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Solar energy — Solar thermal collectors — Test methods

Énergie solaire — Capteurs thermiques solaires — Méthodes d'essai



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Contents

	Page
Foreword	viii
Introduction	ix
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	2
5 General	5
5.1 Test overview — Sequence of the tests.....	5
5.2 Testing of collectors with specific attributes.....	6
5.2.1 General.....	6
5.2.2 Collectors using external power sources and collectors with active or passive measures for normal operation and self-protection.....	6
5.2.3 Collectors co-generating thermal and electrical power.....	7
5.2.4 Wind and/or infrared sensitive collectors (WISC).....	7
5.2.5 Façade collectors.....	7
5.2.6 Air and liquid heating collectors.....	8
6 Internal pressure tests for fluid channels	8
6.1 Objective.....	8
6.2 Fluid channels made of non-polymeric materials.....	8
6.2.1 Apparatus and procedure.....	8
6.2.2 Test conditions.....	8
6.3 Fluid channels made of polymeric materials.....	8
6.3.1 Apparatus and procedure.....	8
6.3.2 Test conditions.....	9
6.4 Results and reporting.....	9
7 Air leakage rate test (air heating collectors only)	9
7.1 Objective.....	9
7.2 Apparatus and procedure.....	9
7.3 Test conditions.....	10
7.4 Results and reporting.....	10
8 Rupture or collapse test (air heating collectors only)	10
8.1 Objective.....	10
8.2 Apparatus and procedure.....	10
8.2.1 General.....	10
8.2.2 Closed-loop collectors.....	11
8.2.3 Open to ambient collectors.....	11
8.3 Results and reporting.....	11
9 Standard stagnation temperature	11
9.1 Objective.....	11
9.2 Testing under stagnation conditions.....	12
9.3 Measurement and extrapolation of standard stagnation temperature.....	12
9.4 Determining standard stagnation temperature using efficiency parameters.....	12
9.5 Results and reporting.....	13
10 Exposure and half-exposure test	13
10.1 Objective.....	13
10.2 Initial outdoor exposure.....	13
10.3 Method 1.....	14
10.4 Method 2.....	14
10.5 Method 3.....	14
10.6 Test conditions.....	14

10.7	Results and reporting.....	15
11	External thermal shock.....	15
11.1	Objective.....	15
11.2	Apparatus and procedure.....	15
11.3	Test conditions.....	15
11.4	Results and reporting.....	16
12	Internal thermal shock test (Liquid heating collectors only).....	16
12.1	Objective.....	16
12.2	Apparatus and procedure.....	16
12.3	Test conditions.....	16
12.4	Results and reporting.....	16
13	Rain penetration test.....	16
13.1	Objective.....	16
13.2	Apparatus and procedure.....	16
13.3	Test conditions.....	17
13.4	Results and reporting.....	19
14	Freeze resistance test.....	19
14.1	Objective.....	19
14.2	Freeze resistant collectors.....	19
14.2.1	General.....	19
14.2.2	Test conditions.....	19
14.3	Heatpipe collectors.....	19
14.3.1	General.....	19
14.3.2	Test conditions.....	20
14.3.3	Results and reporting.....	20
15	Mechanical load test with positive or negative pressure.....	20
15.1	Objective.....	20
15.2	Apparatus and procedure.....	20
15.2.1	Mounting.....	20
15.2.2	Methods for the application of the loads.....	21
15.2.3	Particular specifications for tracking collectors or other specific collector types.....	22
15.3	Test conditions.....	22
15.4	Results and reporting.....	22
16	Impact resistance test.....	22
16.1	Objective.....	22
16.2	Test procedure.....	22
16.3	Impact location.....	22
16.4	Method 1: Impact resistance test using ice balls.....	23
16.4.1	Apparatus.....	23
16.4.2	Ice balls.....	23
16.4.3	Specific aspects of the test procedure using ice balls.....	23
16.5	Method 2: Impact resistance test using steel balls.....	23
16.6	Results and reporting.....	24
17	Final inspection.....	24
17.1	Objective.....	24
17.2	Test procedure.....	24
17.3	Results and reporting.....	25
18	Test report.....	25
19	Thermal performance testing.....	25
19.1	General.....	25
19.2	Performance test using a solar irradiance simulator.....	25
19.2.1	General.....	25
19.2.2	Solar irradiance simulator for performance testing.....	25
19.2.3	Solar irradiance simulator for the measurement of incidence angle modifiers.....	26

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20	Collector mounting and location	27
20.1	General	27
20.2	Collector orientation outdoors	27
20.3	Shading from direct solar irradiance	27
20.4	Diffuse and reflected solar irradiance	27
20.5	Thermal irradiance	28
20.6	Surrounding air speed	28
21	Instrumentation	28
21.1	Solar radiation measurement	28
21.1.1	Pyranometer	28
21.2	Thermal radiation measurement	29
21.2.1	General	29
21.2.2	Measurement of thermal irradiance outdoors	29
21.2.3	Measurement of thermal irradiance indoors	29
21.3	Temperature measurements	29
21.3.1	General	29
21.3.2	Heat transfer fluid temperatures (Liquid heating collectors)	29
21.3.3	Volume flow weighted mean temperature $\vartheta_{m,th}$ (Air heating collectors)	30
21.3.4	Measurement of ambient air temperature	30
21.4	Flow rate measurement	31
21.4.1	Measurement of mass flow rate (liquid)	31
21.4.2	Measurement of collector fluid flow rate (Air heating collectors)	31
21.5	Measurement of air speed over the collector	31
21.5.1	General	31
21.5.2	Required accuracy	32
21.6	Elapsed time measurement	32
21.7	Humidity measurement (Air collectors)	32
21.8	Collector dimensions	32
22	Test installation	32
22.1	Liquid heating collectors	32
22.1.1	General	32
22.1.2	Heat transfer fluid	33
22.1.3	Pipe work and fittings	33
22.1.4	Pump and flow control devices	34
22.2	Air heating collectors	34
22.2.1	General	34
22.2.2	Closed loop test circuit	34
22.2.3	Open to ambient test circuit	35
22.2.4	Heat transfer fluid	35
22.2.5	Test ducts	35
22.2.6	Fan and flow control devices	36
22.2.7	Air preconditioning apparatus	36
22.2.8	Humidity ratio	36
23	Thermal performance test procedures	36
23.1	General	36
23.2	Preconditioning of the collector	37
23.3	Test conditions	37
23.3.1	General	37
23.3.2	Flow rates	37
23.3.3	Steady-state method	37
23.3.4	Quasi dynamic test	38
23.4	Test procedure	38
23.4.1	General	38
23.4.2	Steady-state testing of liquid heating collector	38
23.4.3	Steady-state testing of air heating collectors	38
23.4.4	Steady-state testing of WISC collectors	39
23.4.5	Quasi dynamic testing	39

23.5	Measurements	39
23.5.1	General	39
23.5.2	Additional measurements during tests in solar irradiance simulators	40
23.5.3	Data acquisition requirements	40
23.6	Test period	40
23.6.1	Steady-state testing	40
23.6.2	Quasi dynamic testing	41
24	Computation of the collector parameters	44
24.1	Liquid heating collectors	44
24.1.1	General	44
24.1.2	Steady-state test method for liquid heating collectors	45
24.1.3	Quasi dynamic test method for liquid heating collectors	45
24.1.4	Data analysis	45
24.2	Air heating collectors	46
24.2.1	General	46
24.2.2	Steady-state test method for closed loop air heating collectors	46
24.2.3	Steady-state test method for open to ambient air heating collectors	46
24.2.4	Steady-state test method for open to ambient air heating WISC collectors	46
24.3	Standard reporting conditions (SRC)	46
24.4	Standard uncertainties	47
24.5	Reference area conversion	47
25	Determination of the effective thermal capacity and the time constant	47
25.1	General	47
25.2	Measurement of the effective thermal capacity with irradiance	47
25.3	Measurement of the effective thermal capacity using the quasi dynamic method	48
25.4	Calculation method for the determination of the effective thermal capacity	48
25.5	Determination of collector time constant	48
26	Determination of the incident angle modifier (IAM)	49
26.1	General	49
26.2	Modelling	50
26.2.1	Steady-state	51
26.2.2	Quasi dynamic	52
26.3	Test procedures	52
26.3.1	Steady-state liquid heating collectors	52
26.3.2	Air collectors	52
26.4	Calculation of the collector incidence angle modifier	53
26.5	Reporting	53
27	Determination of the pressure drop	53
27.1	General	53
27.2	Liquid heating collectors	53
27.2.1	Apparatus and procedure	53
27.2.2	Pressure drop caused by fittings	54
27.2.3	Test conditions	54
27.3	Air heating collectors	54
27.3.1	Apparatus and procedure	54
27.4	Calculation and presentation of results	55
	Annex A (normative) Test reports	56
	Annex B (normative) Steady-state and quasi dynamic model	80
	Annex C (normative) Density and heat capacity of water	81
	Annex D (informative) Assessment of the standard uncertainty in solar collector testing	82
	Annex E (informative) Measurement of the velocity weighted mean temperature	86
	Annex F (informative) Material efficiency aspects	88
	Annex G (informative) Area conversion of thermal performance parameters	89

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Bibliography 90

Foreword

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This second edition cancels and replaces the first edition ISO 9806:2013, which has been technically revised.

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Introduction

This document defines procedures for testing fluid heating solar collectors for thermal performance, reliability, durability and safety under well-defined and repeatable conditions. It contains performance test methods for conducting tests outdoors under natural solar irradiance and natural and simulated wind and for conducting tests indoors under simulated solar irradiance and wind. Outdoor tests can be performed either steady-state or as all-day measurements, under changing weather conditions.

Collectors tested according to this document represent a wide range of applications, e.g. glazed flat plate collectors and evacuated tube collectors for domestic water and space heating, collectors for heating swimming pools or for other low temperature systems or tracking concentrating collectors for thermal power generation and process heat applications. This document is applicable to collectors using liquids, as well as air as heat transfer fluid. Similarly, collectors using external power sources for normal operation and/or safety purposes (overheating protection, environmental hazards, etc.), as well as hybrid devices generating thermal power and electrical power are also considered.