



TEST REPORT

Reference No...... : WTF26F07217235Q
Applicant..... : LANGCHEN TECHNOLOGY CO., LIMITED
Address..... : RM C1, FLAT J, 4/F, CENTURY IND CENTRE, 33-35 AU PUI WAN STREET, SHA TIN HONG KONG
Manufacturer : JINHUA JINNUO DUCAI LEISURE PRODUCTS CO., LTD
Address..... : Shentang Industrial Zone, Baiyang Rd., Wuyi county, Jinhua City, Zhejiang Pro., China
Product Name..... : STEAM CLEANER
Model No..... : TC-SC-006, TC-SC-011, TC-SC-008, TC-SC-001, TC-SC-002, TC-SC-003, TC-SC-007, TC-SC-010
Test specification..... : UL499:2014 Ed.14, Rev. 4 Feb, 2025
Date of Receipt sample : 2026-07-01
Date of Test : 2026-07-01 to 2026-08-04
Date of Issue..... : 2026-08-17
Test Report Form No. : WSL-6059821A-04B
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

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Tested by:

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PH Yuan

Approved by:

Allen He
Allen He



Test item description	STEAM CLEANER
Trade Mark.....	N/A
Model/Type reference	TC-SC-006, TC-SC-011, TC-SC-008, TC-SC-001, TC-SC-002, TC-SC-003, TC-SC-007, TC-SC-010
Ratings	110V, 60Hz, 1500W
Copy of marking plate: STEAM CLEANER MODEL: TC-SC-006 Input: 110V, 60Hz, 1500W CAUTION: HOUSEHOLD USE ONLY READ INSTRUCTIONS BEFORE USING DO NOT IMMERSE IN WATER THE WATER NOT FOR DRINK LANGCHEN TECHNOLOGY CO., LIMITED 60 MINUTES “ON” IN A TWO HOUR PERIOD. CONFORMS TO UL STD.499	
Model Similarity: All models are identical except model number.	
Summary of testing: 1. These samples are tested and complied with the requirements of standards listed on this report. 2. Full tests were performed on model TC-SC-006.	
General Similarity: N/A	



UL499			
Clause	Requirement	Result - Remark	Verdict
1	Scope		
2	Glossary		
3	Units of Measurement		
4	Undated References		
CONSTRUCTION			
5	General		P
6	Components		P
6.1	Genera		P
6.2	Requirements for Components		P
6.2.2	Attachment Plugs, Receptacles, Connectors and Terminals		P
6.2.3	Switches		N
6.2.4	Low-Voltage Circuit Transformers		N
6.2.5	Light Sources and Associated Components		N
6.2.6	Heating Devices		P
6.2.7	Controls		N
6.2.8	Cord Reel		N
6.2.9	Overcurrent Protection		P
6.2.10	Ground-Fault, Arc-Fault and Leakage Current Detectors/Interrupters		N
6.2.11	Power Supplies		P
6.2.12	Supplemental Insulation, Insulating Bushings and Assembly Aids		N
6.2.13	Gaskets and Seals		P
6.2.14	Printed Wiring Boards		P
7	Frame and Enclosure		P
8	Assembly		P
9	Stability		P
10	Corrosion Protection		N
11	Supply Connections - Permanently-Connected Products		N
12	Supply Connections - Cord Connected Products		P
12.3	Pin terminals		N
12.4	Bushings		P
13	Current-Carrying Parts		P
14	Internal Wiring		P
14.2	Protection of wiring		P
14.3	Splices		P
14.4	Separation of circuits		N
15	Heating Elements		P
16	Electrical Insulation		P
17	Thermal Insulation		N
18	Motors		N



UL499			
Clause	Requirement	Result - Remark	Verdict
19	Overcurrent Protection of Conductors and Heating Elements		P
20	Motor-Running Overload Protection		N
21	Motor and Power-Transformer Short-Circuit and Ground-Fault Protection		N
22	General (Short-Circuit and Ground-Fault) Overcurrent Protection		N
23	Thermal Cutoffs		P
24	Lampholders		N
25	Switches		N
26	Automatic Controls and Control Circuits		P
27	Spacings		P
27.1.2	Barriers		N
27.2	Low-voltage circuits		N
27.2.2	Other than limiting controls		P
28	Grounding		P
29	Leakage Current Collectors		N
30	Pressure Vessels and Parts Subject to Pressure		N
31	Protection Against Injury to Persons		P
Performance			
32	General.		
33	Power input test		P
34	Leakage Current		P
35	Escape Current Test		N
36	Normal Temperature Tests		P
37	Test of Insulation Resistance and Leakage Current as a Result of Moisture		P
38	Dielectric Voltage-Withstand Test		P
39	Mechanical Endurance Test		N
40	Resistance to Impact		P
41	Overflow Test		P
42	Abnormal Operation Test		P
43	Testing of Component Switches and Control Devices		P
44	Strain Relief Test		N
45	Push-Back Relief Test		N
46	Permanence of Cord Tag for Outdoor-Use Heating Appliances with Power-Supply Cords Less than 6 Feet (1.8 m)		N
47	Crushing Resistance for Flexible Pet Heating Mats/Pads		N
48	Appliance Coupler Retention		N
49	Connector Current Interruption		N
RATING			
52	Details		P
MARKING			
53	Details		P



UL499			
Clause	Requirement	Result - Remark	Verdict
54	Instructions		P
SUPPLEMENT SA	SUPPLEMENT SA - ELECTRIC HEATER GUNS FOR GOVERNMENT USE..		N
SUPPLEMENT SB	SUPPLEMENT SB - HEAT GUNS OPERATING FROM RECHARGEABLE BATTERY POWER		N
SUPPLEMENT SC	SUPPLEMENT SC - BATTERY OPERATED ELECTRIC HEATING APPLIANCES.		N
SUPPLEMENT SD	SUPPLEMENT SD - INDUSTRIAL BLANKET HEATERS.		N

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**List of test items:**

No.	Test Items	Requirement + Test	Result
1	Stability	UL499	Pass
2	Power Input Test	UL499	Pass
3	Leakage Current	UL499	Pass
4	Normal Temperature Test	UL499	Pass
5	Test of Insulation Resistance and Leakage Current as a Result of Moisture	UL499	Pass
6	Dielectric Voltage-Withstand Test	UL499	Pass
7	Resistance to Impact	UL499	Pass
8	Overflow Test	UL499	Pass
9	Abnormal Operation Test	UL499	Pass
10	Testing of components Switches and Control Devices	UL499	Pass
11	Polarization and Grounding Continuity Tests	UL499	Pass

Subcontract

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test items: ---

Lab information: --

Possible test case verdicts:

- test case does not apply to the test object.....: N/A
- test object does meet the requirement.....: P (Pass)
- test object does not meet the requirement.....: F (Fail)

1. Stability

**Test Method:**

A portable household appliance was placed on a supporting surface that is inclined at a 15° angle from the horizontal. The appliance was turned to the position most likely to cause tipping. Any adjustable or movable part that will affect the location of the centre of gravity of the appliance was placed in the position most likely to contribute to tipping. Blocks are placed in front of the appliance to prevent it from moving down the incline. The results are acceptable if the appliance remains stable on the tilted surface.

For appliances with reservoirs, and with liquid reaches a temperature greater than 46°C, it was placed on a plane inclined at an angle of 15° to the horizontal. The appliance was positioned and loaded with whatever combination of separable components, liquid or other media (material) that results in the maximum tendency to overturn under conditions of intended use. The appliance was contained a minimum of 5 ounces (148 mL) of liquid.

Test Result:

The appliance (☐ did / ☒ did not) overturn as a result of the test.

Conclusion:

These results (☒ complied / ☐ did not comply) with the requirements.

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2. Power Input Test

Test Method:

The power input to a heating appliance shall not be more than 105 percent of its marked rating.

The power input was measured with the product at normal operating temperature under full-load conditions and while connected to the supply circuit of the marked voltage rating, or the highest voltage of the applicable range of voltages specified.

Test Result:

Operating Condition	Supply Voltage (V)	Current (A)	Wattage (W)	Marked Rating (W)	Wattage Limit (W)
Full load and normal operation max setting.	110	13.1	1450	1500	1575

The measured power input (☐was / ☒was not) more than 105 percent of its marked rating.

Conclusion:

These results (☒ complied / ☐did not comply) with the requirements.

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3. Leakage Current Test

Test Method:

One "as received" sample was placed on an insulated surface and was connected to a 120 V, 60 Hz source of supply. Leakage currents to earth ground were measured from all exposed conductive surface of the unit by a meter having an input impedance of 1500ohms resistive shunted by a capacitance of 0.15 μ F. For enclosure surface other than metal, the leakage current was measured using a metal foil with an area of 10 x 20 cm in contact with the surface.

The test sequence was as follows:

- With switch S1 open, the appliance was connected to the measuring circuit. Leakage current was measured using both positions of switch S2. (S1 - OFF, S2 - P1 / S1 - OFF, S2 - P2)
- Switch S1 was then closed, energizing the appliance, and within a period of 5 second, the leakage current was measured using both position of switch S2, and with the appliance operated at maximum heat setting of controls. (S1 - ON, S2 - P1 / S1 - ON, S2 - P2)
- Leakage current was monitor until thermal stabilization under the maximum heat condition. Both positions of switch S2 were used.
- For the appliance employs a single pole switch, monitoring of leakage was continue until the leakage current stabilized or decreased after the appliance was turned off.

The leakage current of a cord-connected appliance rated for a nominal 120V supply shall not be more than:

- 0.5 mA for an ungrounded (2-wire) appliance,
- 0.5 mA for a grounded (3-wire) appliance that is easily carried or conveyed by hand, and
- 0.75 mA for a grounded (3-wire or 4-wire) permanently connected appliance, or a cord connected appliance that is intended to be fastened in place or located in a dedicated space and employing a standard attachment plug rated 20A or less.

Test Result:

Condition	S1	S2	Measured maximum leakage current (mA)
a. - Unit ON	OFF OFF	P1 P2	<0.05 <0.05
b. - Unit ON (0 - 5 seconds)	ON ON	P1 P2	<0.05 <0.05
c. - Unit ON (Thermal stabilisation)	ON ON	P1 P2	<0.05 <0.05
d. - Unit OFF (Leakage current stabilised or decreased)	ON ON	P1 P2	<0.05 <0.05

Conclusion:

These results (☒ complied / ☐ did not comply) with the requirements.



4. Normal Temperature Test

All appliance, when tested under the specified conditions, shall not attain a temperature at any point sufficiently high to constitute a risk of fire or to damage any of the materials used in the appliance, or show temperature rises at any time during the test greater than those indicated.

Test Result:

Input: 112.7VAC, 13.36 A, 1500W

Load: Unit set to maximum temperature setting and water load until stably.

Ch.	Location	Temp. Rise (°C)	Rise Limit (°C)
101	Power cord	34.2	80
102	Inlet	56.9	Ref
103	Heater lead wire	61.2	175
104	Heater holder	137.2	Ref
105	Heater lead wire sleeving	95.1	175
106	Thermostat	136.0	Ref
107	Thermal link of Heater	148.6	Ref
108	Water valve	50.2	Ref
109	NTC lead wire	86.6	175
110	PCB	90.3	105
111	PCB support	57.3	Ref
112	Varistor	60.7	Ref
113	X2 Capacitor	68.5	Ref
114	Relay	71.7	Ref
115	Wire connector	60.9	Ref
116	Fuse	57.5	Ref
117	Water pipe	130.7	Ref
118	Steam outlet	68.7	Ref
119	Bottom cover	52.8	65
120	Main body near heater	44.1	65
201	UP enclosure	35.9	65
202	Water tank	10.7	65
203	Button	11.1	65
204	Test corner, floor	8.5	65
205	Test corner , wall	0.5	65
206	Ambient Temperature	24.2	--

The product (☐ attained / ☒ did not attain) a temperature at any point high enough to constitute a risk of fire or to damage any material employed in the appliance.

The product (☐ showed / ☒ did not show) greater temperature rises at certain specified points itemized on the next page.

Conclusion:

These results (☒ complied / ☐ did not comply) with the requirements.



5. Insulation Resistance and Leakage Current as a Result of Moisture

Test Method:

The appliance was placed in a humidity chamber maintained at a relative humidity of $88 \pm 2\%$ at a temperature of $32.0 \pm 2.0\text{ }^{\circ}\text{C}$ for a period of 48 hours. Following the test, the appliance shall comply with the Leakage Current Test, Section 32.

The leakage current of a cord-connected appliance rated for a nominal 120V or 240V supply shall not be more than:

- a) 0.5mA for an ungrounded (2-wire) appliance,
- b) 0.5mA for a grounded (3-wire) appliance that is easily carried or conveyed by hand, and
- c) 0.75mA for a grounded (3-wire) permanently connected appliance, or a cord connected appliance that is intended to be fastened in place or located in a dedicated space and employing a standard attachment plug rated 20A or less.

Test Result:

The maximum leakage current measure record was 0.032 mA(Max.) (☐ was / ☒ was not) more than 0.5mA.

Conclusion:

These results (☒ complied / ☐ did not comply) with the requirements.

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6. Dielectric Voltage-withstand Test

Test Method:

An appliance shall be capable of withstanding, for 1 minute without an indication of unacceptable performance, the application of a potential applied between live parts and accessible metal parts.

The appliance was to be at its maximum normal operating temperature. The test potential (rms) was _____1000_____ V. An enclosure constructed partly or totally of insulating material was to have all accessible surface of the material closely wrapped in metal foil. The test potential was applied between live parts and the foil.

Test Result:

There (☐was /☒was no) indication of dielectric breakdown or arc-over during applying the test potential for 1 minute.

Conclusion:

These results (☒complied / ☐did not comply) with the requirements.

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7. Resistance to Impact

Test Method:

The material of the reservoir shall withstand the impact, with the appliance restrained, without occurrence of electric shock or in risk of fire.

After the applicable Impact Test, the appliance is considered to comply if the current measured through a 500 ohm resistor connected between an accessible part and ground is not more than 5mA and comply with the Dielectric Voltage-Withstand Test, Section 35.

Test Result:

The units (☐did / ☒did not) collapse or experience displacement of parts which resulted in a risk of fire or electric shock.

Entry of the accessibility probe (☐was / ☒was not) permitted into the unit enclosure to contact an uninsulated live part.

The units (☒complied / ☐ did not comply) with the Dielectric Voltage-Withstand Test.

The maximum leakage current recorded was 0.033 mA (Max.)which is (☐greater / ☒ smaller) than the maximum allowable leakage current 5 mA.

Conclusion:

These results (☒complied / ☐ did not comply) with the requirements.

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8. Overflow Test

Test Method:

Water was poured into the reservoir through an orifice 3/8inch in diameter. The reservoir was filled to the level recommended by the manufacturer if such level is plainly marked; otherwise, the reservoir was filled to maximum capacity. Additional water, equal to 50 percent of the volume just mentioned, but not more than 1 pint (470mL), was poured into the reservoir.

Test Result:

The uninsulated live parts (☐have / ☒have not) become wet as a result of the overflow

The insulation of appliance (☒can / ☐cannot) withstand the 1000 V dielectric potential (☐with / ☒without) breakdown or arc-over between insulation.

The insulation resistance (☐was / ☒was not) less than 50,000 ohms.

Conclusion:

These results (☒complied / ☐did not comply) with the requirements.

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9.1. Abnormal Operation Test

Test Method:

A liquid heater is to be operated dry and with all or protective devices shunted out of the circuit, except as noted in 36.1.19

Test Result:

There (☐ was / ☒ was no) emission of flame or molten metal, and glowing or flaming of combustible material.

The unit (☐ did / ☒ did not) collapse or experience displacement of parts which resulted in a risk of fire or electric shock.

The leakage current measured was 0.031 mA(Max.), which (☐ did / ☒ did not) exceed the limit of 5 mA.

Note:Temperature fuse activates in two minutes

Conclusion:

These results (☒ complied / ☐ did not comply) with the requirements.

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9.2. Abnormal Operation Test

Test Method:

The sample was placed on white tissue paper on a softwood surface and covered with a double layer of cheesecloth. It was supplied with rated voltage and operated continuously for 7 to 8 hours until the ultimate result was observed.

The sample was subjected to short-circuiting of thermostat.

Then the current between an accessible part and ground was measured through a 500-ohm resistor. Hard water solution was added to an amount equal to the capacity of the container before measurement.

Test Result:

After 7 to 8 hours of operation, there (☐ was / ☒ was no) emission of flame or molten metal, and glowing or flaming of combustible material.

The units (☐ did / ☒ did not) collapse or experience displacement of parts which resulted in a risk of fire or electric shock.

The cheesecloth (☐ was / ☒ was not) caused to glow or flame as a result of this test.

The leakage current measured was 0.031 mA(Max.), which (☐ did / ☒ did not) exceed the limit of 5 mA.

Note: Temperature fuse activates in two minutes

Conclusion:

These results (☒ complied / ☐ did not comply) with the requirements.

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10. Component Switches and Control Devices

An automatic control for temperature regulating or temperature limiting shall be capable of performing successfully for 50 cycles of operation, when the heater is connected to a supply circuit having a potential of 120 percent of the voltage specified in 32.1.13. There shall be neither electrical nor mechanical malfunction of the device, nor undue burning, pitting, or welding of the contacts.

Test Method:

The appliance was connected to a grounded supply circuit. During the test, exposed dead metal parts of the appliance were connected to ground through a 3-A fuse; and the control, if single-pole, was connected in an ungrounded conductor of the circuit. If the heater is intended for use on direct current, or on direct current as well as on alternating current, the test was conducted with direct current, and the enclosure was so connected as to be positive with respect to a single-pole automatic control. The device was operated at the rate of 10 cycles per minute, except that a faster rate of operation may be employed if agreeable to all concerned.

Test Result:

The 3-A fuse (☒remained / ☐ did not remain) intact after the test.

There (☐was / ☒ was no) electrical or mechanical malfunction of the device.

There (☐was / ☒ was no) welding or undue pitting of the switch contacts.

Conclusion:

These results (☒complied / ☐did not comply) with the requirements.

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11.Continuity of grounding connection test

Test Method:

As a routine production-line test, each cord-connected appliance having a provision for grounding shall be tested to determine grounding continuity between the grounding blade of the attachment plug and the accessible metal parts of the appliance that are likely to become energized. See 51.3.1.

51.2 Polarization continuity test 51.2.1 As a routine production-line verification, each cord-connected heating appliance provided with a 2-wire polarized or 3-wire grounding attachment plug shall be examined or tested for electrical continuity between the ungrounded circuit supply conductor of the attachment plug (see Figure 12.1 for attachment plug blade connections) and all components intended to be connected to the ungrounded conductor. If the continuity cannot be readily determined by visual inspection and component checking, an electrical continuity test is to be conducted. See 51.3.1.

51.3 Electrical indicating device 51.3.1 Any indicating device (an ohmmeter, a battery-and-buzzer combination, or the like) may be used to determine compliance with the continuity requirements in 51.1.1 and 51.2.1.

Test Result:

There (☒ was / ☐ was no) good grounding continuity between the grounding tab of the plug and the accessible metal parts of the appliance that may be live.

Conclusion:

These results (☒ complied / ☐ did not comply) with the requirements.

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Photo Documentation:



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8

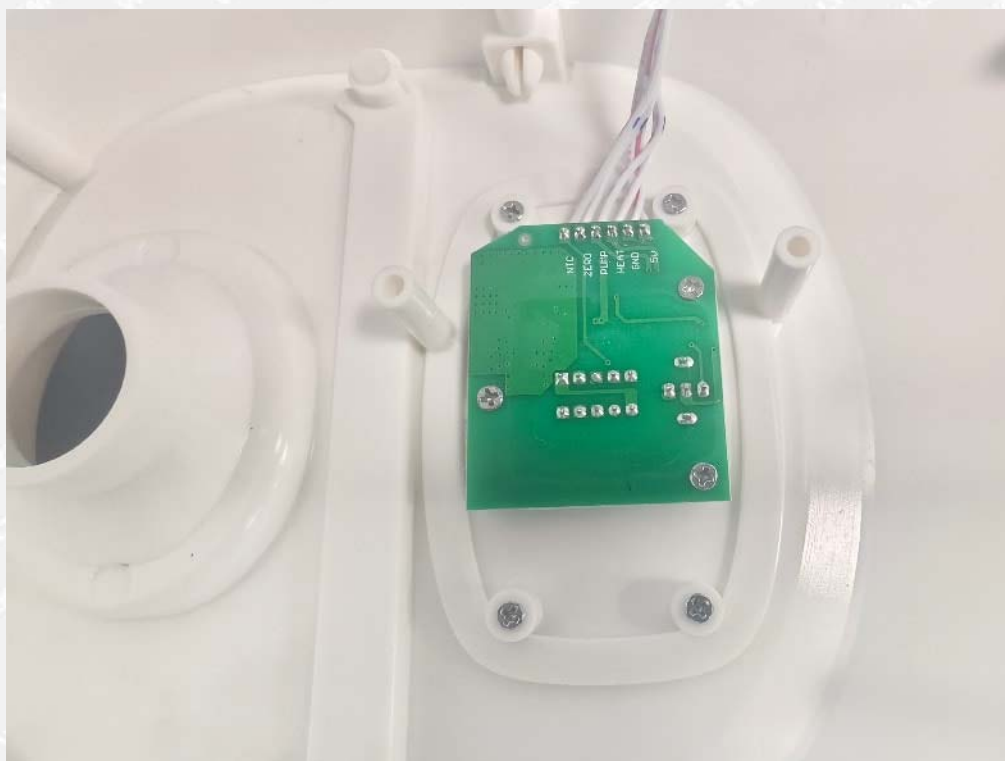


Photo 9



Photo 10



Photo 11



Photo 11



Photo 11



Photo 11



Photo 11

Equipment Used during Test:

Equipment	Model/Type
Temperature & Humidity Datalogger	DT-172
Temperature Recorder	34970A
Power Meter	PF9808B
Dielectric & Insulation Resistance Tester	9012
AC leakage current tester	7611
Environmental Chamber	GR-HWS-1000L
Stability Angle Gauge	JZC-B2
Digital Multimeter	15B
Impact ball	FZ-111
Clock	HS-70W
Balance	JM3102
Tape Measure	3m
Multi meter	115C
Caliper	CD-6 " CSX
Poise	35 LB
Force Gauge	SN-500
Counter Mechanism	DHC3J-6AL

===== End of Report =====