

Velocity Sweep

Water Tunnel Verification Test Data

Project: 30cm Flow Visualization Water Tunnel
 Organization: Oklahoma State University

Serial No.: 81114
 PO No.: E089406

Pump: (2) Gusher Series 7600SH
 HP: 7.5 ea.

Probe: Measurement Science Enterprise miniLDV-G5-240
 Location: Approximately 20cm from Test Section Entrance

Engineering Laboratory Design

Date: 1/28/2015
 Engineer: MKT

Starting Water Temp (°F): 69
 Ending Water Temp (°F): 69

Start: 2:00 PM
 Finish: 3:45 PM

Frequency Sweep:

Pump No. 1 Inverter Frequency (Hz)	Pump No. 2 Inverter Frequency (Hz)	u (m/s)	Velocity RMS	u (ft/s)	Q (m³/s)	Pump 1		Pump 2		Pump 1			Pump 1			Pump 2			Pump 2		
						Motor RPM	Pump RPM	Motor RPM	Pump RPM	Inverter (Amps)			Motor (Amps)			Inverter (Amps)			Motor (Amps)		
										L1	L2	L3	T1	T2	T3	L1	L2	L3	T1	T2	T3
4.0	4.0	0.0635	0.504	0.208	0.006	119	65	119	65	0.6	0.8	1.0	4.8	5.0	4.8	0.4	1.0	0.4	4.8	4.9	5.0
3.0	3.0	0.0479	0.530	0.157	0.004	89	49	89	49	0.7	0.8	1.0	5.2	5.1	4.4	0.6	0.9	0.9	4.6	4.6	5.0
2.0	2.0	0.03206	0.492	0.105	0.003	59	33	59	33	0.8	1.0	1.3	5.8	5.6	6.1	0.7	1.2	1.3	6.3	6.7	6.4
1.0	1.0	0.0164	0.704	0.054	0.001	29	17	29	17	1.5	1.5	2.2	7.8	7.8	7.5	1.4	2.2	1.9	7.6	8.1	7.8
4.0	0.0	0.0352	0.588	0.115	0.003	119	65	0	0	0.6	1.1	1.0	5.0	5.0	5.1	-	-	-	-	-	-
3.0	0.0	0.0266	0.673	0.087	0.002	89	49	0	0	0.6	1.1	1.2	4.7	4.7	5.0	-	-	-	-	-	-
2.0	0.0	0.0179	0.775	0.059	0.002	59	33	0	0	0.7	1.4	1.2	6.3	6.7	6.2	-	-	-	-	-	-
1.0	0.0	0.0093	0.955	0.031	0.001	29	17	0	0	1.5	2.4	2.3	7.6	7.8	8.0	-	-	-	-	-	-
0.0	4.0	0.0331	0.717	0.109	0.003	0	0	119	65	-	-	-	-	-	-	0.4	1.2	1.2	5.3	5.4	5.1
0.0	3.0	0.0253	0.699	0.083	0.002	0	0	89	49	-	-	-	-	-	-	0.6	1.1	1.3	4.7	4.7	4.8
0.0	2.0	0.0171	0.689	0.056	0.002	0	0	59	33	-	-	-	-	-	-	0.4	1.7	1.7	5.5	5.8	5.6
0.0	1.0	0.0090	0.819	0.029	0.001	0	0	29	17	-	-	-	-	-	-	1.6	2.0	2.0	7.9	8.0	7.9