

Anemometer Calibration Record

Serial Number: 4004366

Date: 2/19/2016

Calibrated By: TMS

Signature: _____

Job Number: A15 018

Reference Anemometer Calibration		
Freq. (Hz)	Ft/Sec	Pulse/Ft
34.21	3.4375	9.9523
71.63	6.6869	10.7112
90.24	8.3560	10.7995
132.46	12.1818	10.8732
175.33	16.1067	10.8852
235.62	21.6720	10.8722
329.25	30.3172	10.8603
402.31	37.0774	10.8506
522.36	48.1879	10.8401
602.54	55.6306	10.8311
655.28	60.5082	10.8296
710.29	65.5762	10.8314
906.52	83.7075	10.8297
1008.52	93.0919	10.8336
1215.62	112.2415	10.8304
1465.29	135.2803	10.8315

Reference Anemometer	
Calibration Date/Due:	3/5/2015 - 3/5/2016
Procedure:	NAVAIR17-20MG, NIST250
Calibration Fluid:	Air
Standard(s) Used:	A5,A359,A220,A24 DUE 5-14
NIST Traceability Per:	1361269184 ,1360578741 ,1360586185
Ambient Conditions:	759 mmHGA 46% RH 69°F
Rated Uncertainty:	+/- 0.5% RD
Uncertainty Given:	+/- 0.243% RD K=2

Average Inefficiency%	0.09%	PASS
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Reference Section Blockage (in^2)	0.59
Test Section Blockage (in^2)	0.55

*The Emprise Reference Anemometer was calibrated on 3/5/2015 to an NIST traceable standard by an ISO 17025 accredited laboratory.

Poll Interval	Reference Area (in^2)	Reference Anemometer Blockage (in^2)	Test Area (in^2)	Test Anemometer Blockage (in^2)	Reference Area (Ft^2)	# of Blades on Test Anemometer	Test Pitch, Corrected (Ft/Rev)
1	78.40	3.163	75.58	2.271	0.544	4	1.094178

Test Point	Ref. Freq. (Hz)	Ref. Air Velocity (Ft/Sec)	Flow (CFM)	Test Freq. (Hz)	Test Revolutions (RPS)	Test Air Velocity (Ft/Sec)	% of Reading Error
1	44.46	4.32	141.10	14.27	3.57	4.27	2.59%
2	59.40	5.61	183.35	19.15	4.79	5.54	1.28%
3	74.23	6.92	226.02	24.03	6.01	6.83	0.67%
4	88.87	8.23	268.85	28.83	7.21	8.13	0.55%
5	110.46	10.18	332.69	36.25	9.06	10.06	0.26%
6	148.41	13.63	445.33	49.43	12.36	13.46	1.30%
7	205.97	18.95	619.06	68.72	17.18	18.72	0.69%
8	297.52	27.38	894.54	98.96	24.74	27.04	0.14%
9	421.46	38.83	1268.57	139.87	34.97	38.34	0.79%
10	588.26	54.39	1776.93	196.05	49.01	53.68	0.90%
11	791.03	72.92	2382.22	265.79	66.45	71.91	0.12%
12	1017.76	94.00	3070.72	341.85	85.46	92.61	0.10%
13	904.78	83.49	2727.45	304.69	76.17	82.30	0.24%
14	681.80	62.91	2055.19	229.61	57.40	62.06	0.29%
15	501.90	46.27	1511.44	167.97	41.99	45.67	0.12%
16	358.62	33.02	1078.55	119.90	29.98	32.60	0.16%
17	247.78	22.78	744.31	83.14	20.78	22.50	1.03%
18	174.59	16.05	524.20	58.51	14.63	15.85	1.53%
19	127.62	11.74	383.58	42.46	10.62	11.60	1.41%
20	98.91	9.14	298.54	32.33	8.08	9.03	0.01%
21	80.96	7.52	245.51	26.24	6.56	7.42	0.52%
22	67.23	6.30	205.74	21.65	5.41	6.22	1.20%
23	52.33	5.00	163.29	16.66	4.17	4.94	2.75%

Test Anemometer Calibration Constants			Linear Calibration Equation (Y = mX + b)	
Slope	Intercept	R Squared	Air Velocity (Ft/Sec) = Slope * Test Revolutions (RPS) + Intercept	
1.078987	0.306311	0.999959	Test Revolutions = Frequency (Hz) / # Anemometer Blades	
0.269747	0.306311		Air Velocity (Ft/Sec) = Slope * Frequency (Hz) + Intercept	

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