CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT

SCHEDULE OF ACCREDITATION CERTIFICATE

(Registration No. CNAS L3310)

Name: Mahr Precision Metrology (Suzhou) Co., Ltd. Calibration Laboratory

Address: No. 399, Suhong Middle Road, Industrial Park, Suzhou, Jiangsu, China

Date of Issue: 2017-01-05 Date of Expiry: 2023-01-04

SCHEDULE 2 ACCREDITED SIGNATORIES AND SCOPE

№	Name	Authorized Scope of Signature	Note
1	Liu Xiaobing	Geometric calibration and machinery parts testing	
2	He Peng	Geometric calibration and machinery parts testing （except pneumatic measuring instrument,inductive micrometer apparatus outside）	
3	Luan yueping	Geometric calibration and machinery parts testing（except pneumatic measuring instrument,inductive micrometer apparatus outside）	

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SCHEDULE 1 ACCREDITED KEY LOCATIONS OF THE LABORATORY

	Location Code	Address/Postal Code	Facilities Characteristic	Activity	Note
Locations Specified	A	No. 399, Suhong Middle Road, Industrial Park, Suzhou, Jiangsu, China/215122	I	(1), (2), (3), (4), (5)	

Note:

1. Facilities Characteristics I: Fixed Facilities, II: Out of Fixed Facilities, III: Temporary Facilities, IV: Mobile Facilities, V: Others.
2. Activity (1): Testing, (2): Calibration, (3): Issue of Reports/Certificates, (4): Sample Receiving, (5): Contract Review, (6): Others.

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SCHEDULE 3 ACCREDITED TESTING SCOPE

№	Test Object	Item/Parameter		Standard or Method	Note
		№	Item/ Parameter		
1	machinery parts	1	dimension	Geometrical Product Specifications (GPS) - Inspection of plain workpiece sizes GB/T 3177-2009	
		2	roughness	Geometrical Product Specifications (GPS) - Surface texture: Profile - Surface roughness parameters and their values; Geometrical Product Specifications (GPS) - Surface texture: Profile method - Terms, definitions and surface texture parameters GB/T 1031-2009; GB/T 3505-2009	

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№	Test Object	Item/Parameter		Standard or Method	Note
		№	Item/ Parameter		
		3	pitch diameter	General purpose metric screw threads - Basic dimensions; General purpose metric screw threads - Tolerances GB/T 196-2003; GB/T 197-2003	
		4	straightness	Geometrical product Specifications (GPS) - Geometrical tolerance - Verification prescription GB/T 1958-2004	
		5	flatness	Geometrical product Specifications (GPS) - Geometrical tolerance - Verification prescription GB/T 1958-2004	
		6	parallelism	Geometrical product Specifications (GPS) - Geometrical tolerance - Verification prescription GB/T 1958-2004	
		7	runout	Geometrical product Specifications (GPS) - Geometrical tolerance - Verification prescription GB/T 1958-2004	

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SCHEDULE 5 ACCREDITED CALIBRATION AND MEASUREMENT CAPABILITY SCOPE

Note: The instruments with * represents onsite calibration can be performed.

№	Instrument	Parameter	Calibration Method	Range	Expanded Uncertainty (k=2)	Note
1	Gage Block	length	Verification Regulation of gauge blocks JJG146	(0～100)mm	U=0.1μm+$10^{-6}L$(k=2.58)	
				(>100～500) mm	U=0.2μm+2×$10^{-6}L$ (k=2.58)	
2	Current Calipers	length	Verification Regulation of Current Calipers JJG30	(0～300) mm	U=0.01mm	
				(300～500)mm	U=0.02mm	
				(500～1000)mm	U=0.04mm	
				(1000～1500)mm	U=0.06mm	
3	Dial Gages	length	Verification Regulation of Dial Gauges JJG34	(0～15) mm	U=1.0μm	
4	Wide range dial gages reading in 0.01mm	length	Verification Regulation of wide range Dial Gauges reading in 0.01mm JJG379	(>10～30) mm	U=6μm	
				(>30～50) mm	U=7μm	
				(>50～100) mm	U=8μm	
5	Micrometer	length	Verification Regulation of Micrometer JJG21	(0～50) mm	U=0.7μm	
				(>50～100) mm	U=1.0μm	

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№	Instrument	Parameter	Calibration Method	Range	Expanded Uncertainty (k=2)	Note
				（>100～200）mm	U=1.3μm	
				（>200～300）mm	U=1.7μm	
				（>300～500）mm	U=3.0μm	
6	Internal Micrometer	length	Verification Regulation of internal Micrometers JJG22	(0～50）mm	U=0.7μm	
				（>50～100）mm	U=1.0μm	
				（>100～200）mm	U=1.3μm	
				（>200～300）mm	U=1.7μm	
				（>300～500）mm	U=3.0μm	
7	Depth Micrometer	length	Verification Regulation of Depth Micrometers JJG24	（0～100）mm	U=1.5μm	
				（>100～200）mm	U=2.0μm	
				（>200～300）mm	U=2.5μm	
8	Screw thread Micrometer	length	Verification Regulation of Screw Thread Micrometers JJG25	（0～50）mm	U=1.5μm	
				（>50～100）mm	U=2.0μm	
9	Micrometer with dial comparator indicating snap	length	Verification Regulation of Micrometers with Dial comparator and indication snap gauge JJG26	（0～50）mm	U=0.8μm	
				（>50～100）mm	U=1.0μm	
10	Height Caliper	length	Verification Regulation of Height Caliper JJG31	（0～300）mm	U=0.01mm	
				（>300～500）mm	U=0.02mm	
11	dial test indicator	length	Verification Regulation of Dial Test Indicator JJG35	（0～0.2）mm	U=0.5μm	
12	comparators of machine type	length	Verification Regulation of Comparators of machine type JJG39	≤100μm	U=0.4μm	
13	cylindrical measuring pin	diameter	Calibration Specification for Cylindrical Measuring Pin JJF1207	Φ(0.1～10）mm	U=0.3μm	

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№	Instrument	Parameter	Calibration Method	Range	Expanded Uncertainty (k=2)	Note
14	Feeler Gauge	thickness	Verification Regulation of Feeler Gauges JJG62	(0.02～3.00) mm	U=3.0μm	
15	The class of common Normal Micrometer	length	Verification Regulation of Common Normal Micrometer JJG82	(0～50) mm	U=1.6μm	
				(>50～100) mm	U=2.0μm	
16	Snap gauges reading in 0.01mm	length	Verification Regulation of Snap Gauges Reading in 0.01mm JJG109	(0～100)mm	U=4μm	
17	Surface plates	flatness	Verification Regulation of Surface Plates JJG117	≤(400×400) mm	U=1.0μm	
				≥(600×400)～(1000×750) mm	U=1.5μm	
				≥(1000×750)～(1600×1000) mm	U=2.3μm	
				≥(1600×1000)～(2500×1600) mm	U=3.0μm	
18	Mikrokator	length	Verification Regulation of Microcator JJG118	≤100μm	U=0.2μm	
19	Inductive Micrometers	length	Calibration Specification for Inductive Micrometers JJF1331	(-1000～+1000)μm	U=0.1μm	
20	Micrometers with dial gauge	length	Verification Regulation of Micrometers with Dial Gauge JJG427	(0～100mm	U=1.0μm	
21	Depth Dial gauge	length	Verification Regulation of Depth Dial Gauge JJG830	(0～100) mm	U=4μm	
22	Smooth plug gauge	diameter	Verification Regulation of Plain limit Gauges JJG343	φ(1～10)mm	U=0.5μm	
				φ(>10～50)mm	U=1.0μm	
				φ(>50～100)mm	U=1.3μm	
				φ(>100～200)mm	U=2.0μm	

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№	Instrument	Parameter	Calibration Method	Range	Expanded Uncertainty (k=2)	Note
23	Cylindrical thread gauge	middle diameter	Calibration Specification for cylindrical Thread Gauges JJF1345	M（2～100）mm	U=3.0μm	
24	Digital Height Measuring Instrument	length	Calibration Specification for Height measuring Instrument with digital display JJF1254	L≤360mm	U=1.0μm	
				(360< L≤600)mm	U=1.5μm	
				(600< L≤1000)mm	U=2.0μm	
25	Bore dial indicators	length	Calibration Specification for Bore Dial Indicators JJF1102	(2～200)mm	U=1.0μm	
26	Micrometers for measuring inside dimension	length	Calibration Specification for Micrometers of Measuring inside dimension JJF1411	（5～100）mm	U=1.5μm	
				（>100～150）mm	U=2.0μm	
27	Squares	perpendicularity	Verification Regulation of Squares JJG7	（0～100）mm	U=1.5μm	
				（>100～150）mm	U=2μm	
				（>150～300）mm	U=3μm	
				（>300～400）mm	U=4μm	
				（>400～500）mm	U=5μm	
28	Standard ring gauge	diameter	Verification Regulation of Standard Ring gauge JJG894	Φ（2～200）mm	U=(0.7+6L)μm	
29	Contact(stylus) instruments of surface roughness measurement	roughness	Calibration Specification for Contact instrument of surface roughness measurement by the profile method JJF1105	Ra=(0.01~4.0)μm	U_{rel}=5%	
30	pneumatic measuring instrument for micrometers	length	Verification Regulation of Pneumatic Measuring Instrument for Micrometers JJG356	（0～400）μm	U=0.5μm	

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№	Instrument	Parameter	Calibration Method	Range	Expanded Uncertainty (k=2)	Note
31	Imaging probe measuring machines	length	Calibration Specification for Imaging Probe Measuring Machines JJF1318	（0～200）mm	U=(0.5+2L/1000)μm	Accredited only for dinmension error of indication
32	Electronic plug gages	diameter	Calibration Specification for Electronic Plug Gauges JJF1310	φ(1～10)mm	U=0.5μm	
				φ(＞10～50)mm	U=1.0μm	
				φ(＞50～100)mm	U=1.3μm	
				φ(＞100～130)mm	U=1.6μm	
33	Concentricity tester	length	Calibration Specification for Concentricity JJF1109	(0～1000)mm	U=3.0μm	
34	Universal bevel protractor	angle	Verification Regulation of Universal Bevel Protractors JJG33	(0～360)°	U=1′	
35	Dial snap gauges	length	Calibration Specification for Dial Snap Gauges JJF1253	（5～100）mm	U=4μm	
36	Radius gauges	radius	Verification Regulation of Radius Gauges JJG58	R（1～25）mm	U=8μm	
37	Toolmaker's microscope	length	Verification Regulation of Toolmaker's Microscope JJG56	（0～200）mm	U=(0.5+5L/1000)μm L:mm	
38	Length measuring instrument	length	Calibration Specification for Length Measuring Instrument JJF1189	(0～500)mm	U=(0.2+1L/1000)μm L:mm	
39	Coordinate measuring machine	length	Calibration Specification for Coordinate Measuring Machine JJF1064	(30～1000)mm	U=(0.5+2L/1000)μm L:mm	

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