ISO 10360-10:2021 (E)

Geometrical product specifications (GPS) — Acceptance and reverification tests for coordinate measuring systems (CMS) — Part 10: Laser trackers

Contents

		Forew	ord	
		Introdi	uction	
		muou	201011	
1		Scope		
_				
2		Normative references		
3		Terms and definitions		
4		Symbols		
5		Rated	operating conditions	
	5.1		Environmental conditions	
	5.2		Operating conditions	
6		Accep	tance tests and reverification tests	
•		-		
	6.1		General	
	6.2		Probing size and form errors Principle	
	6.2.1 6.2.2		Reference artefact	
	6.2.3	-	Procedure	
	6.2.4		Derivation of test results	
		=	Size errors	
	6.2.4		Form errors	
	6.3		Location errors (two-face tests)	
	6.3.1		Principle	
	6.3.2		Reference artefact	
	6.3.3		Procedure	
	6.3.4		Derivation of test results	
	6.4		Length errors	
	6.4.1		General	
	6.4.2		Principle	
	6.4.3		Reference artefacts	
	6.4.4		Procedure	
	6.4.4	1.1	Required test length positions	
	6.4.4		Testing of laser trackers with both IFM mode and ADM mode specified	
	6.4.5		Derivation of test results	
7		Confo	rmity with specification	
	7.1		Acceptance tests	
	7.2		Reverification tests	
8		Applic	ations	
	8.1		Acceptance test	
	8.2		Reverification test	
	8.3		Interim check	
9		Alterna	ative unformatted presentation of symbols	
Annex	κA	(informative) Forms		
	A.1		Form 1 — General specifications and rated conditions	
	A.2		Form 2 — Manufacturer's performance specifications	

Annex B	(normative) Calibrated test lengths
B.1	General
B.2	Material measures
B.3	Scale bars
B.4	Rigid nests
B.5	Rail or carriage system
B.6	Averaged and bi-directional lengths
Annex C	(normative) Thermal compensation of workpieces
Annex D	(informative) Specification of MPEs
D.1	General
D.2	Subsystem contributions
D.3	Development of generic formula
D.4	Note on distance (range) testing
D.5	Note on two-face measurement
Annex E	(informative) Interim testing
E.1	General
E.2	Environmental considerations
E.3	Frequency of interim testing
E.4	A best practice guideline
E.5	Interim test procedure
E.5.	see te geemen, en et
	1.1 Introduction
	1.2 Procedure
E.5.	
E.5.	
	2.1 Introduction
	2.2 Set-up
	2.3 Inclinometer test based on laser tracker tilt
E.5. E.5.	2.4 Inclinometer test based on laser tracker translation
Annex F	(normative) Testing of a stylus and retroreflector combination (SRC)
F.1	General
F.2	Probing errors
F.3	Orientation-dependent errors
F.3.	
F.3.2	
F.3.4 F.3.4	
г.з. ₄ F.4	Registration errors
F.4 F.5	Symbols pertaining to this annex
Annex G	(normative) Testing of an optical distance sensor and retroreflector combination (ODR)
G.1 G.2	General Problem overes
G.2 G.3	Probing errors Registration errors
G.3 G.4	Flat form measurement
G.4 G.5	Symbols pertaining to this annex
Annex H	(informative) Relation to the GPS matrix model
H.1	General
H.2	Information about this document and its use
H.3	Position in the GPS matrix model

H.4

Related International Standards

Page count: 46