Survey Staff Calibration

Version 5.6.0.4, Nov 2019

Staff Serial No:222 Length: 4 metres
Staff Owner: Landgate Material: Fibreglass

Test No: Test 4-222 Location: Victor Road, Darlington

Test Date: 17/03/2020 Laboratory: Boya

Observer: B.Hellmund Audit Test: Test 47:Boya Checked by: Audit Date: 17/03/2020

Signature: Average Observed Temperature23.3 degrees Celsius

Date: Level: Leica/LS15/702272

Correction Factor: 1.00003 At 25.0 degrees Celsius (Correction Factor is temperature dependent).

Graduation Uncertainty: 0.00015 metres at 95% confidence level

		Staff Readings		Known Height	Measured Height	Corrected
0	D'	From	То	Difference	Difference	Difference
Set	Pins_	(metres)	(metres)	(metres)	(metres)	(metres)
1	1-2	0.07113	0.16198	0.09084	0.09085	-0.00001
1	2-3	0.16198	0.32605	0.16401	0.16407	-0.00006
1	3-4	0.32605	0.47225	0.14615	0.14620	-0.00005
1	4-5	0.47225	0.68530	0.21305	0.21305	0.00000
1	5-6	0.68530	0.87131	0.18609	0.18601	0.00008
1	6-7	0.87131	1.07100	0.19975	0.19969	0.00006
1	7-8	1.07100	1.27599	0.20498	0.20499	-0.00001
1	8-9	1.27599	1.52279	0.24691	0.24680	0.00011
1	9-10	1.52279	1.79033	0.26761	0.26754	0.00007
1	10-11	1.79033	2.12344	0.33313	0.33311	0.00002
1	11-12	2.12344	2.38746	0.26384	0.26402	-0.00018
1	12-13	2.38746	2.51330	0.12582	0.12584	-0.00002
1	13-14	2.51330	2.64306	0.12978	0.12976	0.00002
1	14-15	2.64306	2.87145	0.22857	0.22839	0.00018
1	15-16	2.87145	3.05390	0.18243	0.18245	-0.00002
1	16-17	3.05390	3.20586	0.15183	0.15196	-0.00013
1	17-18	3.20586	3.35918	0.15330	0.15332	-0.00002
1	18-19	3.35918	3.51635	0.15720	0.15717	0.00003
1	19-20	3.51635	3.66500	0.14863	0.14865	-0.00002
1	20-21	3.66500	3.87468	0.20969	0.20968	0.00001

Date:

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Level: Leica/LS15/702272

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Staff Serial No:222 Length: 4 metres Staff Owner: Landgate Material: Fibreglass Test No: Test 4-222 Location: Victor Road, Darlington Test Date: 17/03/2020 Laboratory: Boya Observer: **B.Hellmund** Audit Test: Test 47:Boya Checked by: Audit Date: 17/03/2020 Average Observed Temperature 23.3 degrees Celsius Signature:

Correction Factor = 1.00001687 (1+(0.00001000 (Temperature - 23.3))) Correction Factor = 1.00000 when the temperature is 21.6 degrees Celsius

Temperature	Correction Factor	Correction/Metre (mm)
0	0. 99978	-0.22
2	0. 99980	- 0. 20
4	0. 99982	- 0. 18
6	0. 99984	- 0. 16
8	0. 99986	- 0. 14
10	0. 99988	- 0. 12
12	0. 99990	- 0. 10
14	0. 99992	- 0. 08
16	0. 99994	- 0. 06
18	0. 99996	- 0. 04
20	0. 99998	- 0. 02
22	1. 00000	0. 00
24	1. 00002	0. 02
26	1. 00004	0. 04
28	1. 00006	0. 06
30	1. 00008	0. 08
32	1. 00010	0. 10
34	1. 00012	0. 12
36	1. 00014	0. 14
38	1. 00016	0. 16
40	1. 00018	0. 18

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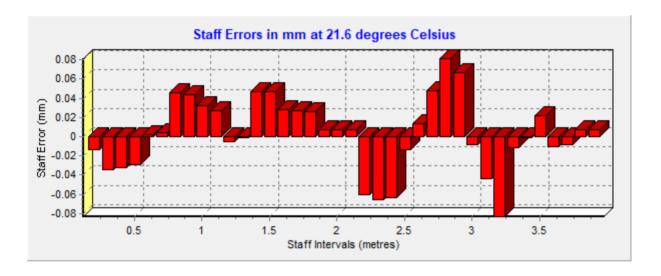
Staff Serial No:222 Length: 4 metres
Staff Owner: Landgate Material: Fibreglass

Test No: Test 4-222 Location: Victor Road, Darlington

Test Date: 17/03/2020 Laboratory: Boya

Observer: B.Hellmund Audit Test: Test 47:Boya Audit Date: 17/03/2020

Average Observed Temperature 23.3 degrees Celsius



To (metres)	Error (mm)	Corrected Interval (metres)
0. 200	- 0. 01	0. 09999
0. 300	- 0. 03	0. 09997
0. 400	- 0. 03	0. 09997
0. 500	- 0. 03	0. 09997
0. 600	0.00	0. 10000
0. 700	0.00	0. 10000
0.800	0. 05	0. 10005
0. 900	0.04	0. 10004
1. 000	0. 03	0. 10003
1. 100	0. 03	0. 10003
1. 200	0.00	0. 10000
1. 300	0.00	0. 10000
1. 400	0. 05	0. 10005
1. 500	0. 05	0. 10005
	(metres) 0. 200 0. 300 0. 400 0. 500 0. 600 0. 700 0. 800 0. 900 1. 000 1. 100 1. 200 1. 300 1. 400	(metres) (mm) 0. 200 - 0. 01 0. 300 - 0. 03 0. 400 - 0. 03 0. 500 - 0. 03 0. 600 0. 00 0. 700 0. 00 0. 800 0. 05 0. 900 0. 04 1. 000 0. 03 1. 100 0. 03 1. 200 0. 00 1. 300 0. 00 1. 400 0. 05

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From (metres)	To (metres)	Error (mm)	Corrected Interval (metres)
1. 500	1. 600	0. 03	0. 10003
1. 600	1. 700	0. 03	0. 10003
1. 700	1. 800	0. 03	0. 10003
1. 800	1. 900	0. 01	0. 10001
1. 900	2. 000	0. 01	0. 10001
2. 000	2. 100	0. 01	0. 10001
2. 100	2. 200	- 0. 06	0. 09994
2. 200	2. 300	- 0. 07	0. 09993
2. 300	2. 400	- 0. 06	0. 09994
2. 400	2. 500	- 0. 01	0. 09999
2. 500	2. 600	0. 01	0. 10001
2. 600	2. 700	0. 05	0. 10005
2. 700	2. 800	0. 08	0. 10008
2. 800	2. 900	0. 07	0. 10007
2. 900	3. 000	- 0. 01	0. 09999
3. 000	3. 100	- 0. 04	0. 09996
3. 100	3. 200	- 0. 08	0. 09992
3. 200	3. 300	- 0. 01	0. 09999
3. 300	3. 400	0.00	0. 10000
3. 400	3. 500	0. 02	0. 10002
3. 500	3. 600	- 0. 01	0. 09999
3. 600	3. 700	- 0. 01	0. 09999
3. 700	3. 800	0. 01	0. 10001
3. 800	3. 900	0. 01	0. 10001