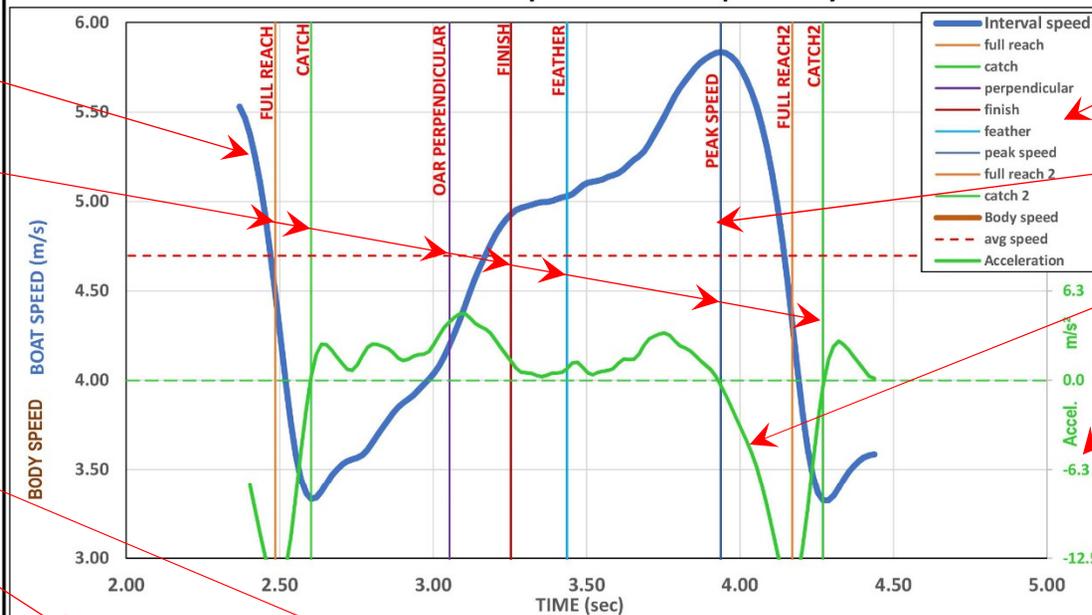


# PURCERVERANCE - Boat Speed & Technique Analysis



BOAT SPEED CURVE (m/s)

ROWING TECHNIQUE POINTS

Graph Legend

Peak boat speed

Boat acceleration

Acceleration axis (m/2<sup>2</sup>)

Video file information

Crew name and category

Boat length used for distance reference

Weather conditions

Video file time reference

Boat speed at time reference

Rigging efficiency analysis measurement

Rowing technique analysis factors

Technique analysis based on oar position, time, speed and/or acceleration

Crew Name	Athlete Name	Video File	C0045.mp4	GMS Time	6:33.00
Boat Class	M1x	Video Location	Welland CORA - 1200m	Finish Time	7:15.92
Race Category	Sr. M1x	Video Description	Men's Final	Percent GMS	90.2%
Boat Length	8.20	Video Time & Date	4:30 PM 2019-07-06	Average Split	1:48.98

GMS Time  
Race Finish Time  
Percent RCA GMS  
Average 500m Split

ANALYSIS		Weather Cond. wind 15/22, 9 oclock		GMS	
time	boat speed	Temp	26.0	Split Speed	1:46.48 1:38.25
full reach	2.49 4.48	Water	choppy	Average Speed	4.70 92.3%
catch	2.60 3.33	Drive Time	0.83		ref.
perpndcir	3.05 4.20	Blade Slip	-0.15		+0.10
finish	3.25 4.93	Eff. Stroke Lngth	2.62		2.83
feather	3.44 5.03	Stroke Position	69.3%		68.7%
full rch 2	4.17 4.31	Stroke Rate	36.0		35.6
catch 2	4.27 3.32	Stroke Ratio	1.00		1.13

Speed based on curve

Rigging reference for comparison

Rigging analysis notes/recommendations

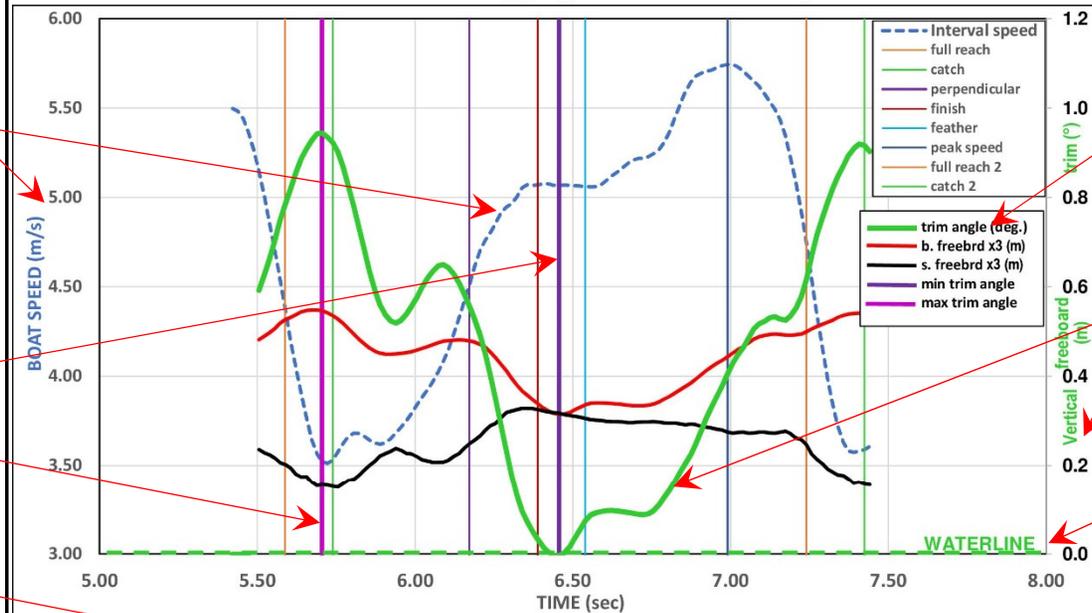
Reference description & number of samples

Rowing technique reference for comparison (average of sample)

Rowing technique notes/recommendations based on analysis

TECHNIQUE ANALYSIS BASED ON SPEED CURVE				Reference: M1x	WC '17 & '18 (23)
Drive	Min. Boat Speed (about catch)	3.33	minimum boat speed		3.50
	Catch Effic. (full reach to catch)	0.12	time between full reach and catch (when the blade is fully buried)		0.14
	Drive Accl. (catch to finish)	2.45	boat acceleration between catch and finish		2.20
	Drive Accl. Eff. (fin to peak)	83.6%	percentage of area under the curve compared to straight line acceleration		79.3%
	Drive Speed Increases (min. to fin.)	1.60	difference in boat speed from minimum to finish		1.51
	Perp to Finish Accl (perp to fin.)	3.66	acceleration between oar at perpendicular and finish		2.72
Recovery	Drive Boat Moves (distance)	2.62	distance the boat moves on the drive (catch to finish)		2.78
	Drive Boat Moves (% of total)	33.4%	distance the boat move on the drive as a percentage of total movement one stroke		34.5%
	Release Effic. (finish to feather)	0.18	time between oar at finish (furthest sternward) and when it is on the feather		0.13
	Recovery Accl. (finish to peak)	1.32	acceleration between finish at peak speed		1.26
	Recovery Accl Eff. (fin. to peak)	76.2%	percentage of area under the curve compared to straight line acceleration		79.1%
	Recovery Peak Speed (% of Rec.)	67.2%	percentage of the recovery that the boat achieves peak speed		63.2%
	Max. Boat Speed (at peak)	5.83	maximum boat speed (m/s)		5.82
	Total Speed Varies (min to max)	2.50	difference between minimum speed and maximum speed		2.31
	Deceleration (peak to catch2)	-7.52	negative acceleration (straight line) from peak speed and catch2		-6.10
	Decel. Effic. (peak to catch2)	123.1%	percentage of area under curve compared to straight line deceleration from peak to catch2		120.8%
Recovery	Recovery Boat Moves (distance)	5.22	distance the boat moves on the recovery (finish to catch2)		5.30
	Recovery Boat Moves (% of total)	66.6%	distance the boat move on the recovery as a percentage of total movement one stroke		65.5%
	Total Boat Moves (m per stroke)	7.83	total boat movement per stroke		8.08

# PURCERVERANCE - Rigging and Boat Fit Analysis



Boat Speed  
(blue dashed line)  
vertical scale in m/s

minimum trim

maximum trim

Freeboard: 'the distance from the waterline to the upper edge of the side of the hull'

Rigging Analysis  
efficiency calculations

Sample reference  
for comparison

Athlete anthropometric  
measurement data

Boat Rigging  
dimensions/measurements

Rowing technique  
reference dimensions

Athlete race power

Boat information

Oar information  
rigging measurements

Trim Legend

Boat hull trim  
stern to bow (angle),  
vertical scale in degrees

Waterline is 0.0  
Vertical scale for bow and  
stern above water (m) with  
exaggeration factor x3

Trim: 'the vertical angle  
between the water surface  
and a straight line from stern  
to bow along the deck.'  
(negative angle is bow down)

Notes on trim analysis

Notes explaining rigging  
recommended adjustments  
with reference letter

Recommended adjustment  
dimension with reference  
letter

Crew Name	Name	Video File	20180509092506.m2ts	Boat Speed	4.74	1:45.43	Split
Rigging Analysis	Ref. Dim. M1x analysis	YC'178'18 Max	Freeboard		Boat Trim		
	Drive Time	0.80	dist (m)	time	time	diff (m)	angle (°)
	Blade Slip	+0.02	bow min	0.105	6.456	-0.001	-0.004
	Eff. Stroke Length	2.76	bow max	0.183	5.689		
	Stroke Position	66.6%	bow vert	0.078			
Stroke Rate	35.6	35.6	strn min	0.051	5.739	Notes: Trim to be reviewed following rigger and footstop relocation.	
Stroke Ratio	1.11	1.13	strn max	0.109	6.356		
Oar Catch Angle	n/a		strn vert	0.058			
Athlete	category	LM	Rigging Info	existing	suggested	Note	Notes
	race weight	72.5	pin line from bow	4.250	4.275	(A)	(A) move rigger one hole toward stern to maintain positive boat trim throughout stroke
	shoe size	10.5	pin line % from bow	53.66%	53.98%		
	height	177	rigger locate ref	2nd hole	1st hole		
	seat to shoulder ht.	60	span	160.0	159.0		
	arm span	189	footstop distance	35.0	35.0	(B)	(B) move footstops similar distance towards stern.
	sleeve length	84	footstop location ref	6th/2nd	update		(C) move track towards stern
	right leg shin length	57.5	footstop height	13.0			
	left leg shin length	57.5	footstop angle	45.0			(D) adjust pitch on both oarlocks to 4.0 degrees.
	inseam length	84.5	work through	18.0		(C)	Current pitch may contribute to lifting of hull through mid drive.
	ankle flexibility	58	finish seat dist.	measure			
	stroke length on ERG	130	starbd oarlock pitch	5.5	4.0	(D)	
	seat travel ERG	45	port oarlock pitch	4.8	4.0		
	handle to front seat	-	starbd oarlock ht.	16.5			
	finish handle split dist	23	port oarlock ht.	16.0			
	target race rate	34	Oar Info/Rig	existing	suggested	Note	
	race power (watts)	378	oar manufacture	C2			
Boat	make	Fluidesign	oar stiffness	med			
	hull type	Midweight	oar length	287.0			
	hull size	160-180	inboard	87.0			
	boat S/N	YFW6#####	outboard	200.0			
	year	2007	blade type	smth2			
	length	7.92	blade area	822			
	seat -WL	measure					