	Example Guillermo	Model	

Main dimensions	Length of hull	L_H	8.9	m
	Length of waterline	L_{WL}	7.8	m
	Waterline breadth	B_{WL}	2.5	m
	Reference depth	D^*	1.18	m
Drafts	Starboard freeboard	F_M^*	0.67	m
	Port freeboard	F_M^*	0.67	m
	Mean freeboard	F_M	0.67	m
	Mean draft	T_C	0.51	m
Displacements	Displacement at time of stability test (from stability curves)	Δ	3280	kg
	+ Total load correction	$\delta\Delta$	0	kg
	= Light craft condition mass	m_{LCC}	3280	kg
	+ Maximum total load	m_{MTL}	1767	kg
	= Loaded displacement condition	m_{LDC}	5047	kg
Test load	Mass of test load	p	417	kg
	Load movement, right	x'	1.05	m
	Load movement, left	x''	1.05	m
	Load movement, mean	x	1.05	m
Pendulum	Length	l	135	cm
	Movement, right	s'	8	cm
	Movement, left	s''	8	cm
	Movement, mean	s	8	cm
	Mean inclining angle	f	3.391	(°)
Stability	Metacentric height at time of stability test	GM	2.253	m
	Center of buoyancy height (from stability curves)	KB	0.395	m
	Transverse metacenter above CB (from stability curves)	BM	1.598	m
	"Fluid" height of center of gravity from baseline	KG^*	-0.26	m
	Free surface correction	e^*	0	m
	Height of center of gravity at time of stability test	KG'	-0.26	m
	Height of center of gravity of m_{LCC}	KG	-0.26	m
	Ratio height of center of gravity / Depth	KG/D	-0.22	
Downflooding	Waterplane area coefficient	CW	0.6	
	Displacement per centimeter	du	119.925	kg/cm
	Total weight correction	$\delta\Delta'$	0	kg
	+ Maximum total load	m_{MTL}	1767	kg
	$m_{LDC} + \Delta$	$\delta\Delta''$	1767	kg
	Downflooding height measured at time of stability test	h'_d	0.68	m
	+ Draft variation	δT_C	0.147	m
	= Downflooding height at loaded displacement condition	h_d	0.533	m
	Base downflooding height ($L_H/17$)	$h_d(r)$	0.524	m
	Downflooding height greater than base downflooding height	PASS/FAIL	PASS	

Place of survey		Date	
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Surveyor		Shipbuilder rep.	
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FREE SURFACES

Free surfaces	Description	Mass density	Breadth	Length	Moment
		<i>kg/m³</i>	<i>m</i>	<i>m</i>	<i>kg · m</i>
1					0
2					0
3					0
4					0
5					0
6					0
7					0
8					0
9					0
10					0
11					0
12					0
13					0
14					0
15					0
16					0
17					0
18					0
19					0
20					0
Total					0
Free surfaces correction					0



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LOADS TO BE ADDED / REMOVED

Loads to be added	Description	Mass	Lever from BL	Moment
		kg	m	kg · m
1				0
2				0
3				0
4				0
5				0
6				0
7				0
8				0
9				0
10				0
11				0
12				0
13				0
14				0
15				0
16				0
17				0
18				0
19				0
20				0

Loads to be removed	Description	Mass	Lever from BL	Moment
		kg	m	kg · m
1				0
2				0
3				0
4				0
5				0
6				0
7				0
8				0
9				0
10				0
11				0
12				0
13				0
14				0
15				0
16				0
17				0
18				0
19				0
20				0

= Total loads to be removed			Div.by 0	0
+ Total loads to be added			Div.by 0	0
= Total load correction		0	Div.by 0	0
+ Displacement at time of stability test		3280	-0.26	-852.8
= Mass of light craft condition		3280	-0.26	-852.8