Advanced Inspection Services

Measurement Uncertainty

Certificate Number: SAMPLE

Advanced Inspection Services
15200 25th. Ave. North
Minneapolis, MN 55447
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Leitz 8106 PMM **Used for: Dimensional Measurement** **Assett ID: PQI 255**

Source of Uncertainty	Type	Value	Units	Distribution	Divisor	Standard Uncertainty	% of Total
1. OPERATOR REPRODUCIBILITY	A	0.00011481	mm	NORMAL	1.00000	0.000115	2%
2. ISO 10 360-2 E	B	0.00110800	mm	RECT.	1.73205	0.000640	52%
3. ISO 10 360-2 P	B	0.00029000	mm	RECT.	1.73205	0.000167	4%
4. RESOLUTION	B	0.00005000	mm	RECT.	1.73205	0.000029	0%
5. UNDE	B	0.00001608	mm	RECT.	1.73205	0.000009	0%
6. PART CHARACTERISTICS	B	0.00025000	mm	RECT.	1.73205	0.000144	3%
7. LAB ENVIRONMENT	B	0.00096469	mm	RECT.	1.73205	0.000557	40%

Part and Environment Data Entry Area:	Material	Coeff. Exp.	Largest Dim.	Units	Temp. Rng.	Units
	C. Steel	0.00000633	12.0	in	0.50	Deg. F.
	UNDE(in)	0.00000063				

Determination of Lab Environment Uncertainty	Material	Coeff. Exp.	Largest Dim.	Units	Temp. Rng.	Units	Uncertainty
	C. Steel	0.00000633	12.0	in	0.50	Deg. F.	0.000038

Uncertainty Summary Statement

Standard Uncertainty	0.00088	mm
Expanded Uncertainty (K=2)	0.00177	mm

System Procedure Accreditted to: AIS

Coefficient of Expansion Deg F.

Glass	0.00000400
Granite	0.00000440
Concrete	0.00000800
C. Steel	0.00000633
Cast Iron	0.00000655
Aluminum	0.00001244

Source: Machinery's Handbook, 23 Ed.