Test Report issued under the responsibility of:

TEST REPORT
IEC/EN 60335-2-23
Part 1: Safety of household and similar electrical appliances
Part 2: Particular requirements for appliances for skin or hair care

Report Number. .....:	SH12090825-001
Date of issue.....:	2013-01-17; Amendment 1: 2014-02-18
Total number of pages	26 pages of test report (Including 5 pages photographs)
Applicant's name.....:	
Address .....:	
Test specification:	
Standard.....:	EN 60335-2-23:2003 + A1:2008 + A11:2010 used in conjunction with EN 60335-1:2012 and EN 62233:2008 (IEC 60335-2-23:2003 (Fifth edition) (incl. corr.2:2008) + A1:2008 in conjunction with IEC 60335-1:2010 (Fifth edition))
Test procedure .....:	--
Non-standard test method……..:	N/A
Test Report Form No.....:	TTRF IEC/EN 60335_2_23D
Test Report Form(s) Originator .....:	INTERTEK HANGZHOU
Master TRF .....:	Dated 2012-10

Test item description .....:	Hair Dryer
Trade Mark .....:	
Manufacturer .....:	Same as applicant
Model/Type reference.....:	RW806*, RW806S*(*=A, B); RW807*, RW862*(*=A, B, AF, BF)
Ratings .....:	50/60Hz, Class II for all models RW806*: 220-240V~, *=A: 1000W, *=B: 1200W RW806S*: 120/230V~, *=A: 1000W, *=B: 1200W RW807*, RW862*: 220-240V~, *=A: 2000W, *=B: 2200W, *=AF: 2000W, *=BF: 2200W

Testing procedure and testing location:			
☒	**Testing Laboratory:**	Intertek Testing Services Shanghai	
Testing location/ address ..... :		Building No.86, 1198 Qinzhou Road (North), Shanghai, 200233, China	
☐	**Associated CB Laboratory:**		
Testing location/ address ..... :		N/A	
	Tested by (name + signature) ..... :	Simon Zhou	
	Approved by (name + signature) . :	Hyden Li	
☐	Testing procedure: TMP		
Testing location/ address ..... :		N/A	
	Tested by (name + signature) ..... :	N/A	
	Approved by (name + signature) . :	N/A	
☐	Testing procedure: WMT		
Testing location/ address ..... :		N/A	
	Tested by (name + signature) ..... :	N/A	
	Witnessed by (name + signature) :	N/A	
	Approved by (name + signature) . :	N/A	
☐	Testing procedure: SMT		
Testing location/ address ..... :		N/A	
	Tested by (name + signature) ..... :	N/A	
	Approved by (name + signature) . :	N/A	
	Supervised by (name + signature):	N/A	
☐	Testing procedure: RMT		
Testing location/ address ..... :		N/A	
	Tested by (name + signature) ..... :	N/A	
	Approved by (name + signature) . :	N/A	
	Supervised by (name + signature):	N/A	

Summary of testing:

From the result of our inspection and tests on the submitted samples, we conclude that they **comply** with the requirements of the standards.

Determination of the test result includes consideration of measurement uncertainty from the test equipment and methods.

The report is base on SH10010200-001 (Cert. No. 10SHH1100-01), The standard updated from EN 60335-2-23:2003+A1:08 used in conjunction with EN 60335-1:2002+A11, A1:04+A12, A2:06+A13:08.

Tests performed (name of test and test clause):	**Testing location:**
Full	Same as previous page.

Summary of compliance with National Differences

List of countries addressed: National differences for Germany, Italy and United Kingdom have been checked.

Copy of marking plate(representative):

Test item particulars ..... :	
Classification of installation and use ..... :	Portable and Household use
Supply Connection..... :	Type Y attachment supply cord
..... :	
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)
Testing .....:	
Date of receipt of test item ..... :	2014-01-15
Date (s) of performance of tests ..... :	2014-02-07 to 2014-02-13

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Appendix: EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

Appendix: Photo documents

No obvious or conspicuous PAK/PAH issues was observed.

PAH test according to ZEK 01.4-08 is considered and passed, please refer to PAH test report 140100696SHA-PAH1 for detail.

This test report should be read in conjunction with the constructional data form (CDF).

Name and address of factory (ies).....:

General product information:

Products covered by this test report are hair dryers for household and indoor use only.

The appliances incorporate switch, heating wire, thermal cut-out and low voltage DC motor.

RW806A and RW806SA are same except voltage rating and RW806SA has additional voltage-select switch, same to RW806B and RW806SB.

RW806A and RW806B are totally same except the rated power input, same to RW806SA and RW806SB.

RW807* (*=A, AF, B, BF) are the same except model name with A rated 2000W, with B rated 2200W, with F Negative Ion Generator employed.

RW862* (*=A, AF, B, BF) are the same except model name with A rated 2000W, with B rated 2200W, with F Negative Ion Generator employed.

RW806A, RW806B, RW806SA, and RW806SB have the foldable handle.

All tests were done under 50 Hz conditions.

For RW806SB: Cl.11, Cl.13, Cl.19, Cl.23.3, Cl.25.14 and Annex I were tested according to the more

unfavourable rated voltage (120V) for same power but larger current.

For the Negative Ion Generator FF-350 and FF-370 certified by TÜV Rh test report 14702816 001; YFA-223M certified by TÜV Rh test report 16011099 001-002; HL-F18, HL-F28 and HL-F78 certified by TÜV PS test report 70.401.08.111.01-01.

We had checked that the construction of Negative Ion Generator used in this test report had the same construction as which shown in the TÜV Rh test report.

After review, RW806B, RW806SB, RW807BF and RW862BF as representative model subjected to all tests and other models were also tested for relevant tests if mentioned, the most unfavourable results were recorded.

Amendment 1:

The original test report ref No. SH12090825-001, dated 2013-01-17, was modified on 2014-02-18 to include the following changes and/or additions:

1. Add four new models RW807* (*=A, AF, B, BF) and delete two original models RW807 and RW807F. RW807* (*=A, B) are same as original model RW807 except the rated power input and circuits are changed, same to RW807* (*=AF, BF) and RW807F.
2. Re-evaluate PAH requirements (ZEK01.4-08).
3. Update table 24.1.

After review, for new added models, compared with original models, the circuit is changed, RW807BF as representative model subjected to all relevant tests and other models were also tested for relevant tests if mentioned, the most unfavourable results were recorded.

Clauses Concerned: Cl.7, Cl.8, Cl.10, Cl.11, Cl.13, Cl.15, Cl.16, Cl.19, Cl.24, Cl.25, Cl.29, Cl.30, Cl.32, Annex I.

Table concerned: Table 10.1, Table 11.8, Table 11.Z101, Table 13.2, Table 13.3, Table 16.2, Table 16.3, Table 19, Table 19.13, Table 24.1, Table 29.1, Table 29.2.

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
7	MARKING AND INSTRUCTIONS		
7.1	Rated voltage or voltage range (V).....:	Refer to marking plate	P
	Symbol for nature of supply, or.....:	Refer to marking plate	P
	Rated frequency (Hz) .....:	Refer to marking plate	P
	Rated power input (W), or .....:	Refer to marking plate	P
	Rated current (A) .....:		N/A
	Manufacturer's or responsible vendor's name, trademark or identification mark.....:	Refer to marking plate	P
	Model or type reference.....:	Refer to marking plate	P
	Symbol IEC 60417-5172, for class II appliances	Refer to marking plate	P
	IP number, other than IPX0.....:	IPX0	N/A
	Symbol IEC 60417-5180, for class III appliances, unless		N/A
	the appliance is operated by batteries only		N/A
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains, if the working voltage exceeds extra-low voltage		N/A
	Portable hairdryers, curling irons and similar appliances marked with symbol IEC 60417-5582 (2002-10) combined with prohibition sign of ISO 3864-1, except for specified colours (IEC 60335-2-23/A1),		P
	or with substance of following: WARNING: Do not use this appliance near water. (IEC 60335-2-23)		N/A
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		P
	the power input is related to the arithmetic mean value of the rated voltage range		P
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N/A
7.13	Instructions and other texts in an official language	English and German	P
10	POWER INPUT AND CURRENT		
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1 ..:	(see appended table)	P

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	Test carried out at upper an lower limits of the ranges for appliances with one or more rated voltage ranges, unless		N/A
	the rated power input is related to the arithmetic mean value		P
11	HEATING		
11.1	No excessive temperatures in normal use		P
	For appliances incorporating swivel connection, compliance also checked by test of clause 11.101 (IEC 60335-2-23)		N/A
11.2	The appliance is held, placed or fixed in position as described .....:	Hand-held with unrestricted airflow directed downward	P
	Appliances intended to be used on a stand or attached to a support placed to give most unfavourable results (IEC 60335-2-23)		N/A
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		N/A
	the windings are non-uniform or it is difficult to make the necessary connections		P
11.4	Heating appliances operated under normal operation at 1,15 times rated power input (W) .....:	(see appended table)	P
	Temperature rise limits exceeded in appliances incorporating motors, transformers or electronic circuits, and power input is lower than rated power input, test repeated with appliance supplied at 1,06 times rated voltage (IEC 60335-2-23)		N/A
11.6	Combined appliances operated as heating appliances (IEC 60335-2-23)		P
11.7	Appliances without timer operated (IEC 60335-2-23):		
	- for 30 min, for hand-held appliances (IEC 60335-2-23);		P
	- in cycles of 30 s on and 5 s off until steady conditions established, for hand dryers that automatically controlled by presence of hands (IEC 60335-2-23);		N/A
	- until steady conditions established, for other appliances (IEC 60335-2-23).		N/A
	Appliances incorporating timer operated in cycles until steady conditions established. Each cycle consists of maximum operating time of timer (min) followed by rest period of 5 s (IEC 60335-2-23) .....:		N/A
11.8	Temperature rises monitored continuously and not exceeding the values in table 3 .....:	(see appended table)	P

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	If the temperature rise of a motor winding exceeds the value of table 3, or		N/A
	if there is doubt with regard to classification of insulation,		N/A
	tests of annex C are carried out		N/A
	Sealing compound does not flow out		N/A
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
	Temperature rise limits of motors, transformers and components of electronic circuits, including parts directly influenced by them, be exceeded when appliance operated at 1,15 times rated power input (IEC 60335-2-23)		N/A
	Temperature rise of handles of curling irons heated by heater for detachable curlers incorporating a timer determined at end of first cycle (IEC 60335-2-23)		N/A
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		
13.1	Leakage current not excessive and electric strength adequate		P
	Heating appliances operated at 1,15 times the rated power input (W) .....:	(see appended table)	P
	Motor-operated appliances and combined appliances supplied at 1,06 times the rated voltage (V) .....:		N/A
	Protective impedance and radio interference filters disconnected before carrying out the tests		P
13.2	For class 0, class II and class III appliances, leakage current measured by means of the circuit described in figure 4 of IEC 60990		P
	For other appliances, a low impedance ammeter may be used		N/A
	Leakage current measurements .....:	(see appended table)	P
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4.....:	(see appended table)	P
	No breakdown during the tests		P
15	MOISTURE RESISTANCE		
15.3	Appliances proof against humid conditions		P
	Checked by test Cab: Damp heat steady state in IEC 60068-2-78		P
	Detachable parts removed and subjected, if necessary, to the humidity test with the main part		P

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	Humidity test for 48 h in a humidity cabinet	23°C, 93% R.H.	P
	Reassembly of those parts that may have been removed		P
	The appliance withstands the tests of clause 16		P
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		
16.1	Leakage current not excessive and electric strength adequate		P
	Protective impedance disconnected from live parts before carrying out the tests		P
	Tests carried out at room temperature and not connected to the supply		P
16.2	Single-phase appliances: test voltage 1,06 times rated voltage (V) .....:	(see appended table)	P
	Three-phase appliances: test voltage 1,06 times rated voltage divided by √3 (V) .....:		N/A
	Leakage current measurements .....:	(see appended table)	P
	Limit values doubled if:		
	- all controls have an off position in all poles, or		N/A
	- the appliance has no control other than a thermal cut-out, or		N/A
	- all thermostats, temperature limiters and energy regulators do not have an off position, or		N/A
	- the appliance has radio interference filters		N/A
	With the radio interference filters disconnected, the leakage current do not exceed limits specified.....:	(see appended table)	N/A
16.3	Electric strength tests according to table 7.....:	(see appended table)	P
	Test voltage applied between the supply cord and inlet bushing and cord guard and cord anchorage as specified.....:	(see appended table)	P
	No breakdown during the tests		P
19	ABNORMAL OPERATION		
19.1	The risk of fire, mechanical damage or electric shock under abnormal or careless operation obviated		P
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe .....:	(see appended table)	P
	Appliances incorporating heating elements subjected to the tests of 19.2 and 19.3, and		P
	if the appliance also has a control that limit the temperature during clause 11 it is subjected to the test of 19.4, and		N/A
	if applicable, to the test of 19.5		N/A

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	Appliances incorporating PTC heating elements are also subjected to the test of 19.6		N/A
	Appliances incorporating motors subjected to the tests of 19.7 to 19.10, as applicable		N/A
	Appliances incorporating electronic circuits subjected to the tests of 19.11 and 19.12, as applicable		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		N/A
	Appliances incorporating voltage selector switches subjected to the test of 19.15		N/A
	Unless otherwise specified, the tests are continued until a non-self-resetting thermal cut-out operates, or		N/A
	until steady conditions are established		P
	If a heating element or intentionally weak part becomes open-circuited, the relevant test is repeated on a second sample		N/A
	Hairdryers also subjected to tests of clause 19.101 and 19.102 (IEC 60335-2-23)		P
19.2	Test of appliances with heating elements with restricted heat dissipation; test voltage (V), power input of 0,85 times rated power input (W) .....:	RW807BF: 213V, 1465W	P
	Restricted heat dissipation is obtained as follows (IEC 60335-2-23):		
	- motors disconnected (IEC 60335-2-23);		P
	- hand-held hairdryers placed on floor of test corner in any stable position likely to occur (IEC 60335-2-23);	Replaced by EN 60335-2-23/A11	N/A
	- appliances intended to be filled with water operated empty (IEC 60335-2-23).		N/A
	Hairdryers with flexible hood attachment also tested with motor operating, airflow through hose being restricted to give most unfavourable result (IEC 60335-2-23)		N/A
	Heaters for detachable curlers placed on piece of low-density glass-fibre insulation having coefficient of thermal insulation of approximately 2,5 m²K/W (IEC 60335-2-23)		N/A
19.3	Test of 19.2 repeated; test voltage (V), power input of 1,24 times rated power input (W) .....:	RW807BF: 278V, 2516W	P
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless		P
	they comply with the conditions specified in 19.11.1		N/A

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8, unless		N/A
	restarting does not result in a hazard		N/A
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		N/A
	If the safety of the appliance under any of the fault conditions depends on the operation of a miniature fuse-link complying with IEC 60127, the test of 19.12 is carried out		N/A
	During and after each test the following is checked:		
	- the temperature of the windings do not exceed the values specified in table 8		N/A
	- the appliance complies with the conditions specified in 19.13		P
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N/A
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided both of the following conditions are met:		
	- the base material of the printed circuit board withstands the test of annex E		N/A
	- any loosened conductor does not reduce clearance or creepage distances between live parts and accessible metal parts below the values specified in clause 29		N/A
19.11.2	Fault conditions applied one at a time, the appliance operating under conditions specified in clause 11, but supplied at rated voltage, duration of the tests as specified:		
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in clause 29		N/A
	b) open circuit at the terminals of any component	D2: switch to low fan speed and appliance not work, no hazard D1: Fan runs slowly then thermal cut-out operates, no hazard	P
	c) short circuit of capacitors, unless	C2: Fan does not run then thermal cut-out operates, no hazard	P
	they comply with IEC 60384-14		N/A

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	d) short circuit of any two terminals of an electronic component, other than integrated circuits	D2: switch to low fan speed is the same as fan full speed, no hazard D1: Fan runs slowly then thermal cut-out operates, no hazard	P
	This fault condition is not applied between the two circuits of an optocoupler		N/A
	e) failure of triacs in the diode mode		N/A
	f) failure of microprocessors and integrated circuits		N/A
	g) failure of an electronic power switching device		N/A
	Each low power circuit is short-circuited by connecting the low-power point to the pole of the supply source from which the measurements were made		N/A
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9 .....:	(see appended table)	P
	Compliance with clause 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		P
	Insulation, other than of class III appliances or class III constructions that do not contain live parts, withstands the electric strength test of 16.3, the test voltage as specified in table 4:		
	- basic insulation (V) .....:	1000V 1min	P
	- supplementary insulation (V) .....:	1750V 1min	P
	- reinforced insulation (V).....:	3000V 1min	P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstand the electric strength test of 16.3, the test voltage being twice the working voltage		P
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N/A
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		
	- do not become operational, or		N/A
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N/A

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	If the appliance contains lids or doors that are controlled by one or more interlocks, one of the interlocks may be released provided that:		
	- the lid or door does not move automatically to an open position when the interlock is released, and		N/A
	- the appliance does not start after the cycle in which the interlock was released		N/A
19.101	Hairdryers operated as specified in clause 11 until steady conditions established (IEC 60335-2-23/A1)		P
	Voltage at terminals of motor reduced until running speed of motor is just sufficient to prevent thermal cut-out from operating, power input to heating element being maintained at 1,15 times rated power input (IEC 60335-2-23/A1)		P
	Voltage is decreased at (IEC 60335-2-23/A1)		
	- 1 V/min, for motors with working voltage not exceeding 30 V (IEC 60335-2-23/A1);		N/A
	- 5 V/min, for motors with working voltage exceeding 30 V (IEC 60335-2-23/A1).	RW807BF	P
	Appliance operated until steady conditions established (IEC 60335-2-23/A1)	Motor voltage decrease to: 26V for RW807BF	P
19.102	Portable hair dryers operated under normal operation at 1,15 times rated power input (IEC 60335-2-23)		P
	Sheet of polyethylene approximately 200 mm x 200 mm and having thickness of 50 μm placed against air-inlet and moved in any direction in order to reduce airflow so that most unfavourable conditions established (IEC 60335-2-23)		P
	Test carried out for 30 min (IEC 60335-2-23)		P
	Test repeated with airflow directed horizontally (IEC 60335-2-23)		P
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		
25.8	Nominal cross-sectional area of supply cords not less than table 11; rated current (A); cross-sectional area (mm²).....:	Max. <=10A, 0, 75 mm^2 with the length of supply cords does not exceed 2m.	P
25.14	Supply cords moved while in operation adequately protected against excessive flexing		P
	Force applied to supply cord of appliances provided with a swivel connection is		
	- 20 N, for cords having nominal cross-sectional area exceeding 0,75 mm² (IEC 60335-2-23);		N/A
	- 10 N, for other cords (IEC 60335-2-23).		N/A
	Hand-held appliances additionally tested while mounted on an apparatus similar to figure 8 with supply cord hanging vertically and loaded with force of 10 N (IEC 60335-2-23)		N/A

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	Oscillating part of apparatus moved through an angle of 180 °and back to original position. (IEC 60335-2-23)		N/A
	Number of flexings 4 000, rate of flexing being 6 /min (IEC 60335-2-23).		N/A
	Flexing test, as described:		
	- applied force (N) .....:	5N for 0,75mm^2	P
	- number of flexings .....:	10000	P
	The test does not result in:		
	- short-circuit between the conductors, such that the current exceeds a value of twice the rated current		P
	- breakage of more than 10 % of the strands of any conductor		P
	- separation of the conductor from its terminal		P
	- loosening of any cord guard		P
	- damage to the cord or the cord guard		P
	- broken strands piercing the insulation and becoming accessible		P
30	RESISTANCE TO HEAT AND FIRE		
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	parts of thermoplastic material providing supplementary or reinforced insulation		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P
	External parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 75 °C, whichever is the higher; temperature (°C).....:	(see appended table)	P
	Parts supporting live parts tested at 40 °C plus the maximum temperature rise determined during the test of clause 11, or at 125 °C, whichever is the higher; temperature (°C).....:	(see appended table)	P
	Parts of thermoplastic material providing supplementary or reinforced insulation tested at 25 °C plus the maximum temperature rise determined during clause 19, if higher; temperature (°C) .....:	(see appended table)	N/A
	Hand dryers and hairdryers, temperature rises occurring during tests of clause 19 not taken into account (IEC 60335-2-23)	Hair dryer	P
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	Appliance does not emit harmful radiation or present a toxic or similar hazard due to their operation in normal use	No obvious or conspicuous PAK/PAH issues was observed. Ozone concentration of ionizer: Refer to Negative Ion Generator test report.	P
	Compliance is checked by the limits or tests specified in part 2, if relevant		N/A
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION THAT IS INADEQUATE FOR THE RATED VOLTAGE OF THE APPLIANCE		
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		
8	Protection against access to live parts		
8.1	Metal parts of the motor are considered to be bare live parts		P
11	Heating		
11.3	The temperature rise of the body of the motor is determined instead of the temperature rise of the windings		P
11.8	The temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		P
16	Leakage current and electric strength		
16.3	Insulation between live parts of the motor and its other metal parts is not subjected to the test		P
19	Abnormal operation		
19.1	The tests of 19.7 to 19.9 are not carried out		P
19.I.101	Appliance operated at rated voltage with each of the following fault conditions:		
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit	Fan does not run at all and thermal cut-out operates soon. No hazard.	P
	- short circuit of each diode of the rectifier	Fan runs slowly and then thermal cut-out operates. No hazard.	P
	- open circuit of the supply to the motor	Fan does not run at all and thermal cut-out operates soon. No hazard.	P
	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		P
22	Construction		

IEC 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
22.I.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N/A
	Compliance checked by the tests specified for double and reinforced insulation		N/A

ATTACHMENT TO TEST REPORT IEC 60335-2-23
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
PART 2-23: PARTICULAR REQUIREMENTS FOR APPLIANCES FOR SKIN OR HAIR CARE

Differences according to.....:	EN 60335-2-23:2003 + A1:2008 + A11:2010 used in conjunction with EN 60335-1:2012 EN 62233:2008

EN 60335-1, EN 60335-2-23			
Clause	Requirement – Test	Result – Remark	Verdict
	Group/CENELEC Common Differences to IEC 60335-1, IEC 60335-2-23		
11.8	In Table 3 delete the row “External enclosure of motor-operated appliancesexcept handles held in normal use". (EN 60335-2-23/A11)		P
19.2	- hand-held appliances are placed on a piece of low density glass-fibre insulation having a coefficient of thermal insulation of approximately 2,5 m² K/W; (EN 60335-2-23/A11)		P
32	Compliance regarding electromagnetic fields is checked according to EN 50366 or EN 62233	EN 62233	P
Annex I, 19.I.101	The appliance is supplied at rated voltage and operated under normal operation with each of the fault conditions specified		P
	The duration of the test is as specified in 19.7		P

Annex EN 62233:2008			
Clause	Requirement + Test	Result - Remark	Verdict
EMF- ELECTROMAGNETICS FIELDS			
	The tested product also complies with the requirements of EN 62233:2008		
	Limit ……100%	Measured max. :<10% (Refer to SH12090825-EMF01+A1)	P

10.1	TABLE: Power input deviation				P
Input deviation of/at:	P rated (W)	P measured (W)	ΔP (W, %)	Required ΔP (W, %)	Remark
RW807A, RW807AF at 230V	2000	1845	-7,8%	-10%~+5%	P
RW807B, RW807BF at 230V	2200	2030	-7,7%	-10%~+5%	P

11.8	TABLE: Heating test, thermocouple measurements (RW807BF)		P
	Test voltage (V) ..... :	268V/2755W	—
	Ambient (°C) ..... :	23	—

Thermocouple locations	Max. temperature rise measured, ΔT (K)	Max.temperature rise limit, ΔT (K)
Supply cord	25	50
X2 capacitor	16	75(T-25)
Ambient of power switch	14	30
Ambient of cool switch	12	60(T-25)
Negative Ion Generator	14	35(T-25)
Internal wire	38	155(T-25)
Motor winding	32	80
Motor support	32	--
Enclosure	93	--
Cylinder	112	--
Handle	12	50
Knob	8	60

Table Z101 - Maximum temperature rises under normal operating conditions (EN 60335-2-23/A11) (RW807BF)			P
	Test voltage (V) ..... :	268V/2755W	—
	Ambient (°C) ..... :	23	—

Surface	*Surfaces of appliances likely to be touched*	
	measured ΔT (K)	max. ΔT (K)
Bare metal	--	--
Coated metal	--	--
Glass and ceramic	--	--
Plastic and plastic coating > 0,3 mm	7	65

13.2	TABLE: Leakage current		P
	Heating appliances: 1,15 x rated input (W) ..... :	268V/2755W	—

	Motor-operated and combined appliances: 1,06 x rated voltage (V).....:	N/A	—

Leakage current between	I (mA)	Max. allowed I (mA)
- for Class II appliances	**Max.: 0,012**	**0,35 mA(peak)**
- For Class 0, Class 0I and Class III appliances	N/A	0,5 mA
- for portable Class I appliances	N/A	0,75 mA
- for stationary Class I motor-operated appliances	N/A	3,5 mA
- for stationary Class I heating appliances	N/A	0,75 mA
or 0,75 mA per KW	N/A	max. 5,0 mA

13.3	**TABLE: Electric strength**				**P**
Insulation	Test voltage (V)				Verdict
	Rated voltage			Working voltage (U)	
	SELV	= 150 V	> 150 and = 250 V	> 250 V	—
Basic insulation	500	1000	**1000**	1,2 U + 700	P
Supplementary insulation	--	1000	**1750**	1,2 U + 1450	P
Reinforced insulation	--	2000	**3000**	1,2 U + 2400	P

16.2	**TABLE: Leakage current**		P
	Single phase appliances: 1,06 x rated voltage (V) .....:	254,4V	—
	Three phase appliances 1,06 x rated voltage divided by √3 (V) .....:	N/A	—

Leakage current between	I (mA)	Max. allowed I (mA)
- for Class II appliances	**Max.: 0,016**	**0,25 mA**
- For Class 0, Class 0I and Class III appliances	N/A	0,5 mA
- for portable Class I appliances	N/A	0,75 mA
- for stationary Class I motor-operated appliances	N/A	3,5 mA
- for stationary Class I heating appliances	N/A	0,75 mA
or 0,75 mA per KW	N/A	max. 5,0 mA

16.3	**TABLE: Electric strength**	P

Test voltage applied between:	Voltage (V)	Breakdown (Yes/No)
Basic insulation	**1250**	No
Supplementary insulation	**1750**	No
Reinforced insulation	**3000**	No

19	Abnormal operation conditions	P

Operational characteristics	YES/NO	Operational conditions
Are there electronic circuits to control the appliance operation?	No	N/A
Are there “off” or “stand-by” position?	No	N/A
The unintended operation of the appliance results in dangerous malfunction?	No	N/A

Sub-clause	Operating conditions description	Test results description	PEC description	EMP 19.11.4	Software type required	19.11.3 PEC	Final result
19.2	Disconnect motor, 0,85 times reted power input	Thermal cut-out operated, no hazards	N/A	N/A	N/A	N/A	P
19.3	Disconnect motor, 1,24 times reted power input	Thermal cut-out operated, no hazards	N/A	N/A	N/A	N/A	P
19.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19.11.2	Refer to Cl.19.11.2	No hazards	N/A	N/A	N/A	N/A	P
19.11.4.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A

19.13	TABLE: Abnormal operation, temperature rises (RW807BF)	P

Parts measured	Limit temp. rise(K)	Measured temperature rise (K)				
		19.2/19.3	19.4	19.5	19.101	19.102
Test corner	150	34	--	--	--	--
Supply cord	150	21	--	--	28	29

24.1	TABLE: Components information	P

Object / part No.	Manufacturer/ trademark	Type / model[2])	Technical data	Standard	Mark(s) of conformity[1])
Refer to CDF					

30	**TABLE: Resistance to heat and fire**																			
Object/ part No.	Manufacturer/ trademark	Type/ model	Ball pressure test ℃				Glow wire test (GWT) ℃						Glow-wire flammability index (GWFI) ℃				Glow- wire ignition temp. (GWIT) ℃		Needle - flame test (NFT)	Verdict
			75	125	cl. 11 +40	cl. 19 +25	550	650		750		850	550	650	750	850	675	775		
								te	ti	te	ti									
Enclosure	China Petroleum Natural Gas Co., Ltd. Jilin Chemical Industry Company Research Academy	ABS+PC			133℃ (1,6 mm)															P
Cylinder	China Petroleum Natural Gas Co., Ltd. Jilin Chemical Industry Company Research Academy	PA			152℃ (1,2 mm)															P

Supplementary information:

[1] Parts of material classified at least HB40 or if relevant HBF
[2] Parts of material classified as V-0 or V-1
[3] Flame persisting longer than 2 s (= $t_e - t_i$) need only be reported for unattended appliances
[4] Surrounding parts subjected to the needle-flame test of annex E
[5] Base material classified as V-0 or if relevant VTM-0
[6] The GWIT pre-selection option, the 850 ℃ GWFI pre -selection option, and the 850 ℃ GWT are not appli cable for attended appliances

Photo 1.

Description: Overall view of RW807* (*=A, AF, B, BF)

Photo 2.

Description: Overall view of RW807* (*=A, AF, B, BF)

Photo 3.

Description: Air inlet of RW807* (*=A, AF, B, BF)

Photo 4.

Description: Air outlet of RW807* (*=A, AF, B, BF)

Photo 5.

Description: Internal view of RW807* (*=A, B)

Photo 6.

Description: Internal view of RW807* (*=A, B)

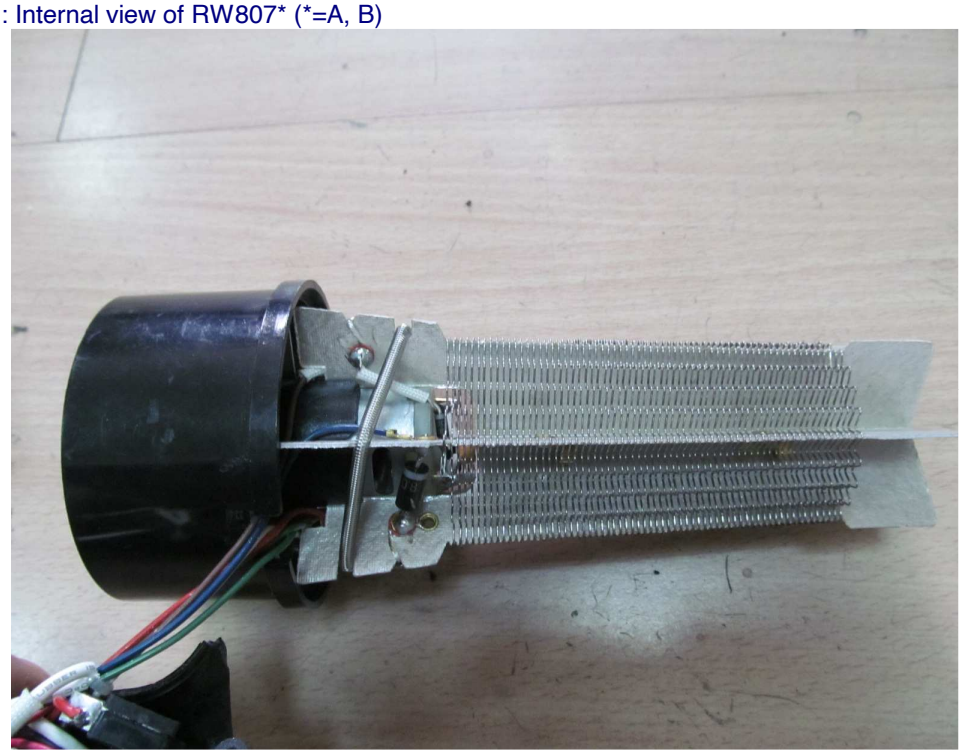

Photo 7.

Description: Internal view of RW807* (*=AF, BF)

Photo 8.

Description: Internal view of RW807* (*=AF, BF)

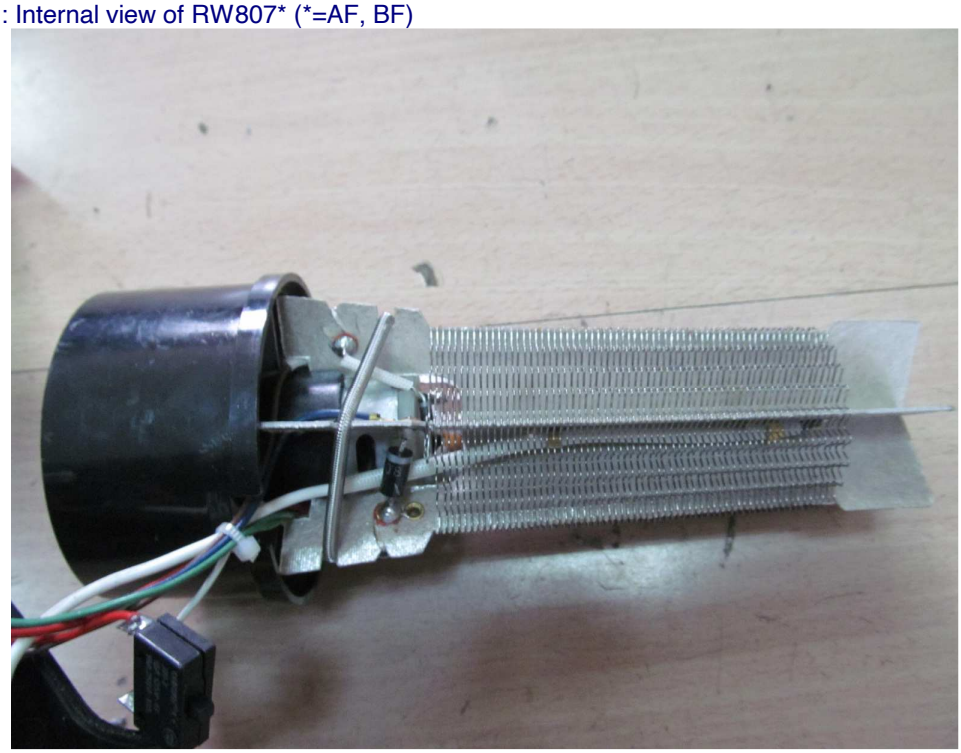

Photo 9.

Description: Thermal cut-out view of RW807* (*=A, AF, B, BF)