



TITLE:  
**ISO 6185 REPORTING TOOL**

Reference: RCD-F-4  
Page: 1  
Issue: 05  
Date: 2020/7/22

HPi Verification Services

Manufacturer's Details:	
Name:	Highfield Boats Co., Ltd.
Address:	Baojia Industrial Zone, Poyu Town
City:	Weihai
Post Code:	264213
Country:	China



Acceleration due to gravity	g	9.8067	m/s
Density of petrol	$\rho$	737	kg/m <sup>3</sup>
Density of diesel	$\rho$	840	kg/m <sup>3</sup>
Density of fresh water	$\rho$	1000	kg/m <sup>3</sup>
Density of black water	$\rho$	1000	kg/m <sup>3</sup>
Density of sea water	$\rho$	1025.2	kg/m <sup>3</sup>

Parameter	Model Name	Unit	SP330	SP360	SP520	MODEL NAME HERE	MODEL NAME HERE	MODEL NAME HERE	MODEL NAME HERE	MODEL NAME HERE	MODEL NAME HERE	MODEL NAME HERE
DESCRIPTION												
Applicable standard	Symbol		EN ISO 6185-3	EN ISO 6185-3	EN ISO 6185-3	EN ISO 6185-1	EN ISO 6185-1	EN ISO 6185-1	EN ISO 6185-1	EN ISO 6185-1	EN ISO 6185-1	EN ISO 6185-1
ISO 6185 Inflatable Type			Type VII	Type VII	Type VII	Type II	Type II	Type II	Type II	Type II	Type II	Type II
Rigid/Inflatable	-	-	RIB	RIB	RIB							
Power source	-	-	Motor	Motor	Motor							
Design Category	-	-	C	C	C							
Material - Bottom	-	-	Aluminium	Aluminium	Aluminium							
Material - Tubes	-	-	PVC	PVC	PVC							
Material - Deck	-	-	PVC	PVC	PVC							
GEOMETRY												
Length - Hull	L <sub>H</sub>	m	3.36	3.62	5.25							
Length - Max	L <sub>MAX</sub>	m	3.36	3.62	5.25							
Length - Inboard	L <sub>I</sub>	m	2.04	2.36	3.43							
Beam - Hull	B <sub>H</sub>	m	1.82	1.84	2.42							
Beam - Max	B <sub>MAX</sub>	m	1.82	1.84	2.42							
Beam - Inboard	B <sub>I</sub>	m	0.90	0.94	1.30							
Beam - Transom	B <sub>T</sub>	m	0.78	0.85	1.15							
Freeboard fwd	F <sub>F</sub>	m	0.71	0.69	0.97							
Freeboard amidships	F <sub>M</sub>	m	0.48	0.45	0.68							
Freeboard aft	F <sub>A</sub>	m	0.25	0.24	0.44							
Draft of canoe-body	T <sub>C</sub>	m	0.35	0.36	0.37							
Sail area	A <sub>S</sub>	m <sup>2</sup>										
Inboard seating area	A	m <sup>2</sup>										
Dimensional factor	F(d)	m <sup>2</sup>	6.10	6.64	12.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARRANGEMENTS												
Engine Arrangement	-	-	Outboard	Outboard	Outboard							
Max. no. of engines	-	Engines	1	1	1							
Max. power (total)	P	kW	22.38	29.84	74.6							
Exhaust Ducting	-	-	Integral Exhaust	Integral Exhaust	Integral Exhaust							
Fuel/Power System	-	-	Petrol fuel system	Petrol fuel system	Petrol fuel system							
Fuel installation	-	-	Permanently installed	Permanently installed	Permanently installed							
Fuel capacity	-	L										
Water tank capacity	-	L										
Holding tank capacity	-	L										
Electrics - DC system	-	-	Fitted	Fitted	Fitted							
Electrics - AC system	-	-	N/A	N/A	N/A							
Steering	-	-										
No. of seats on tubes	-	Adults	2	3	7							
No. seats NOT on tubes	-	Adults	3	3	3							
CREW LIMIT												
Cat B - Adults	-	Adults										
Cat B - Child	-	Child										
Cat C - Adults	-	Adults	5	6	10							
Cat C - Child	-	Child										
Cat D - Adults	-	Adults										
Cat D - Child	-	Child										
Cat B - Limit	CL	Adults	0	0	0	0	0	0	0	0	0	0
Cat C - Limit	CL	Adults	5	6	10	0	0	0	0	0	0	0
Cat D - Limit	CL	Adults	0	0	0	0	0	0	0	0	0	0
WEIGHTS												
Hull	-	kg										
Tubes	-	kg										
Internal mouldings	-	kg										
Engine(s)	-	kg	124	124	208							
Standard Equipment	-	kg										
Non-edible stores & prov.	-	kg										
Edible stores & provisions	-	kg	50	60	100							
Liferaft	-	kg										
Personal Equipment	-	kg										
Fuel	-	kg	0	0	0	0	0	0	0	0	0	0
Water	-	kg	0	0	0	0	0	0	0	0	0	0
Holding tanks	-	kg	0	0	0	0	0	0	0	0	0	0
Crew	-	kg	375	450	750	0	0	0	0	0	0	0
Minimum Crew	-	kg	75	75	75	75	75	75	75	75	75	75
LOAD CONDITIONS												
Maximum Load	M <sub>L</sub>	kg	549	634	1058	0	0	0	0	0	0	0
Empty Craft	M <sub>EC</sub>	kg	212	227	550	0	0	0	0	0	0	0
Lightship	M <sub>LC</sub>	kg	212	227	550	0	0	0	0	0	0	0
Minimum Operating	M <sub>MO</sub>	kg	287	302	625	75	75	75	75	75	75	75
Loaded Arrival	M <sub>LA</sub>	kg	716	807	1518	0	0	0	0	0	0	0
Maximum Loaded	M <sub>LC</sub>	kg	761	861	1608	0	0	0	0	0	0	0
ISO 6185 'Total Mass'	M or m <sub>h</sub>	kg	212	227	550	0	0	0	0	0	0	0
TUBE BUOYANCY												
Recommended working pressure		bar	0.25	0.25	0.25							
		psi	3.63	3.63	3.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		kPa	25.00	25.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 1	Length	mm	2300	2580	2100							
	Diameter	mm	410	410	560							
	Volume	m <sup>3</sup>	0.30	0.34	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 2	Length	mm	2300	2580	2100							
	Diameter	mm	410	410	560							
	Volume	m <sup>3</sup>	0.30	0.34	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 3	Length	mm	2400	2850	2300							
	Diameter	mm	410	410	560							
	Volume	m <sup>3</sup>	0.32	0.38	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 4	Length	mm		2300								
	Diameter	mm		560								
	Volume	m <sup>3</sup>	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 5	Length	mm		2000								
	Diameter	mm		560								
	Volume	m <sup>3</sup>	0.00	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 6	Length	mm		2000								
	Diameter	mm		560								
	Volume	m <sup>3</sup>	0.00	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 7	Length	mm		2000								
	Diameter	mm		560								
	Volume	m <sup>3</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 8	Length	mm		2000								
	Diameter	mm		560								
	Volume	m <sup>3</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 9	Length	mm		2000								
	Diameter	mm		560								
	Volume	m <sup>3</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chamber 10	Length	mm		2000								
	Diameter	mm		560								
	Volume	m <sup>3</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Tube Volume	V <sub>TUBE</sub>	m <sup>3</sup>	0.92	1.06	3.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Chambers	n	chambers	3	3	6	0	0	0	0	0	0	0
Mean chamber volume	-	m <sup>3</sup>	0.31	0.35	0.53	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Mean chamber diameter	-	mm	410	410	560	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Largest chamber vol.	-	m <sup>3</sup>	0.32	0.38	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ADDITIONAL BUOYANCY (as appropriate)												
Sealed buoyancy 1	-	m <sup>3</sup>										
Sealed buoyancy 2	-	m <sup>3</sup>										
Sealed buoyancy 3	-	m <sup>3</sup>										
Air tank/void 1	-	m <sup>3</sup>										
Air tank/void 2	-	m <sup>3</sup>										
Inherent buoyancy of hull	-	m <sup>3</sup>										
Total Hull Volume	V <sub>... </sub>	m <sup>3</sup>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

* ITEM NAME / CATEGORY	* FULL	N	0	0	0	0	0	0	0	0	0	0
		Total Buoyancy/Volume	V <sub>HULL</sub>	m <sup>3</sup>	0.92	1.06	3.15	0.00	0.00	0.00	0.00	0.00
	N		9063	10371	30917	0	0	0	0	0	0	0

ISO 6185 part & clause				SP330	SP340	SP520	MODEL NAME HERE	MODEL NAME HERE	MODEL NAME HERE	MODEL NAME HERE	MODEL NAME HERE	MODEL NAME HERE	
1	2	3	4										
<b>VALVES</b>													
5.4.1	5.4.1	5.4.1	5.4.1	Valves shall be corrosion resistant & not be capable of changing the basic, and									
90	90	90	90	be readily	Pass	Pass	Pass						
90	90	90	90	be so arranged so as not to	Pass	Pass	Pass						
90	90	90	90	be so arranged so as not to interface	Fail	Fail	Fail						
90	90	90	90	be so arranged so as not to interface with the	Fail	Fail	Fail						
90	90	90	90	be arranged so as not to be basic, or	Fail	Fail	Fail						
90	90	90	90	be filled with a medium, which	Already had the safety case	Already had the safety case	Already had the safety case						
90	90	90	90	be arranged to allow controlled pressure reduction	Pass	Pass	Pass						
5.4.2	5.4.2	5.4.2	5.4.2	allow deflation by	refer to Owner manual	refer to Owner manual	refer to Owner manual						
5.4.2	5.4.2	5.4.2	5.4.2	Deflation of any compartment shall not cause a loss of gas from any of the other	Fail	Fail	Fail						
<b>DRAINAGE</b>													
5.7	5.7	5.7	5.7	If fitted with a drain, it shall be of stainless steel, or of stainless steel without attached foam below deck shall have a means of obtaining	Fail	Fail	Fail						
5.7	5.7	5.7	5.7	Types VII, IX & X	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
5.7	5.7	5.7	5.7	Boat's cockpit drainage shall either (a) comply with ISO 11812 or (b) shall comply with ISO 11812	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>MAXIMUM NUMBER OF PERSONS</b>													
6.1	6.1	6.1	6.1	Type I, $n = \frac{A}{0.38}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6.1	6.1	6.1	6.1	Type II, V or VI, $n = \frac{A}{0.38} - 1$	N/A	N/A	N/A	-1	-1	-1	-1	-1	
6.1	6.1	6.1	6.1	Type III, VII, VIII, IX & X, $n = \frac{A}{0.38}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6.1	6.1	6.1	6.1	Type IV, $n = \frac{A}{0.38} - 1$	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6.1	6.1	6.1	6.1	Types VII, VIII, IX & X: call C, limited by total no. of seats	5	6	10	N/A	N/A	N/A	N/A	N/A	
6.1	6.1	6.1	6.1	Type VII, IX & X: call B, limited by the maximum acceptable limit: call B	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>Crew Verdict</b>													
6.1	6.1	6.1	6.1	Acceptable Limit: call C	5	6	10	-1	-1	-1	-1	-1	
6.1	6.1	6.1	6.1	Acceptable Limit: call D	5	6	10	-1	-1	-1	-1	-1	
<b>MAXIMUM LOAD CAPACITY</b>													
6.4.1	6.4.1	6.4.1	6.4.1	Type I & II kg, $m = (0.5 \cdot V \cdot 2000) - M$	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6.4.1	6.4.1	6.4.1	6.4.1	Type III, IV, V & VI (kg), $m = (0.75 \cdot V \cdot 2000) - M$	N/A	N/A	N/A	0	0	0	0	0	
<b>RESIDUAL BUOYANCY</b>													
6.8.1	6.8.1	6.8.1	6.8.1	Type I, II, III, IV, V and VI. Buoyancy after failure of the largest chamber must be at least 50% of max load capacity. Min buoyancy	N/A	N/A	N/A	0 N	0 N	0 N	0 N	0 N	0 N
<b>TOTAL BUOYANT VOLUME</b>													
7.4.1	7.4.1	7.4.1	7.4.1	Load factor, $k$	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	
7.4.1	7.4.1	7.4.1	7.4.1	Type VII, VIII, IX & X: (m <sup>3</sup> ), $V = \frac{R \cdot \rho_{air}}{1000}$	0.91	1.03	1.93	0.00	0.00	0.00	0.00	0.00	
7.4.1	7.4.1	7.4.1	7.4.1	For all buoyant volume	0.92	1.06	3.15	N/A	N/A	N/A	N/A	N/A	
<b>COMPARTMENTATION</b>													
6.10	6.10	6.10	6.10	Minimum number of chambers	N/A	N/A	N/A	2	2	2	2	2	
6.10	6.10	6.10	6.10	3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6.10	6.10	6.10	6.10	ISO 6185-4 max chamber volume	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6.10	6.10	6.10	6.10	Max. chamber volume	3%	7%	8%	N/A	N/A	N/A	N/A	N/A	
<b>OVERPRESSURE TEST</b>													
4.4.4	4.4.4	4.4.4	4.4.4	Alternate chambers pressurized to 1.5 x working pressure for 30 mins	Pass	Pass	Pass						
<b>STABILITY</b>													
6.3.2	6.3.2	6.3.2	6.3.2	ISO 6185 Offset load test	251.3 kg	301.5 kg	502.5 kg	0.0 kg	0.0 kg	0.0 kg	0.0 kg	0.0 kg	
6.3.2	6.3.2	6.3.2	6.3.2	Test Boat	N/A	N/A	N/A	0.0 kg	0.0 kg	0.0 kg	0.0 kg	0.0 kg	
6.3.2	6.3.2	6.3.2	6.3.2	ISO 6185 Offset load test with alternate load	375.0 kg	450.0 kg	750.0 kg	0.0 kg	0.0 kg	0.0 kg	0.0 kg	0.0 kg	
6.3.2	6.3.2	6.3.2	6.3.2	Test Boat	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7.3.1	7.3.1	7.3.1	7.3.1	Check arrangement	Open	Open	Open						
7.3.1	7.3.1	7.3.1	7.3.1	Type VII, VIII, IX & X: ISO 12217 Offset load test	425.0 kg	510.0 kg	850.0 kg	0.0 kg	0.0 kg	0.0 kg	0.0 kg	0.0 kg	
7.3.1	7.3.1	7.3.1	7.3.1	Test Boat	Pass	Pass	Pass	N/A	N/A	N/A	N/A	N/A	
7.3.1	7.3.1	7.3.1	7.3.1	Type VII & X category B: ISO 12217-1 Resistance to heeling	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7.4.2	7.4.2	7.4.2	7.4.2	Type VII, VIII, IX & X: Level flotation when heeled	Pass	Pass	Pass	N/A	N/A	N/A	N/A	N/A	

# Test on Site

Product-Family Name		Highfield Boats Co., Ltd.											
Table of Product-Family Dimensions													
Model Name	Length (L <sub>h</sub> )	Beam (B <sub>h</sub> )	Category	Bottom Material	Version of ISO 12217-3	Propulsion	Max. Power (kW)	Crew Limit	Weight (Kg)	Engine weight	Maximum Load (kg)	Crew index	Load Index
SP330	3.330	1.845	C	Aluminium		O/B engine	22.38	6	206	124	549	0.529	48.432
SP360	3.620	1.800	C	Aluminium		O/B engine	29.84	6	223	124	634	0.512	54.055
SP520	5.250	2.415	C	Aluminium		O/B engine	74.6	10	550	207.6	1058	0.327	34.554

Based on the form 'HPIVS RCD-WI-06 - SELECTION OF PRODUCT-FAMILIES TESTING', I perform 2 models testing totally on site. -1.SP330 covers SP360 which the Lh is in the scope of +/-1.2m and Bh is in +/-15%. I test SP330 which risk is higher. -2.SP520 which the Lh is not in the scope of +/-1.2m so that I test on site separated.

SP330:



Maximum angle:



Testing weight:

- 102
- + 85
- + 75
- + 70
- + 75
- + 60
- = 467 (>85\*5)

The maximum angle for this model is 15.0 degree.

SP520:




Maximum angle:



Testing weight:

- 102
- + 85
- + 75
- + 70
- + 75
- + 60
- + 91
- + 62
- + 79
- + 81
- + 78
- = 858 (>85\*10)

The maximum angle for this model is 13.7 degree.

	REFERENCE:	RCD - F - 01	ISSUE:	1
	TITLE:	RCD Inspection Report		

HPi Verification Services

(This form is mandatory for all inspections)

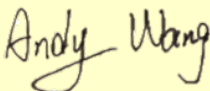
CUSTOMER:	Highfield Boats Co., Ltd.	PROJECT NUMBER:	
PRODUCT DESCRIPTION:	SP330, SP360 & SP520		
STAGE OF PRODUCTION:	Complete	VISIT No:	1
		BOTH AFLOAT & ASHORE	
CATEGORY:	C	MODULE:	A1
		LENGTH L <sub>H</sub> :	3.33m, 3.62m & 5.25m
LOCATION:	Weihai City, China.	DATE:	13th/Jul/2020
PERSONNEL:	Andy Wang, other stuffs from shipyard.		

\* Delete as appropriate

<b>GENERAL NARRATIVE:</b> <i>(SUMMARY OF ACTIVITIES)</i> I checked the models:SP330, SP360 & SP520 totally 3 models of RIB in this shipyard and all the boats are in the stage of completed.We do the offset load test on site for two models - SP330 and SP520.
<b>STRUCTURAL NARRATIVE:</b> <i>(NEW BUILD: MATERIALS, CONDITIONS, WORKMANSHIP, DIMENSIONAL ACCURACY ETC.</i> <i>POST-CONSTRUCTION: INSPECTION REPORT AND CONFIRMATION THAT STRUCTURE REMAINS IN SOUND CONDITION)</i> The manufacture use the PVC as the main material for the boat.And the manufacture use the aluminium for the bottom of the boat.
<b>STABILITY NARRATIVE:</b> <i>(TESTS PERFORMED. IF NO TESTS PERFORMED, SUMMARY OF BASIS FOR ASSESSMENT)</i> All three models of RIB are completed when I checked on site and meet the requirement for mininum chamber numbers.The chambers in the boat are separated.
<b>NOTES / NON CONFORMITIES / OBSERVATIONS / ACTIONS:</b> <i>(IMPORTANT DETAILS FOR HPi HQ TO NOTE)</i>

I certify that there I am free of conflicts of interest in relation to this project. I am entirely independent of the client and have no relationship, whether past, current or future, that could give rise to a claim of bias, prejudice or a lack of neutrality or fairness.

Signed



Name: Andy Wang

Date

17-Jul-20

