Technical Construction Files

TCF No.: MY-160509-L Date: 2016-05-09

Silicone-Rubber Electrical Heater

Model/s: DC 75V~460V/1W~8KW,
AC 50V~460V/1W~8KW

According to

Low Voltage Directive (2014/35/EU)

Presented By

Jiangyin City Mengyou Electric Heating Appliances Co., Ltd.
No.72, Nanyan Road, Qingyang Town, Jiangyin City, Jiangsu Province, China

Documents Reference

1.0 LVD TEST REPORT

EN 60519-1:2015 Safety in electroheating installations - Part 1: General requirements	
Test Report Reference No..... :	MY-160509
Tested by (name and signature) ..... :	Jun Li
Approved by (name and signature).. :	Gang Liu
Test Date:..... :	05.May.2016
Date of issue..... :	09.May.2016
Testing Laboratory..... :	Nanjing Lacey Enterprise Management Consultants Ltd.
Address..... :	Room 302,No.3 Tongxi International Plaza,Shengtai West Road, Nanjing,China
Testing location/procedure ..... :	JIANGYIN CITY MENGYOU ELECTRIC HEATING APPLIANCES CO., LTD.
Address ..... :	No.72,Nanyan Road,Qingyang Town,Jiangyin City, Jiangsu Province, China
Applicant's name ..... :	JIANGYIN CITY MENGYOU ELECTRIC HEATING APPLIANCES CO., LTD.
Address ..... :	No.72,Nanyan Road,Qingyang Town,Jiangyin City, Jiangsu Province, China
Test specification:	
Directive..... :	Low Voltage Directive (2014/35/EU)
procedure ..... :	CE–LVD
Test item description ..... :	Silicone-rubber Electrical Heater
Manufacturer……:	JIANGYIN CITY MENGYOU ELECTRIC HEATING APPLIANCES CO., LTD.
Address……..:	No.72,Nanyan Road,Qingyang Town,Jiangyin City, Jiangsu Province, China
Model/Type reference ..... :	DC 75V~460V/1W~8KW,AC 50V~460V/1W~8KW
Model tested…… ….:	AC 220V 50W
Rating(s) ..... :	AC 220V 50W
Equipment mobility ..... :	
Operation condition ..... :	Continuous
Class of equipment ..... :	Class II
Protection against ingress of water .....:	IP20

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
5	General requirements		-
5.1	General		-
5.1.1	Electroheating installations shall be so designed and constructed that when installed and used in accordance with manufacturer's instructions, any hazard to personnel or environment is prevented, as far as practicable.		P
5.1.2	Electroheating installations shall be so designed and manufactured that they can function safely in normal operation and under single fault condition.		P
5.1.3	Abnormal operation shall be considered and avoided, as far as practicable.		P
5.1.4	Assembly and operation of components shall be in accordance with the manufacturer's instructions.		P
5.1.5	For electroheating installations of voltages up to 1 000 V a.c. or 1 500 V smooth d.c.and frequencies of up to 60 Hz, the following parts of IEC 60364 shall apply: IEC 60364-1:2005, IEC 60364-4-41, IEC 60364-4-42, IEC 60364-4-43, IEC 60364-5-53 andIEC 60364-5-54. For electroheating equipment of voltages exceeding 1 000 V a.c. or 1 500 V smooth d.c., special requirements of this standard shall be complied with.IEC 60204-11 and IEC 61936-1 may be taken as guidance.For electrical equipment of voltages up to 1 000 V a.c. or 1 500 V smooth d.c. and frequencies of up to 200 Hz, IEC 60204-1:2005 may be taken as guidance. IEC 60204-1:2005 however does not cover power circuits, where electrical energy is directly used as a working tool.		P
5.1.6	Safety aspects vary with the frequency range.		P
5.1.7	Protective measures against overcurrent shall be provided in accordance with the relevant standards, for example IEC 60364-4-43 and 7.2 of IEC 60204-1:2005.		P
5.1.8	Protective measures against electric shock shall be taken		P
5.1.9	Where danger or damage may arise due to an interruption of the supply, suitable provisions shall be made (see 7.5 of IEC 60204-1:2005).		P
5.1.10	In hydraulic circuits measures shall be taken to avoid dangerous overpressure, for example by safety valves or temperature limiters. Switching valves are to be placed in a way ensuring avoidance of overpressure and damage of certain delicate parts.		P
5.1.11	Escape routes shall be provided, to allow fast evacuation of personnel from the operating area in case of any hazardous incident, e.g. due to fire, noxious emissions,workload eruptions and the like.		P

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
5.2	Electroheating equipment		-
5.2.1	All parts of electroheating equipment shall be designed, constructed and installed taking into account the voltages and frequencies used (0 Hz included), the mode of operation, the relevant IEC standards and the relevant instructions according to good engineering practice.The equipment shall be used only for purposes and in operating conditions for which it has been designed.		P
5.2.2	For electroheating equipment with voltages exceeding 1 000 V , the ionization phenomena which could occur at high temperatures under high electric fields shall be taken into account in design of insulation distances along surfaces and/or in air. Particular care shall be taken in case of metallic vapour emission, splashes, pollution, etc., according to IEC 60664-1.		P
5.2.3	For equipment, whose process frequency may vary around the rated process frequency within a certain range, the frequency most unfavourable for safety requirements shall be considered.		P
5.2.4	Electroheating equipment shall be so designed, constructed and installed as to be sufficiently stable during operation, taking into account all possible positions of its movable parts. Handles, operating levers and the like shall be reliably fixed and secured. The movement of levers and controls shall, as far as possible, correspond with the direction of the mechanical movements they control.		P
5.2.5	Tilting, swivelling or movable electroheating equipment shall be so designed that the electric equipment and the pertinent auxiliary parts, when in either of the end positions or in motion, are not mechanically overstressed.		P
5.3	Electric equipment of electroheating installations		-
5.3.1	Electric equipment shall be designed and constructed to ensure the safety of personnel taking care of electrical hazards but also of other hazards according to Clause 12.Electric equipment shall comply with the relevant IEC standards, as far as they exist and apply. It shall also comply with the requirements for electroheating installations and/or equipment.Electric equipment shall be so designed that currents flowing in normal operation do not cause dangerous heating of conductors, insulation or nearby parts of the electroheating installation.		P
5.3.2	Circuits comprising transformers, inductors and capacitors shall be designed to obviate the occurrence of excessive voltages or currents (e.g. by resonance effect), which if maintained may cause a danger due to deterioration of the electroheating installation.		P

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
5.3.3	Provisions to avoid hazards due to energy stored in capacitors and inductive components during or after switch-off shall be taken. Protection against residual voltages on capacitors shall be provided by effective discharge of capacitors. Guidance may be taken from relevant standards, for example IEC 60110-1:1998, IEC 60204-1:2005 or specific standards for power generators and/or capacitors not covered by IEC 60110-1:1998. Appropriate instructions for the users, if necessary, shall be given in the operating manual and according to the circumstances by a warning label on the equipment.		P
5.3.4	Electric equipment shall be so designed that it does not deteriorate during normal operation due to physical and chemical effects, created by e.g. electromagnetic forces,ultraviolet, heat from the surroundings, spatter of molten material and salt, humidity, oil,shocks or friction. If necessary, suitable structural measures shall be taken, for example by providing gutters, protective channels or conduits and similar means.		P
5.3.5	For inspection and maintenance, the electric equipment and its parts, and particularly those liable to wear, shall be easily accessible, as far as reasonable.		P
5.3.6	Where forced cooling of components is employed, provisions shall be made for monitoring the cooling action. Should the cooling be insufficient, an alarm shall be given and, if necessary, the electroheating equipment shall be switched off or safety otherwise ensured.		P
5.3.7	Sensors of any physical quantity and actuators shall be selected and mounted taking into account all possible operating conditions (e.g. temperature, mechanical action or electromagneticphenomena).		P
5.3.8	Pushbuttons shall be in accordance with 10.2 of IEC 60204-1:2005.		P
5.3.9	Indicator lights and displays shall be in accordance with 10.3 of IEC 60204-1:2005.		P
5.3.10	Emergency switching-off devices shall be in accordance with 10.8 of IEC 60204-1:2005.		P
5.4	Electrostatic charges		-
	Electrostatic charges, which may impair the efficient operation of electroheating equipment or be dangerous to personnel, shall be suppressed or made harmless, for example by means of earthing, screening or provision of sufficient distance.		P
5.5	Magnetic, electric and electromagnetic fields		-

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
	The electroheating equipment shall be designed and operated so as to protect personnel and the environment from harmful effects of magnetic, electric and electromagnetic fields emitted from it. Secondary phenomena such as eddy currents and/or induced voltages shall also be taken into account.		P
5.6	Electromagnetic compatibility	See EMC TCF	N/A
5.7	Ionizing radiation		-
	Devices and components for measurement or monitoring of electroheating installations emitting ionizing radiation shall comply with respective legal regulations. This also applies to the workload of particular electroheating equipment.		P
5.8	Liquid cooling		N/A
6	Isolation and switching		-
6.1	General		-
	Isolation, switching-off for maintenance, emergency switching, and functional switching (control) shall be provided and be in accordance with the relevant standards, for example IEC 60364-4-41,IEC 60364-5-53 and IEC 60204-1:2005.		P
6.2	Switching-off of control and auxiliary circuits		-
	Examples of control and auxiliary circuits, which depending on the application need not be switched off, are:		-
	a) lighting and socket-outlet circuits for the connection of repair and maintenance tools, for example lamps or drills (irrespective of their voltage); b) circuits supplying undervoltage trips and circuit-breaker closing and tripping devices which are operated at mains voltage, but are not used for control purposes; c) auxiliary circuits with voltages not exceeding 50 V a.c. or 120 V smooth d.c.; d) other auxiliary circuits supplying essential components, for example pumps, fans and drives, which shall not be switched off during the period of interruption of the mains supply.		P
	In the case of voltages exceeding 50 V a.c. or 120 V smooth d.c., the above-mentioned circuits shall employ cables or insulated conductors segregated from those following the supply disconnecting switch. They shall be connected via separate specially enclosed terminals and shall be provided with a separate disconnecting switch.In the case specified under item b), this disconnecting switch need not be applied. The circuits, which are not disconnected by the supply-disconnecting switch, shall be clearly indicated in the technical documentation.		P

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Clause	Requirement - Test	Result - Remark	Verdict
6.3	Switching at high voltage levels		-
	Circuit breakers are permissible for supply, disconnection and isolation, providing the following conditions exist:		-
	– isolating distance is provided and visible (e.g. a disconnecting switch or withdrawn circuit-breaker); – facilities are provided to prevent closing of the isolating switches as well as to provideconnections to earth of the outgoing cables or busbars.		P
7	Connection to the electrical supply network and internal connections		-
7.1	General requirements		-
7.1.1	The connection to the electrical supply network depends on the type and the voltage of the supply system according to Clause 312 of IEC 60364-1:2005. The conductors shall be in accordance with the relevant standards, for example Clause 12 of IEC 60204-1:2005. The conductors shall be identified according to IEC 60446.		P
7.1.2	Interconnecting conductors shall be designed and arranged so that in normal operation they do not undergo abnormal mechanical stresses, e.g. due to tension, flexing,torsion, friction or vibration, or effects of heat, moisture or vapours liable to damage them.Single fault conditions shall be considered as well.		P
7.1.3	Enclosures of conductors shall ensure:		-
	– protection of insulation of conductors against abrasion and laceration; – protection of conductors against tension and torsion.		P
7.2	Fixed electric connection		-
7.2.1	Devices adopted to avoid tensile stress in fixed electric connections shall not be made live. They shall also be so designed that any damage of the conductor to be protected from abnormal tensile stresses is prevented in accordance with 7.1.2.		P
7.2.2	The bending radius of conductors/cables shall be large enough at the point of entry to prevent any damage. Connection of conductors including their covering shall be possible without risk of damage.		P
7.3	Removable connection and flexible conductors		-
	Electroheating equipment which is not permanently connected to the supply network shall have a permanently-fixed flexible connecting conductor which can only be removed by the use of tools.All flexible wiring shall be provided with protective sheaths in accordance with the requirements of 7.1.2 and the steps taken to ensure protection against tensile stress and torsion shall be readily recognizable.		P

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
	Flexible conductors shall be protected against excessive flexing at the points of entry. Protective devices shall be long enough and fixed securely. The lead-in points of connecting conductors shall be such that the protective covering of the conductors can be inserted without risk of deterioration.		P
	The spacing provided for the supply leads inside the installation shall be such that they can be easily inserted and connected, and if a cover or lid is provided, it shall be readily secured in position without risk of damage to the conductors.Connections using a sliding contact shall be inaccessible and checked by a standard test finger according to IEC 60529, both when connected and disconnected but live.Live parts of plug-and-socket devices shall be inaccessible when connected or disconnected but live.Removable connecting lines shall contain necessary active and protective conductors clearly identified and laid-up together.In installations, where several plugs are used, an erroneous connection shall be prevented by shape or distinct marking of the plugs.		P
8	Protection against electric shock		-
8.1	General		-
	Protective measures against electric shock shall be provided. For installations of voltages not exceeding 1 000 V a.c. or 1 500 V smooth d.c. and frequencies not exceeding 60 Hz,the requirements of IEC 60364-4-41 apply. For installations of voltages exceeding 1 000 V a.c. or 1 500 V smooth d.c. with frequencies not exceeding 60 Hz, the requirements of IEC 61140 apply.		P
8.2	Direct contact – special measures		-
	Specifications on special measures in case of direct contact are given in the Particular Requirements, as relevant (see also Annex A, Clause A.1).		P
8.3	Indirect contact – special measures		-
	Specifications on special measures in case of indirect contact are given in the Particular Requirements, as relevant		P
9	Equipotential bonding		-
9.1	General		-
	This clause provides requirements for both protective and functional bonding.		P
9.2	Protective bonding circuits		-

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Clause	Requirement - Test	Result - Remark	Verdict
	Protective bonding circuits consist of: – PE terminal(s); – conductive structural parts of the electroheating installation; – charging devices, in case operated when the electroheating installation is switched on; – protective conductors in the electroheating installation including sliding contacts, in case they are part of the circuit.		P
	All parts of the protective bonding circuits shall be so designed that they are able to withstand the highest thermal and mechanical stress, which may be caused by earth-fault currents, which could flow in any part of the protective bonding circuits. Any structural part of the electric equipment may be used as part of the protective bonding circuit, in case an earth fault monitoring system is installed.		P
	Protective conductors shall be in accordance with 8.2.2 of IEC 60204-1:2005.Continuity of the protective bonding system shall be in accordance with 8.2.3 of IEC 60204-1:2005.Subclause 8.2.4 of IEC 60204-1:2005 applies.Parts described in 8.2.5 of IEC 60204-1:2005 need not be connected to the protective bonding system.		P
9.3	Functional bonding		-
	Subclause 8.3 of IEC 60204-1:2005 applies.		P
9.4	Prohibition of the use of earth as part of an active circuit		-
	The earth, protective conductors, sheaths and structures shall not be used as part of an active circuit, unless otherwise specified in the Particular Requirements. However,earthing of neutral points or the adoption of safety devices using the earth as a return circuit is permitted.Track rails may be used as a return circuit, provided that under fault conditions the impedance of the circuit is sufficiently low to limit the step and contact voltages between the rails and the adjacent earth to values not exceeding 25 V r.m.s.For equipment of voltages exceeding 1 000 V a.c. or 1 500 V smooth d.c., track rails shall not be used as a return circuit.		P
10	Control circuits and control functions		-
10.1	Control circuits		-
	Control circuits shall comply with 9.1 of IEC 60204-1:2005.Control circuits can be directly supplied from a network of type TN or TT (see 312.2 of IEC 60364-1:2005).Protective devices for short-circuit shall be adequately calibrated for the switching elements in the control circuits.		P
10.2	Earthing of control circuits		-

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
	An earth fault on any control circuit shall neither cause inadvertent switching on nor prevent switching off the electroheating installation or its part.In order to fulfil this requirement, it is recommended that one side of the control transformer(s) be earthed and coils and contacts be connected accordingly.Unearthed control circuits fed from the transformer shall be provided with an insulationmonitoring device, which either indicates an earth fault or interrupts the circuit automatically after an earth fault. The d.c. internal resistance of the insulation-monitoring device shall be at least 15 k1. For certain electronic devices much higher values of this resistance may be necessary.In the case of control transformers with an earthed centre tap, a differential current circuitbreaker shall be used.		P
	For control circuits, in which single-pole earthing is required for operational reasons, the manufacturer shall provide for earthing. Such operational reasons may be, e.g. the use of electromagnetic clutches having an internal earth or of control circuits with electronic components. In this case, separate control transformers or one control transformer with several isolated secondary windings shall be used.		P
	In case of earthed control circuits supplies, the common conductor is connected to the protective bonding circuit at the point of supply. All contacts, solid state elements, etc.,which are intended to operate an electromagnetic or other device (for example, a relay or indicator light) are inserted between one side, the switched conductor of the control circuit supply and one terminal of the coil or device. The other terminal of the coil or device (preferably always having the same marking) is connected directly to the common conductor of the control circuit supply without any switching elements.		P
	The following exceptions to this rule are allowed: a) contacts of protective relays, for example overload relays, may be connected between the side connected to the protective circuit and the coils provided that the conductors between such contacts and the coils of the control devices, on which the relay contacts operate, are in the same control enclosure; b) in special cases, where a different arrangement of the contacts leads to a simplification of the external control accessories (trolleys, cable winders, multiple plugs, etc.),provided that the requirements of the first paragraph of 10.2.1 are still fulfilled.		P

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
10.3	Control functions		-
	In case of more than one control station for the equipment, measures shall be provided to ensure that any command from any control station does not lead to a hazardous situation.		P
	Start functions shall operate by energizing the relevant circuit. Stop functions shall override related start functions. If push-buttons are used, separate push-buttons for „Start" and „Stop" shall be provided. Interlocks shall be provided to secure correct sequential starting.Where more than one control station is provided, stop command from any control station shall be effective.		P
11	Protection against thermal influences		-
	Protective measures against thermal influences shall be provided according to IEC 60364-4-42. Parts of electroheating installations may attain high temperatures in normal operation,exceeding the limit values with respect to personnel and environment given in IEC 60364-4-42. This shall be taken into account in design and operation of the equipment to ensure the protection of personnel and environment.Parts made of organic or inorganic insulating materials shall be heat-resistant to ensure that their electrical and mechanical properties are not unduly impaired by the operating temperatures.Connections between conductors and of conductors to parts of equipment, where excessive local temperature rise may occur, shall be designed respectively. Effects due to non-uniform current distribution and the proximity effect shall be taken into account. Precautions shall be taken to avoid excessive temperature rise in conductors,connections and adjacent metallic parts due to induced currents. Electrical accessories of electroheating installations shall be mounted in such a way that they are not subjected to temperatures exceeding the temperature for which they are designed.		P
12	Protection against other hazards		-
	In addition to potential hazards due to the electrical, mechanical, magnetic, electric and electromagnetic fields and radiation described in Clauses 5, 8 or 11, the following hazards shall be considered and be addressed in the operating and maintenance manuals:		-

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
	– mechanical shocks and vibration, – fire, – explosion caused by the electroheating equipment itself or by the workload, – implosion, – eruption (or sudden expansion) of the workload, – water leakage, – infra- and ultrasound, – acoustic noise, – adverse biological and / or chemical phenomena, – emission, production and/or use of hazardous substances (e.g. noxious gases, liquids,dusts, mists, vapour).		P
13	Marking, labelling and technical documentation		-
13.1	Marking		-
	Marking of the installation and/or equipment placed on the name plate(s) shall include the following data (unless otherwise specified in the Particular Requirements):		-
	a) symbol of origin (name or symbol of the manufacturer); b) type or catalogue number; c) date of manufacture (or date code); d) serial number; e) number of phases and rated input voltage. When the equipment is intended to be used at different rated supply voltages, the association of the particular voltage and corresponding supply terminals as well as the type of connection shall be indicated on the rating plate; f) type and value of rated input current; g) rated input power. h) input frequency and rated process frequency or range, where appropriate, shall be stated. Graphical symbols according to IEC 60417 shall be used; i) class and group of the equipment according to CISPR 11; j) other essential data, including non-electrical data, for identification of the equipment.		P
13.2	Warning marking		-
	Appropriate warning signs shall be displayed, in particular warnings against hazards which may not be immediately perceived, such as high voltage, non-ionising or ionising radiation.Preference shall be given to the use of the relevant graphical symbols of IEC 60417 or ISO 7000 and design principles for signs, labels or signboards according to ISO 3864-1.		P

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
13.3	Labelling		-
	All positions of the actuating and control devices shall be clearly indicated by letters, words, numbers or symbols. Preference shall be given to the use of graphical symbols given in IEC 60417 or ISO 7000 and design principles according to ISO 3864-1.The electrical components and their references to the diagram shall be durably marked. The designation shall comply with the indications on the diagrams.Control and signalling devices shall be identified by letters, words or symbols.Identification of conductors shall be in accordance with 13.2 of IEC 60204-1:2005.		P
14	Commissioning, inspection, operation and maintenance		-
14.1	General requirements		-
	All information provided by the manufacturer with respect to safety of personnel and protection of the environment shall be taken into account by the user when issuing the operating instructions in compliance with local regulations.		P
	Electroheating installations shall be so supervised, inspected and maintained that they remain in compliance with the safety requirements of this standard. All suitable precautions shall be taken to prevent any risk for personnel during maintenance.Instructions on maintenance, inspection or service intervals and required records shall be included in the technical documentation.		P
	Earth terminals shall be available in the vicinity of parts of the electroheating installations where it is necessary for maintenance and inspection that conductors and bare conductive parts are earthed after switching off the supply.		P
14.2	Commissioning and inspection		-
	Electroheating installations shall be commissioned before being put into first operation. Inspections shall also be carried out after important modifications or refurbishing, and thereafter at specified intervals, depending on the working conditions and instructions of the manufacturer. The objective of these inspections is to ascertain whether the installations have been built and maintained in compliance with these requirements.		P
	Resistance of earth circuits, equipotential bonding and insulation resistance values of the conductors to earth and to each other shall be tested and recorded in the inspection report.These inspections shall be carried out by trained personnel only according to the Particular Requirements and the maintenance instructions of the installation provided by the manufacturer.		P

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
	After commissioning, electroheating installations shall not be made live for the purpose of measurement and inspection, if it would cause excessive stress to electrical insulation,which can also serve as heat insulation. This applies, e.g. to any insulation tests. As a rule,the maximum permissible rated voltage shall not be exceeded. Information for commissioning and inspection shall be included in the technical documentation provided by the manufacturer. Also the procedure of discharging capacitors and checking the absence of voltage on capacitors shall be provided, if necessary.		P
14.3	Safety instructions for operation		-
	The user is responsible for providing safety instructions to the personnel and shall ensure that the safety requirements are observed.		P
	Personnel whose activities involve the operation of electroheating installations or work in the vicinity shall be instructed and trained with respect to all safety issues and procedures to be observed during the operation of the installation by means of orders. The operating instructions shall be brought to their attention by posting-up notices and, if necessary, by handing them a book of instructions for which written acknowledgement is obtained.		P
	Instructions on the application of first aid to the victims of accidents of electrical origin shall be given in the operating instructions and brought to the notice of the personnel.		P
	Safety equipment required for intervention in case of an incident or accident shall be at the disposal of the personnel.		P
14.4	Instructions for maintenance work		-
	Electrical maintenance shall be carried out by instructed or skilled persons only.		P
	No maintenance work shall be carried out with equipment live unless necessary for inspection, settings or adjustments.		P
	Before maintenance work starts, the installation shall be switched off and earthed according to the following procedure: – disconnect from the supply network, – ascertain, e.g. by a keylock and sign at the main breaker stating that the installation shall not be energised; – take means to prevent re-closing of isolation switches, – check absence of voltage, – ensure earthing and short circuiting, – protect adjacent live parts by covers and barriers.		P

EN 60519-1			
Clause	Requirement - Test	Result - Remark	Verdict
	In case maintenance work is unavoidable with equipment live, relevant measures shall be taken (see the Particular Requirements and local regulations).Maintenance work with equipment live shall be in general prohibited for equipment of voltages exceeding 1 000 V a.c. or 1 500 V smooth d.c. In special cases, when maintenance work with equipment live is necessary, e.g. for checking and adjustment of control settings, and trouble shooting (search for causes of malfunction and localisation of sources of abnormal vibrations/noise and/or flashovers), appropriate safety measures according to respective instructions and local regulations shall be taken.		P
	In areas liable to a risk of explosion according to Clause 12, no live work, e.g. even the replacement of a lamp or fuse, shall be undertaken, unless measures have been taken to remove the risk of explosion.Authorization to work in such areas shall be controlled (e.g. by "permit to work") and where it is essential to restore the supply before the equipment is re-assembled, special dispensation should be obtained (e.g. by issue of an "explosive gas-free certificate").		P
	In areas liable to contain toxic gases live work shall not be undertaken, unless the toxic gases are removed.Authorization to work in such areas shall be controlled (e.g. by "permit to work") and where it is essential to restore the supply before the equipment is re-assembled, special dispensation should be obtained (e.g. by issue of a "toxic gas-free certificate").		P

****** THE END ******

2.0 Declaration of Conformity

EC DECLARATION OF CONFORMITY

WE,JIANGYIN CITY MENGYOU ELECTRIC HEATING APPLIANCES CO., LTD.

No.72,Nanyan Road,Qingyang Town,Jiangyin City,Jiangsu Province,China

Product name: Silicone-rubber Electrical Heater

Product model: DC 75V~460V/1W~8KW,AC 50V~460V/1W~8KW

Conform with the essential safety requirements of the relevant European Directives:
- Low Voltage Directive (2014/35/EU)

For the most specific risks of this machine ,safety and compliance with the essential requirement of the Directive has been based on elements of :
- EN 60519-1:2015 SAFETY IN ELECTROHEATING INSTALLATIONS –Part 1: General requirements

Mounting and connecting instructions defined in catalogues and technical constructions files must be respected by the user.

ATTENTION:
The attention of the specified ,purchaser,installer,or user is drawn to special measures and limitations to use which must be observed when the product is taken into service to maintain compliance with the above directives.Details of these special measures and limitations to use are available on request and are also contained in the product manuals.

NAME :

Responsibility : President

Authorized Signature :

Date :

3.0 ATTACHMENT-EUT PHOTOS

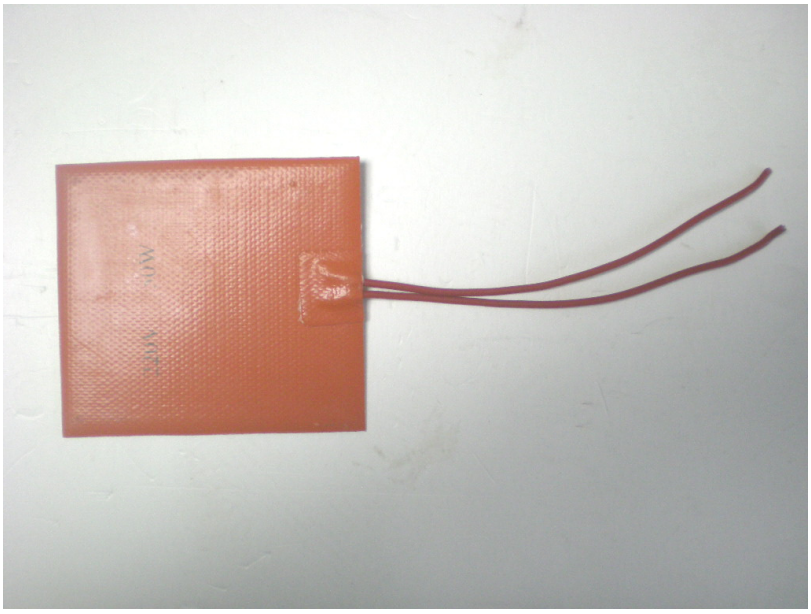

Fig 1 the overiew

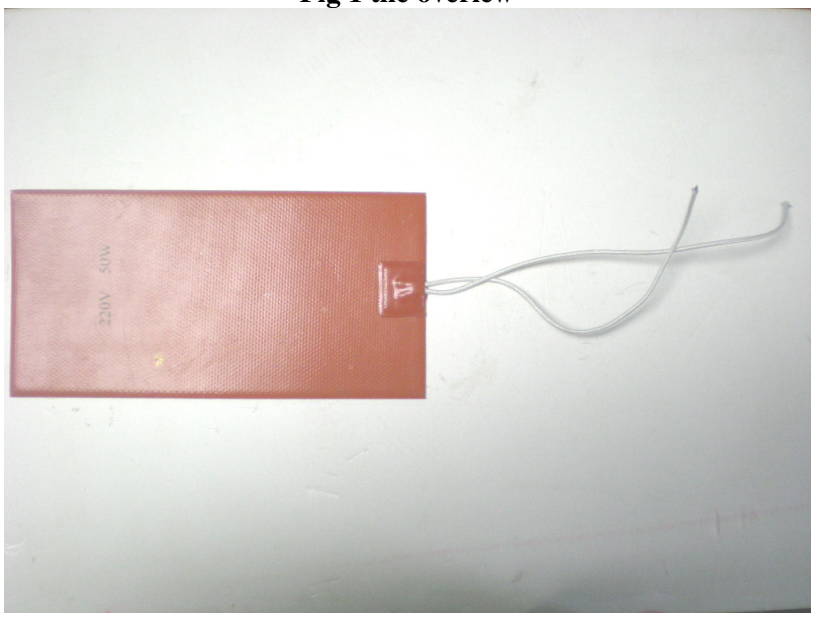

Fig 2 the overiew