Survey and Trials form 2A	Zig Zag	V 1.0 16/10/23

Boat Type:	Boat Number:	Trial Date:
Trials Location:		

Sea State:	Wind Force:	Wind Direction:	Air Temperature (°C):	Sea Temperature: (°C):
Craft loaded condition:	Weight of craft (Kg):	Ballast added (Kg): Type of ballast:		Fuel (ltr):
Time trial started:		Time trial finished:		

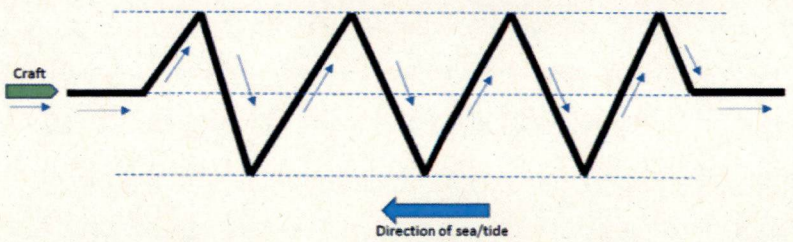


Fig 1.

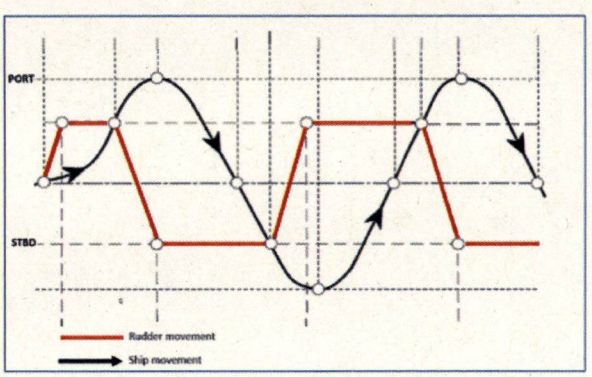


Fig 2.

Craft engines are to be run in and at operating temperature. Ref. Fig 1. On a heading into the sea, the craft is to accelerate to its planning speed as specified in the craft's BR. The craft is to turn to PORT 20◦ from the original heading. Once stable on the new course the craft is to maintain the heading for 10s then turn to STBD 40◦. The craft once stable on the new course craft is again to hold the heading for 10s then tun to PORT 40◦. This cycle is to be repeated until the craft has conduct 8 changes in heading. The craft is to repeat the trial heading with the sea.

The performance of the craft during the turns and taking up the new courses is to be monitored.

Note. This trials aim is to monitor the crafts ability to conduct a controlled turn and to take up the new heading as quickly as possible without overshooting or hunting on the new course. It assists in assessing if the craft at speed is safe, stable, manoeuvrable and responsive to the coxswain's commands. (Fig 2 show the overshoot typically associated with larger slower vessels.)

Required speed for trial _____knots

Required Speed _____Kts	Observations	Notes
Speed achieved (Knots)		
Craft response to helm commands	Satisfactory Yes ☐ / No ☐	
Craft control during the turns	Satisfactory Yes ☐ / No ☐	
Craft stability during the turn	Satisfactory Yes ☐ / No ☐	
Any overshoot noticed during the turn	Yes ☐ / No ☐	
Craft ability to take up a new course quickly	Satisfactory Yes ☐ / No ☐	
Any hunting noticed when taking up the new course	Yes ☐ / No ☐	

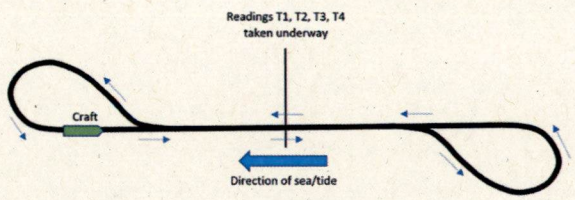
General trial observations	
Did any mechanical defects or alarms occur during the trial?	Yes ☐ / No ☐
Was the craft stable as it accelerated?	Yes ☐ / No ☐
Was the craft stable on a straight-line transit?	Yes ☐ / No ☐
Was the craft stable as it de-accelerated?	Yes ☐ / No ☐
Were any of the following conditions observed during the trial: *chine walking, craft lol, proposing/ nose diving, excessive slamming, poor trim*?	Yes ☐ / No ☐
Was the craft responsive and controllable during the course changes?	Yes ☐ / No ☐
Was the coxswain able to trim the craft as required for craft performance?	Yes ☐ / No ☐
Was the craft easily controlled by the coxswain without need for significant input of control?	Yes ☐ / No ☐
Were the craft controls and their positions suitable for the coxswain?	Yes ☐ / No ☐
Was the craft considered noisy during the trial	Yes ☐ / No ☐
Were there any WBV issues observed during the trial?	Yes ☐ / No ☐
Detail any observations.	

Observation Summary of Craft Performance During the Trial			
	Satisfactory	Not Satisfactory	Notes
Craft Stability	☐	☐	
Craft course keeping	☐	☐	
Craft manoeuvrability	☐	☐	
Craft speed performance	☐	☐	
Craft acceleration	☐	☐	
Craft ability to stop	☐	☐	
Sea Keeping	☐	☐	

Survey and Trials form 2A	Endurance And Fuel Consumption Trial	V 1.0 16/10/23

Boat Type:	Boat Number:	Trial Date:
Trials Location:		

Sea State:	Wind Force:	Wind Direction:	Air Temperature (°C):	Sea Temperature: (°C):
Craft loaded condition:	Weight of craft (Kg):	Ballast added (Kg): Type of ballast:		Fuel (ltr):
Time trial started:		Time trial finished:		



Craft engines are to be run in and at operating temperature. The craft is to accelerate up to its planning speed as given in the BR. The craft is to maintain its planning speed for 1 hour. Readings are to be taken every 15 minutes. Fuel consumption is to be recorded, Endurance and Range of the craft to be calculated.

Craft Planning speed / Endurance speed as given in the BR. _____Kts

Craft range as given in the BR_____nm.

Required speed:_____Kts		Time Record				
Engine 1 = Single or Port Engine. Engine 2 = STBD Engine		Pre start (craft at idle)	T1 (15min)	T2 (30min)	T3 (45min)	(T4 - 60min)
Actual average speed achieved (knots)						
Engine 1	RPM					
	Oil (BAR)					
	FW Temp (°C)					
Engine 2	RPM					
	Oil (BAR)					
	FW Temp (°C)					
Fuel	litres					
Distance covered	nm					

Average speed achieved: _____knots	Fuel used in one hour: _____ltr	Distance covered in one hour: _____nm

The craft fuel tanks hold _____ltr

From the data recorded the nm/ltr of the craft was: _____nm/ltr

For a craft with full fuel tanks this would give the craft a **Range of _____nm.**

From the data recorded the craft used _____ ltr of fuel in one hour.

For a craft with full fuel tanks this would give the craft an **Endurance of _____hrs.**

Are these figures compliant with the craft BR – Yes ☒ / No ☐

General trial observations	
Did any mechanical defects or alarms occur during the trial?	Yes ☐ / No ☐
Was the craft stable as it accelerated?	Yes ☐ / No ☐
Was the craft stable on a straight-line transit?	Yes ☐ / No ☐
Was the craft stable as it de-accelerated?	Yes ☐ / No ☐
Were any of the following conditions observed during the trial: *chine walking, craft lol, proposing/ nose diving, excessive slamming, poor trim*?	Yes ☐ / No ☐
Was the craft responsive and controllable during the course changes?	Yes ☐ / No ☐
Was the coxswain able to trim the craft as required for craft performance?	Yes ☐ / No ☐
Was the craft easily controlled by the coxswain without need for significant input of control?	Yes ☐ / No ☐
Were the craft controls and their positions suitable for the coxswain?	Yes ☐ / No ☐
Was the craft considered noisy during the trial	Yes ☐ / No ☐
Were there any WBV issues observed during the trial?	Yes ☐ / No ☐
Detail any observations.	

Observation Summary of Craft Performance During the Trial			
	Satisfactory	Not Satisfactory	Notes
Craft Stability	☐	☐	
Craft course keeping	☐	☐	
Craft manoeuvrability	☐	☐	
Craft speed performance	☐	☐	
Craft acceleration	☐	☐	
Craft ability to stop	☐	☐	
Sea Keeping	☐	☐	

Survey and Trials form 2A	Sea Keeping	V 1.0 16/10/23

Boat Type:	Boat Number:	Trial Date:
Trials Location:		

Sea State:	Wind Force:	Wind Direction:	Air Temperature (°C):	Sea Temperature: (°C):
Craft loaded condition:	Weight of craft (Kg):	Ballast added (Kg): Type of ballast:		Fuel (ltr):
Time trial started:		Time trial finished:		

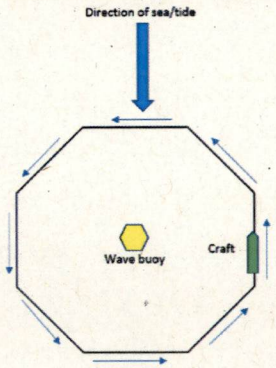


Fig 1

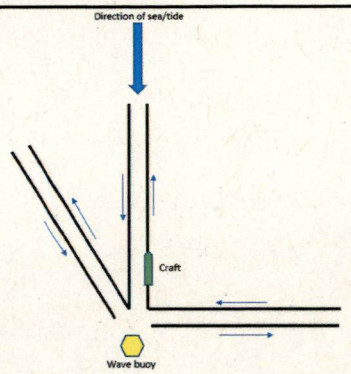


Fig 2

A trials wave buoy should preferably be employed to record sea data. If one is not available, then the nearest fixed national wave buoy should be used. Various sea keeping trials courses are promoted, 2 options are displayed above. Selection is dependent on trial area used and craft. All courses contain a run in to sea, a run with the sea, a run into the sea at 45°, a run with the sea at 45° and a run parallel to the sea. Each leg should be conducted for 5 minutes for Fig 1 and 10 minutes for Fig 2. The performance of the craft during the turn is to be monitored.

Provided the sea state is within the operating boundaries of the craft, the trial should be conducted at the maximum planning speed for the craft. However, depending on the sea conditions it is the responsibility of the coxswain to moderate the craft speed to the safest speed for the craft and passengers.

Required Speed _____Kts	Trial Legs				
	Into sea	With the sea	Into the sea at 45	With the sea at 45	Parallel to the sea
Speed achieved (Kts)					
Craft stability	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐
Craft course keeping	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐
Craft manoeuvrability	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐
Sea keeping	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐	Satisfactory Yes ☐ / No ☐

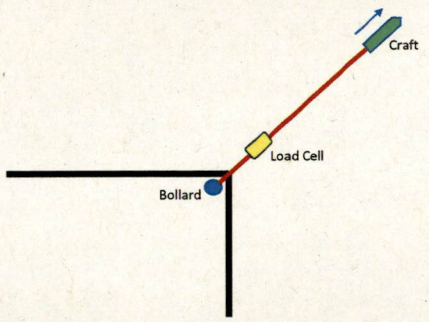
General trial observations	
Did any mechanical defects or alarms occur during the trial?	Yes ☐ / No ☐
Was the craft stable as it accelerated?	Yes ☐ / No ☐
Was the craft stable on a straight-line transit?	Yes ☐ / No ☐
Was the craft stable as it de-accelerated?	Yes ☐ / No ☐
Were any of the following conditions observed during the trial: *chine walking, craft lol, proposing/ nose diving, excessive slamming, poor trim*?	Yes ☐ / No ☐
Was the craft responsive and controllable during the course changes?	Yes ☐ / No ☐
Was the coxswain able to trim the craft as required for craft performance?	Yes ☐ / No ☐
Was the craft easily controlled by the coxswain without need for significant input of control?	Yes ☐ / No ☐
Were the craft controls and their positions suitable for the coxswain?	Yes ☐ / No ☐
Was the craft considered noisy during the trial	Yes ☐ / No ☐
Were there any WBV issues observed during the trial?	Yes ☐ / No ☐
Detail any observations.	

Observation Summary of Craft Performance During the Trial			
	Satisfactory	Not Satisfactory	Notes
Craft Stability	☐	☐	
Craft course keeping	☐	☐	
Craft manoeuvrability	☐	☐	
Craft speed performance	☐	☐	
Craft acceleration	☐	☐	
Craft ability to stop	☐	☐	
Sea Keeping	☐	☐	

Survey and Trials form 2A	**Bollard Pull**	V 1.0 16/10/23

Boat Type:	Boat Number:	Trial Date:
Trials Location:		

Sea State:	Wind Force:	Wind Direction:	Air Temperature (°C):	Sea Temperature: (°C):
Craft loaded condition:	Weight of craft (Kg):	Ballast added (Kg): Type of ballast:		Fuel (ltr):
Time trial started:		Time trial finished:		



This trial is only for craft which have undergone with changes to new engines, gear boxes or propulsion units or concern that existing power trains are not producing the required thrust.

This trial requires the use of a load cell.

Craft engines are to be run in and at operating temperature. The craft is to slowly take up the slack of the stop with the load cell. The craft is to then apply the RPMs as given in the table below.

(The RPM used below are indicative and may be changed to meet the actual engines parameters)

Engine 1 = Single or Port Engine. Engine 2 = STBD Engine		Engine 1 (RPM)					
		1500	2000	2500	3000	3500	MAX
Load	kg						
		Engine 2 (RPM)					
		1500	1500	1500	1500	1500	1500
Load	kg						
		Engine 1 & 2 (RPM)					
		1500	1500	1500	1500	1500	1500
Load	kg						