

Report No.: TMC200313115-S

TEST REPORT EN 60601-1

Medical electrical equipment

Part 1: General requirements for basic safety and essential performance

Report Reference No.....: TMC200313115-S

Checked by

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2, Shihuan Road, Shiyan Street, Baoan District, Shenzhen, China

Applicant's name...... Luzhou Skinod Technology Co., Ltd

Address...... Block 28, No.9 Chuangxin Road, Jiangyang District, Luzhou City

Manufacturer's name...... Luzhou Skinod Technology Co., Ltd

Address...... Block 28, No.9 Chuangxin Road, Jiangyang District, Luzhou City

Test specification:

Standard.....: EN 60601-1:2006+A12:2014

Test procedure....: CE

Non-standard test method.....: N/A

Test Report Form No.....: IEC60601_1J

Test Report Form Originator....: UL(US)9

Master TRF.....: 2016-07

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Test item description.....: Medical infrared thermometer

Manufacturer.....: Luzhou Skinod Technology Co., Ltd

Model/Type reference.....: SK-T008, SK-T008A, SK-T008B, SK-T008C, SK-T006, SK-T007,

SK-T009, SK-T100, SK-T200, SK-T300

Ratings...... Input: DC9V



List of Attachments (including a total number of pages in each attachment): Attachment 1: Photo documentation . **Summary of testing** Tests performed (name of test and test clause): **Testing location:** -EN 60601-1:2006+A12:2014; 1st Floor, Block A1, Zone A, Xinshidai Gongrong Industrial Park, The submitted samples were found to comply with the requirements of No. 2, Shihuan Road, Shiyan above specification. Street, Baoan District, Shenzhen, China **Summary of compliance with National Differences** List of countries addressed: ☑ The product fulfils the requirements of _EN 60601-1:2006+A12:2014.

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TMC Testing Services(Shenzhen) Co., Ltd

Copy of marking plate

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Medical infrared thermometer

Model: SK-T008 Rating:DC9V



Luzhou Skinod Technology Co., Ltd Made in china



TMC Testing Services(Shenzhen) Co., Ltd Report No.: TMC200313115-S **GENERAL INFORMATION** Test item particulars (see also Clause 6): Classification of installation and use..... □transportable / □portable / □stationary/ □mobile /□ fixed /□ permanently installed /☑hand-held, body-worn Device type (component/sub-assembly/ equipment/ system): mini operating room, doctor's office Intended use (Including type of patient, application location).: outpatient examination, mini operating room Mode of operation..... Continuous /□non-continuous Supply connection..... ☑internally powered /permanently installed / appliance coupler / non-detachable cord Accessories and detachable parts included..... Other options include..... N/A **Testing** March 10, 2020 Date of receipt of test item(s)..... Dates tests performed....: March 10, 2020-March 17, 2020 Possible test case verdicts: - test case does not apply to the test object N/A - test object does meet the requirement....: Pass (P) - test object was not evaluated for the requirement.....: N/E (collateral standards only) - test object does not meet the requirement.....: Fail (F) Abbreviations used in the report: - normal condition....: N.C. - single fault condition.....: S.F.C. - means of Patient protection: MOPP - means of Operator protection: MOOP General remarks: Before starting to use the TRF please read carefully the 4 instructions pages at the end of the report on how to complete the new version "J" of TRF for IEC for 60601-1 3rd edition with Amendment 1. '(See Attachment #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.

The tests 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 testing laboratory. List of test equipment must be kept on file and available for review.

Additional test data and/or information provided in the attachments to this report.

Throughout this report a \square comma / \boxtimes point is used as the decimal separator.



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Manufacturer's Declaration per sub-clause 4.2.5 of I	ECEE 02:2012	1 la	Lin	<
The application for obtaining a Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided:	☐ Yes ⊠ Not applicable	THIC	THIC	<
When differences exist; they shall be identified in the	e General product	information	section.	1
Name and address of factory (ies):	Luzhou Skinod Teo Block 28, No.9 Chu Luzhou City			strict,
IMC IMC IMC IMC	THIC	THIC	THIC	<
General product information:	THIC	LAUC	TANC	<
Model SK-T008 is selected as representative models for	or tested.	THINC	THIC	<
THIC THIC THIC THIC	THIC	MC	TANC	16J



.0		EN 60601-1		25
Clause	Requirement + Test	. C.	Result - Remark	Verdict

4	GENERAL REQUIREMENTS	/ /			
4.1	Requirements of this standard applied in NORMAL USE and reasonably foreseeable misuse	We Line Lin	10	Р	<
4.2	RISK MANAGEMENT PROCESS FOR ME EQUIPMENT OR M	IE SYSTEMS	200	Р	
4.2.2	General requirement for RISK MANAGEMENT - PROCESS complies with ISO14971 (2007):	See Appended RM Results Table 4.2.2.	10	Р	<
4.2.3	Evaluating RISK	200	55-1		
4.2.3.1	a) Compliance with the standard reduces residual risk to an acceptable level	NC LANC LA	VC-	Р	<
	b) Manufacturer has defined risk acceptability criteria in the RISK MANAGEMENT PLAN:		(Р	
LIN	c) When no specific technical requirements provided manufacturer has determined HAZARDS or HAZARDOUS SITUATIONS exists.	No Line Lin		P	1
THIC	- HAZARDS or HAZARDOUS SITUATIONS have been evaluated using the RISK MANAGEMENT PROCESS.	NC THE TH	VC.	Р	>
4.2.3.2	MANUFACTURER has addressed HAZARDS or HAZARDOUS SITUATIONS not specifically addressed in the IEC 60601-1 series.	NC WC W	C	P	
4.3	Performance of clinical functions necessary to achieve intended use or that could affect the safety of the ME EQUIPMENT or ME SYSTEM were identified during RISK ANALYSIS.	C WIC WI		P	7
	- Performance limits were identified in both NORMAL CONDITION and SINGLE FAULT CONDITION.			Р	
1 Miles	- Loss or degradation of performance beyond the limits specified by the MANUFACTURER were evaluated	We Live Lin	1	N/A	<
- MC	- Functions with unacceptable risks are identified as ESSENTIAL PERFORMANCE:	See Appended Table 4.3	C	Р	1
	- RISK CONTROL measures implemented			Р	
MC	- Methods used to verify the effectiveness of RISK CONTROL measures implemented	NC WIC W	C	Р	_1
4.4	EXPECTED SERVICE LIFE stated in RISK MANAGEMENT FILE:	7. 7.		Р	7
4.5	Alternative RISK CONTROL methods utilized:	no and at	0	Р	-



Report No.: TMC200313115-8 TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Requirement + Test Verdict Clause Result - Remark RESIDUAL RISK resulting from the alternative RMF Reference to specific N/A RISK CONTROL measures or tests is acceptable risks: and comparable to RESIDUAL RISK resulting from application of this standard....: (ISO 14971 CI. (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) Alternative means based scientific data or Ρ clinical opinion or comparative studies.....: 4.6 See Appended Insulation N/A RISK MANAGEMENT PROCESS identifies parts that Diagram Table can come into contact with PATIENT but not defined as APPLIED PARTS, subjected to the requirements for APPLIED PARTS, except for Clause 7.2.10..... MANUFACTURER assesses the risk of accessible RMF Reference to specific N/A parts coming into contact with the patient.....: RISKS: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) (ISO 14971 CI. Type B/BF/CF Ρ Assessment identified the APPLIED PART TYPE requirements....:: N/A ME EQUIPMENT remained SINGLE FAULT SAFE, or the RISK remained acceptable as determined by Clause 4.2....: MANUFACTURER RISK ANALYSIS was used to RISK ANALYSIS reference: N/A determine failures to be tested.....: (ISO 14971 Cl.) (ISO 14971 CI. 4.2-4.4) Failure of any one component at a time that See appended Table 13.2 for N/A could result in a HAZARDOUS SITUATION, including simulated physical test, or those in 13.1, simulated physically or See Attachment No. for theoretical simulation theoretically: All components and wiring whose failure could result in a HAZARDOUS SITUATION used according to their applicable ratings, unless specified: Components and wiring exception in the standard or by RISK MANAGEMENT PROCESS **RISK MANAGEMENT PROCESS assesses** RMF Reference to specific N/A components to identify components where the RISKS: failure results in a HAZARDOUS SITUATION for components used outside their ratings.....: (ISO 14971 CI. (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) See Table 8.10 b. MANUFACTURER identified components where Ρ the failure results in a HAZARDOUS SITUATION...:

Components determined to be acceptable

where used as a MEANS OF PROTECTION.....::

RISKS:

RMF Reference to specific

N/A



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Clause Requirement + Test Result - Remark Verdict Reliability of components used as MEANS OF N/A PROTECTION assessed for conditions of use in ME EQUIPMENT, and they complied with one of the following a) Applicable safety requirements of a relevant N/A IEC or ISO standard b) Requirements of this standard applied in the N/A absence of a relevant IEC or ISO standard A COMPONENT WITH HIGH-INTEGRITY See appended Table 8.10 b **CHARACTERISTICS provided and selected** appropriately.....: RISK MANAGEMENT FILE includes an assessment RMF Reference to specific N/A to determine if the failure of components RISKS: results in unacceptable RISK.....:: (ISO 14971 Cl.) (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) Components identified and required to be See Table 8.10 b Ρ COMPONENTS WITH HIGH INTEGRITY CHARACTERISTIC: **Power supply** 4.10 4.10.1 ME EQUIPMENT is suitable for connection to Internally powered indicated power source (select applicable).....: 4.10.2 Maximum rated voltage for ME EQUIPMENT N/A intended to be connected to SUPPLY MAINS: - 250 V for HAND-HELD ME EQUIPMENT (V)..... N/A - 250 V d.c. or single-phase a.c., or 500 V poly-N/A phase a.c. for ME EQUIPMENT and ME SYSTEMS with a RATED input ≤ 4 kVA (V).....:: - 500 V for all other ME EQUIPMENT and ME N/A **SYSTEMS Power input** N/A Steady-state measured input of ME EQUIPMENT or See appended Table 4.11 N/A ME SYSTEM at RATED voltage or voltage range and at operating settings indicated in instructions for use didn't exceed marked rating by more than 10%.....:

5	GENERAL REQUIREMENTS FOR TESTING ME	EQUIPMENT	2 -
5.1	Test not performed when analysis indicated condition being tested was adequately evaluated by other tests or methods:	Me Line L	W. P



Report No.: TMC200313115-9 EN 60601-1 Requirement + Test Verdict Clause Result - Remark **RISK MANAGEMENT FILE identifies combinations of** RMF Reference to specific N/A simultaneous independent faults that could RISKS: result in a HAZARDOUS SITUATION. (ISO 14971 Cl.) (ISO 14971 CI. 4.2-4.4) 5.3 Tests conducted within the environmental Р conditions specified in technical description Temperature (°C), Relative Humidity (%): 50-75% Atmospheric Pressure (kPa).....: 86-101kPa 5.5 a) Supply voltage during tests was the least N/A favourable of the voltages specified in 4.10.2 or voltages marked on ME EQUIPMENT (V): b) ME EQUIPMENT marked with a RATED frequency N/A range tested at the least favourable frequency within the range (Hz).....: c) ME EQUIPMENT with more than one RATED N/A voltage, both a.c./ d.c. or both external power and INTERNAL ELECTRICAL POWER SOURCE tested in conditions (see 5.4) related to the least favourable voltage, nature of supply, and type of current.....: d) ME EQUIPMENT intended for only d.c. supply N/A connection tested with d.c. and influence of polarity considered....:: e)ME EQUIPMENT tested with alternative N/A ACCESSORIES and components specified in **ACCOMPANYING DOCUMENTS to result in the least** favourable conditions....: f) ME EQUIPMENT connected to a separate power N/A supply as specified in instructions for use 5.7 ME EQUIPMENT or parts thereof affected by climatic conditions were set up completely, or partially, with covers detached and subjected to a humidity preconditioning prior to tests of Clauses 8.7.4 and 8.8.3..... ME EQUIPMENT heated to a temperature between T = 20 °C T and T + 4°C for at least 4 h and placed in a Time - 48H/168H/48 h humidity chamber and ambient within 2 °C of T in range of +20°C to +32°C for indicated time 5.9 **Determination of APPLIED PARTS and ACCESSIBLE PARTS** 5.9.1 APPLIED PARTS identified by inspection and reference to ACCOMPANYING DOCUMENTS.....: 5.9.2 **ACCESSIBLE PARTS**



	EN 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
5.9.2.1	Accessibility determined using standard test finger of Fig. 6	See Appended Table 5.9.2	Р
5.9.2.2	Test hook of Fig. 7 inserted in all openings of ME EQUIPMENT and pulled with a force of 20 N for 10 s	NC LINC LIN	P
5.9.2.3	Conductive parts of actuating mechanisms of electrical controls accessible after removal of handles, knobs, levers and the like regarded as ACCESSIBLE PARTS	UC LINC LIN	C P
THIC	Conductive parts of actuating mechanisms not considered ACCESSIBLE PARTS when removal of handles, knobs, required use of a TOOL:	UC LINC LIN	C P

6 11	CLASSIFICATION OF ME EQUIPMENT AND MES	SYSTEMS	- W	- 12	P	
6.2	CLASS I ME EQUIPMENT, externally powered		7.	1.	N/A	
	CLASS II ME EQUIPMENT, externally powered	. (.	. (N/A	
THING	INTERNALLY POWERED ME EQUIPMENT	No	L BIND	~ PI	Р	X
THIC	EQUIPMENT with means of connection to a SUPPLY MAINS complied with CLASS I or CLASS II ME EQUIPMENT requirements when so connected, and when not connected to SUPPLY MAINS with INTERNALLY POWERED ME EQUIPMENT requirements	nc nc	THIC	113	N/A	<
	TYPE B APPLIED PART	C	. C.	. (N/A	
1 PM	TYPE BF APPLIED PART		L KIN	~ 61/L	N/A	1
	TYPE CF APPLIED PART		7	- 3	N/A	
	DEFIBRILLATION-PROOF APPLIED PARTS	0		- 0	N/A	
6.3	ENCLOSURES classified according to degree of protection against ingress of water and particulate matter as per IEC 60529:	IP	1 kg	10	N/A	<
6.4	ME EQUIPMENT or its parts intended to be sterilized classified according to method(s) of sterilization in instructions for use	W.C.	TANC	1 to	N/A	<
6.5	ME EQUIPMENT and ME SYSTEMS intended for use in an OXYGEN RICH ENVIRONMENT classified for such use and complied with 11.2.2	WC.	TIME	160	C N/A	<
6.6	CONTINUOUS OF Non-CONTINUOUS OPERATION:	_			N/A	

7	ME EQUIPMENT IDENTIFICATION, MARKING, AND DOCUMENTS		Р	6
7.1.2	Legibility of Markings Test for Markings specified in Clause 7.2-7.6	See Appended Table 7.1.2	P	4



	EN 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
7.1.3	Required markings can be removed only with a TOOL or by appreciable force, are durable and remain CLEARLY LEGIBLE during EXPECTED SERVICE LIFE OF ME EQUIPMENT IN NORMAL USE	See appended Tables 7.1.3 and 8.10	P
7.2	Marking on the outside of ME EQUIPMENT or ME EQ	QUIPMENT parts	
7.2.1 T MIC	At least markings in 7.2.2, 7.2.5, 7.2.6, 7.2.10, and 7.2.13 were applied when size of EQUIPMENT, its part, an ACCESSORY, or ENCLOSURE did not permit application of all required markings:	See attached copy of Marking Plate	CP
THIC	Remaining markings fully recorded in ACCOMPANYING DOCUMENTS	We LANG LA	P
. (Markings applied to individual packaging when impractical to apply to ME EQUIPMENT		P
THE	Single use item marked:	"Single Use Only"/ "Do Not Reuse"/ symbol 28 of Table D.1	Р
7.2.2	ME EQUIPMENT marked with:	nc onc or	СР
In.	the name or trademark and contact information of the MANUFACTURER	a. In. In	Р
MC	- a MODEL OR TYPE REFERENCE	See attached copy of Marking Plate	C P
	- a serial number or lot or batch identifier; and		Р
	- the date of manufacture or use by date	C .C .C	Р
TRING	Detachable components of the ME EQUIPMENT not marked; misidentification does not present an unacceptable risk, or	Line Line	P
THIC	RISK MANAGEMENT FILE includes an assessment of the RISKS relating to misidentification of all detachable parts: (ISO 14971 Cl. 4.2-4.4, 5, 6.4)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
TANC	Detachable components of the ME EQUIPMENT are marked with the name or trademark of the MANUFACTURER, and	We LANC LA	Р
. (- a MODEL OR TYPE REFERENCE	.((C P
LEN	Software forming part of a PEMS identified with a unique identifier:	21 - Lay Lu	Р
7.2.3	Symbol 11 on Table D.1 used, optionally, advice to OPERATOR to consult ACCOMPANYING DOCUMENTS	NC THIC TH	N/A
,nC	Safety sign 10 on Table D.2) used, advising OPERATOR that ACCOMPANYING DOCUMENTS must be consulted	aC aC .	N/A



	EN 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
7.2.4	Accessories marked with name or trademark and contact information of their MANUFACTURER, and	Accessories inspected:	N/A
1 M	- with a MODEL or TYPE REFERENCE	11 × 11/1 × 11/1	N/A
	- a serial number or lot or batch identifier		N/A
	- the date of manufacture or use by date	S S S	N/A
16,	Markings applied to individual packaging when not practical to apply to ACCESSORIES	1 /4 /4	N/A
7.2.5	ME EQUIPMENT and ME SYSTEM intended to receive power from other equipment, provided with one of the following	UC LAUC LA	N/A
THIC	- the name or trademark of the manufacturer of the other electrical equipment and type reference marked adjacent to the relevant connection point; or	UC LAUC LA	N/A
- NAC	- Table D.2, safety sign No. 10 adjacent to the relevant connection point and listing of the required details in the instructions for use; or	NC WIC W	N/A
	 Special connector style used that is not commonly available on the market and listing of the required details in the instructions for use. 	aC .aC .a	N/A
7.2.6	Connection to the Supply Mains	1/4/	N/A
- NE	Marking appearing on the outside of part containing SUPPLY MAINS connection and, adjacent to connection point	C min Onio	N/A
7 V	For PERMANENTLY INSTALLED ME EQUIPMENT, NOMINAL supply voltage or range marked inside or outside of ME EQUIPMENT		N/A
TEN	- RATED supply voltage(s) or RATED voltage range(s) with a hyphen (-) between minimum and maximum voltages (V, V-V)::	y Lay Lay	N/A
THIC	Multiple RATED supply voltages or multiple RATED supply voltage ranges are separated by (V/V):	WC LANC LA	N/A
	- Nature of supply and type of current:	9.	N/A
NINC	Symbols 1-5, Table D.1 (used for same parameters:	UC THE TH	N/A
	- RATED supply frequency or RATED frequency range in hertz:		N/A
THIC	- Symbol 9 of Table D.1 used for CLASS II ME EQUIPMENT:	We LANG LA	N/A
7.2.7	RATED input in amps or volt-amps, (A, VA):		N/A
THIC	RATED input in amps or volt-amps, or in watts when power factor exceeds 0.9 (A, VA, W):	UC LANC LA	N/A



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Requirement + Test Verdict Clause Result - Remark RATED input for one or more RATED voltage N/A ranges provided for upper and lower limits of the range or ranges when the range(s) is/are greater than ± 10 % of the mean value of specified range (A, VA,W)....:: Input at mean value of range marked when N/A range limits do not differ by more than 10 % from mean value (A, VA, W).....:: Marking includes long-time and most relevant N/A momentary volt-ampere ratings when provided, each plainly identified and indicated in ACCOMPANYING DOCUMENTS (VA)....: Marked input of ME EQUIPMENT provided with N/A means for connection of supply conductors of other electrical equipment includes RATED and marked output of such means (A, VA, W)....:: 7.2.8 **Output connectors** N/A 7.2.8.2 Output connectors are marked, except for N/A **MULTIPLE SOCKET-OUTLETS or connectors intended** for specified ACCESSORIES or equipment Rated Voltage (V), Rated Current (A).....: Rated Power (W), Output Frequency (Hz).....: 7.2.9 N/A ME EQUIPMENT or its parts marked with the IP environmental Code per IEC 60529 according to classification in 6.3 (Table D.3, Code 2), marking optional for ME EQUIPMENT or parts rated IPX0....: 7.2.10 Degrees of protection against electric shock as N/A classified in 6.2 for all APPLIED PARTS marked with relevant symbols: TYPE B APPLIED PARTS with symbol 19 of Table N/A **D.1** TYPE BF APPLIED PARTS with symbol 20 of Table N/A TYPE CF APPLIED PARTS with symbol 21 of Table N/A N/A **DEFIBRILLATION-PROOF APPLIED PARTS marked with** symbols 25-27 of Table D.1....:: Proper symbol marked adjacent to or on N/A connector for APPLIED PART.....: Safety sign 2 of Table D.2 placed near relevant N/A outlet.....: An explanation indicating protection of ME N/A EQUIPMENT against effects of discharge of a cardiac defibrillator depends on use of proper cables included in instructions for use.....:



01	Description of a Treat of	Dec. H. Demark	2 V
Clause	Requirement + Test	Result - Remark	Verdict
7.2.11	ME EQUIPMENT suitable for CONTINUOUS OPERATION	, 41, 41,	Р
THIC	DUTY CYCLE for ME EQUIPMENT intended for non- CONTINUOUS OPERATION appropriately marked to provide maximum "on" and "off" time:	NC THIC TH	P
7.2.12	Type and full rating of a fuse marked adjacent to ACCESSIBLE fuse-holder		N/A
- 13/1 C	Fuse type::	No Line Lin	_
	Voltage (V) and Current (A) rating:		_
	Operating speed (s) and Breaking capacity:	((.	_
7.2.13	Physiological effects – safety sign and warning statements:	y Lay Lu	N/A
THIC	Nature of HAZARD and precautions for avoiding or minimizing the associated RISK described in instructions for use: (ISO 14971 CI. 4.2-4.4, 5, 6.3)	RMF Reference to specific RISKS: (ISO 14971 Cl)	N/A
7.2.14	HIGH VOLTAGE TERMINAL DEVICES on the outside of ME EQUIPMENT accessible without the use of a TOOL marked with symbol 24 of Table D.1	NC THIC TH	N/A
7.2.15	Requirements for cooling provisions marked:	200	N/A
7.2.17	Packaging marked with special handling instructions for transport and/or storage::	NC THIC TH	N/A
	Permissible environmental conditions marked on outside of packaging:		N/A
THIN	Packaging marked with a suitable safety sign indicating premature unpacking of ME EQUIPMENT could result in an unacceptable RISK	LING LIN	N/A
THIC	RISK MANAGEMENT FILE includes the assessment to determine premature unpacking of ME EQUIPMENT or its parts could result in an unacceptable RISK: (ISO 14971 Cl. 4.2-4.4, 5, 6.3-6.4)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
LUN	Packaging of sterile ME EQUIPMENT or ACCESSORIES marked sterile and indicates the methods of sterilization	W LEW LU	N/A
7.2.18	RATED maximum supply pressure from an external source marked on ME EQUIPMENT adjacent to each input connector, and:	We LINE LIN	N/A
. (- the RATED flow rate also marked	.((.	N/A
7.2.19	Symbol 7 of Table D.1 marked on FUNCTIONAL EARTH TERMINAL	y Lay Lu	N/A
7.2.20	Removable protective means marked to indicate the necessity for replacement when the function is no longer needed:	nc anc ar	N/A



Clause	Requirement + Test	Result - Remark	Verdict
Siause	Izedangingir i i est	INGGUIL - INGILIAIR	VEIUICE
7.2.21	MOBILE ME EQUIPMENT marked with its mass including its SAFE WORKING LOAD in kilograms:	1, 1, 1,	N/A
7.3	Marking on the inside of ME EQUIPMENT or ME EQUI	PMENT parts	N/A
7.3.1	Maximum power loading of heating elements or lamp-holders designed for use with heating lamps marked near or in the heater (W):	, 10, 1p	N/A
THINC	A marking referring to ACCOMPANYING DOCUMENTS provided for heating elements or lamp-holders designed for heating lamps that can be changed only by SERVICE PERSONNEL using a TOOL	We Line Lin	N/A
7.3.2	Symbol 24 of Table D.1, or safety sign No.3 of Table D.2 used to mark presence of HIGH VOLTAGE parts	ye Line Lin	N/A
7.3.3	Type of battery and mode of insertion marked:	nc anc a	○ N/A
LIM.	An identifying marking provided referring to instructions in ACCOMPANYING DOCUMENTS for batteries intended to be changed only by SERVICE PERSONNEL using a TOOL	"C ""C "	N/A
LIN.	A warning provided indicating replacement of lithium batteries or fuel cells when incorrect replacement would result in an unacceptable RISK	UC WILL WILL	N/A
Linc	RISK MANAGEMENT FILE includes an assessment to determine the replacement of lithium batteries or fuel cells leads to an unacceptable RISK if replaced incorrectly: (ISO 14971 Cl. 4.2-4.4, 5, 6.3)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
THIC	ACCOMPANYING DOCUMENTS contain a warning indicating the replacement of lithium batteries or fuel cells by inadequately trained personnel could result in a HAZARD:	NC THIC TH	N/A
7.3.4	Fuses, replaceable THERMAL CUT-OUTS and OVER-CURRENT RELEASES, accessible by use of a TOOL Identified:	Specification adjacent to component/reference to ACCOMPANYING DOCUMENTS	N/A
./.	Voltage (V) and Current (A) rating:	7	_
- (Operating speed(s), size & breaking capacity. :		_
7.3.5	PROTECTIVE EARTH TERMINAL marked with symbol 6 of Table D.1	THE THE	N/A
THIC	Markings on or adjacent to PROTECTIVE EARTH TERMINALS not applied to parts requiring removal to make the connection, and remained visible after connection made	UC LANC LA	N/A
7.3.6	Symbol 7 of Table D.1 marked on FUNCTIONAL EARTH TERMINALS	aC aC .	N/A



Clause	Requirement + Test	Result - Remark	Verdict
1 Bil.	1 61, 1 61, 1 61, 1 1	n 100 10	1
7.3.7	Terminals for supply conductors marked adjacent to terminals:		N/A
THIC	Terminals for supply connections are not marked, the RISK MANAGEMENT FILE includes an assessment of the RISKS resulting from misconnections: (ISO 14971 CI. 4.3)	RMF Reference to specific RISKS: (ISO14971 Cl)	N/A
16,	Terminal markings included in ACCOMPANYING DOCUMENTS when ME EQUIPMENT too small to accommodate markings	n, 100, 10	N/A
THIC	Terminals exclusively for neutral supply conductor in PERMANENTLY INSTALLED ME EQUIPMENT marked with Code 1 of Table D.3	We LANC LA	N/A
MIC	Marking for connection to a 3-phase supply, complies with IEC 60445	NC WC W	N/A
- WIC	Markings on or adjacent to electrical connection points not applied to parts requiring removal to make connection, and remained visible after connection made	WC WIC W	N/A
7.3.8	"For supply connections, use wiring materials suitable for at least X °C" or equivalent, marked at the point of supply connections		N/A
LEN	Statement not applied to parts requiring removal to make the connection, and CLEARLY LEGIBLE after connections made	a Len Lu	N/A
7.4	Marking of controls and instruments	C and and	N/A
7.4.1	The "on" & "off" positions of switch to control power to ME EQUIPMENT or its parts, including mains switch, marked with symbols 12 and 13 of Table D.1 or	UC LINE LINE	N/A
11.	- indicated by an adjacent indicator light, or	. 41. 41	N/A
-	- indicated by other unambiguous means	<i>j j</i>	N/A
THIC	The "on/off" positions of push button switch with bi-stable positions marked with symbol 14 of Table D.1, and	We LANG LA	N/A
	- status indicated by adjacent indicator light		N/A
160	status indicated by other unambiguous means	y 4 1/4 1/4	N/A
THIC	The "on/off" positions of push button switch with momentary on position marked with symbol 15 of Table D.1 or	NC THIC TH	N/A
	- status indicated by adjacent indicator light		N/A
NINC	status indicated by other unambiguous means	UC THIC TH	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
7.4.2	Different positions of control devices/switches indicated by figures, letters, or other visual means		N/A
Len	RISK MANAGEMENT FILE identifies controls where a change in setting during NORMAL USE results in an unacceptable RISK:	RMF Reference to specific RISKS:	N/A
TONC	(ISO 14971 CI. 4.2-4.4, 5, 6.2, 6.3)	List of controls: (ISO14971 CI)	C
THIC	Controls provided with an associated indicating device when change of setting of a control could result in an unacceptable RISK to PATIENT in NORMAL USE:	UC LAUC LA	N/A
` /	or an indication of direction in which magnitude of the function changes	, ,	N/A
LINE	Control device or switch that brings the ME EQUIPMENT into the "stand-by" condition marked with symbol IEC 60417-5009	No LANG LA	N/A
7.4.3	Numeric indications of parameters on ME EQUIPMENT expressed in SI units according to ISO 80000-1 except the base quantities listed in Table 1 expressed in the indicated units	UC LINC LIN	N/A
- NAC	ISO 80000-1 applied for application of SI units, their multiples, and certain other units	NC THIC TH	N/A
	All Markings in Sub-clause 7.4 complied with tests and criteria of 7.1.2 and 7.1.3:	See Appended Tables 7.1.2 and 7.1.3.	N/A
7.5	Safety signs	in in	P
1.	Safety sign with established meaning used	1, 1,	-7.
THIC	RISK MANAGEMENT PROCESS identifies markings used to convey a warning, prohibition or mandatory action that mitigate a RISK not obvious to the OPERATOR: (ISO 14971 CI. 4.2-4.4, 5, 6.3)	RMF Reference to specific RISK & Marking: Safety Sign Used: (ISO 14971 CI)	N/A
1 kills	Affirmative statement together with safety sign placed in instructions for use if insufficient space on ME EQUIPMENT	We LANG LA	N/A
NAC	Specified colours in ISO 3864-1 used for safety signs:	UC LANC LA	N/A
	Safety notices include appropriate precautions or instructions on how to reduce RISK(s)		N/A
1 MC	Safety signs including any supplementary text or symbols described in instructions for use	No LING LA	N/A
. (- and in a language acceptable to the intended OPERATOR		N/A
7.6	Symbols	21 - 12 - 14	Р



Clause	Requirement + Test	Result - Remark	Verdict
7.6.1	Meanings of symbols used for marking	See Appended Instruction for	Р
	described in instructions for use:	Use	. 9
7.6.3	Symbols used for controls and performance conform to the IEC or ISO publication where symbols are defined, as applicable	We LANC LA	Р
7.7	Colours of the insulation of conductors	((P
7.7.1	PROTECTIVE EARTH CONDUCTOR identified by green and yellow insulation	We Line Lin	N/A
7.7.2	Insulation on conductors inside ME EQUIPMENT forming PROTECTIVE EARTH CONNECTIONS identified by green and yellow at least at terminations	WC LINC LIN	N/A
7.7.3	Green and yellow insulation identify only following conductors:	nc inc in	N/A
110.	- PROTECTIVE EARTH CONDUCTORS	10. 110. 14	N/A
	- conductors specified in 7.7.2		N/A
a'nC	- POTENTIAL EQUALIZATION CONDUCTORS	inc ainc air	N/A
I la	- FUNCTIONAL EARTH CONDUCTORS	a Lin Li	N/A
7.7.4	Neutral conductors of POWER SUPPLY CORDS are "light blue"	00 00	N/A
7.7.5	Colours of conductors in POWER SUPPLY CORDS in accordance with IEC 60227-1 or IEC 60245-1	a, Les Lu	N/A
7.8	Indicator lights and controls	C 4C 40	N/A
.8.1	Red indicator lights used only for Warning	Lay Lay	N/A
	Yellow indicator lights used only for Caution		N/A
- MC	Green indicator lights used only for Ready for use	NC WAC W	N/A
	Other colours: Meaning other than red, yellow, or green (colour, meaning):		N/A
. 8.2	Red used only for emergency control	in the in	N/A
'.9	ACCOMPANYING DOCUMENTS	1, 1,	N/A
7.9.1	ME EQUIPMENT accompanied by documents containing instructions for use, and a technical description	INC THIC TH	N/A
1	ACCOMPANYING DOCUMENTS identify ME EQUIPMENT by the following, as applicable:		N/A
1 Miles	Name or trade-name of MANUFACTURER and contact information for the RESPONSIBLE ORGANIZATION can be referred to:	and Line Lin	N/A



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Requirement + Test Verdict Clause Result - Remark When ACCOMPANYING DOCUMENTS provided N/A electronically, USABILITY ENGINEERING PROCESS includes instructions as to what is required in hard copy or as markings on ME EQUIPMENT ACCOMPANYING DOCUMENTS specify special skills, N/A training, and knowledge required of OPERATOR or **RESPONSIBLE ORGANIZATION and environmental** restrictions on locations of use ACCOMPANYING DOCUMENTS written at a level N/A consistent with education, training, and other needs of individuals for whom they are intended 7.9.2 Instructions for use include the required information N/A 7.9.2.1 - use of ME EQUIPMENT as intended by the N/A MANUFACTURER: frequently used functions, N/A - known contraindication(s) to use of ME N/A **EQUIPMENT** - parts of the ME EQUIPMENT that are not serviced N/A or maintained while in use with the patient name or trademark and address of the N/A **MANUFACTURER** - MODEL OR TYPE REFERENCE N/A Instruction for use included the following when N/A the PATIENT is an intended OPERATOR: - the PATIENT is an intended OPERATOR N/A N/A warning against servicing and maintenance while the ME EQUIPMENT is in use functions the PATIENT can safely use and, N/A where applicable, which functions the PATIENT cannot safely use; and -maintenance the PATIENT can perform N/A Classifications as in Clause 6, all markings per N/A Clause 7.2, and explanation of safety signs and symbols marked on ME EQUIPMENT Instructions for use are in a language N/A acceptable to the intended operator 7.9.2.2 Instructions for use include all warning and Ρ safety notices Warning statement for CLASS I ME EQUIPMENT N/A included Warnings regarding significant RISKS of Ρ reciprocal interference posed by ME EQUIPMENT during specific investigations or treatments



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Requirement + Test Verdict Clause Result - Remark Ρ Information on potential electromagnetic or other interference and advice on how to avoid or minimize such interference Р Warning statement for ME EQUIPMENT supplied with an integral MULTIPLE SOCKET-OUTLET provided The RESPONSIBLE ORGANIZATION is referred to Ρ this standard for the requirements applicable to ME SYSTEMS 7.9.2.3 Р Statement on ME EQUIPMENT for connection to a separate power supply provided in instructions 7.9.2.4 Warning statement for mains- operated ME N/A **EQUIPMENT** with additional power source not automatically maintained in a fully usable condition indicating the necessity for periodic checking or replacement of power source RISK MANAGEMENT FILE assesses the RISK Specific RISKS: N/A resulting from leakage of batteries....: (ISO 14971 Cl. 4.2-4.4, 5, 6.3) (ISO 14971 CI Where the RISK is unacceptable, the IFU N/A includes a warning to remove the battery if the ME EQUIPMENT is not likely to be used for some time....:: Specifications of replaceable INTERNAL N/A **ELECTRICAL POWER SOURCE when provided.....:** Warning indicating ME EQUIPMENT must be N/A connected to an appropriate power source when loss of power source would result in an unacceptable RISK.....:: 7.9.2.5 Instructions for use include a description of ME **EQUIPMENT**, its functions, significant physical and performance characteristics together with the expected positions of OPERATOR, PATIENT, or other persons near ME EQUIPMENT in NORMAL USE P Information provided on materials and ingredients PATIENT or OPERATOR is exposed to Restrictions specified on other equipment or NETWORK/DATA COUPLINGS, other than those forming part of an ME SYSTEM, to which a SIGNAL INPUT/OUTPUT PART may be connected **APPLIED PARTS specified** 7.9.2.6 Information provided indicating where the installation instructions may be found or information on qualified personnel who can perform the installation



	EN 60601-1		1
Clause	Requirement + Test	Result - Remark	Verdict
7.9.2.7	Instructions provided indicating not to position ME EQUIPMENT to make it difficult to operate the disconnection device	V. 460, 46	Р
7.9.2.8	Necessary information provided for OPERATOR to bring ME EQUIPMENT into operation	y 1/4/2 1/4	P
7.9.2.9	Information provided to operate ME EQUIPMENT	7 6	P
THIN	Meanings of figures, symbols, warning statements, abbreviations and indicator lights described in instructions for use	No LINE LE	P
7.9.2.10	A list of all system messages, error messages, and fault messages provided with an explanation of messages including important causes and possible action(s) to be taken to resolve the problem indicated by the message	UC LINC LIN	C P
7.9.2.11	Information provided for the OPERATOR to safely terminate operation of ME EQUIPMENT	2 - 1 kg - 1 kg	P
7.9.2.12	Information provided on cleaning, disinfection, and sterilization methods, and applicable parameters that can be tolerated by ME EQUIPMENT parts or ACCESSORIES specified	UC LINC LI	C P
THIC	Components, ACCESSORIES or ME EQUIPMENT marked for single use, except when required by MANUFACTURER to be cleaned, disinfected, or sterilized prior to use	UC LINC LIN	CP
7.9.2.13	Instructions provided on preventive inspection, calibration, maintenance and its frequency	7 min 2 min 2	P
ζ 1°	Information provided for safe performance of routine maintenance necessary to ensure continued safe use of ME EQUIPMENT		P
THIC	Parts requiring preventive inspection and maintenance to be performed by SERVICE PERSONNEL identified including periods of application	No Line Li	P
THIC	Instructions provided to ensure adequate maintenance of ME EQUIPMENT containing rechargeable batteries to be maintained by anyone other than SERVICE PERSONNEL	and the the	P
7.9.2.14	A list of ACCESSORIES, detachable parts, and materials for use with ME EQUIPMENT provided	21 - Lay - La	P
N/C	Other equipment providing power to ME SYSTEM sufficiently described	nc anc a	C P
7.9.2.15	Disposal of waste products, residues, etc., and of ME EQUIPMENT and ACCESSORIES at the end of their EXPECTED SERVICE LIFE are identified in the instruction for use:	UC THE TH	P
1 10	7 / 2 / 7 / 2 / 7 / 7 / 7 / 7 / 7 / 7 /	4 14. 14	•



10-2	EN 60601-1		1 22 1
Clause	Requirement + Test	Result - Remark	Verdict
7.9.2.16	Instructions for use include information specified in 7.9.3 or identify where it can be found (e.g. in a service manual)	°C °C 'L	Р
7.9.2.17	Instruction for use for ME EQUIPMENT emitting radiation for medical purposes, indicate the nature, type, intensity and distribution of this radiation	20 LUN LU	P
7.9.2.18	The instructions for use for ME EQUIPMENT or ACCESSORIES supplied sterile indicate that they have been sterilized and the method of sterilization	VC VC	PK
LINC.	The instructions for use indicate the necessary instructions in the event of damage to the sterile packaging, and where appropriate, details of the appropriate methods of resterilization	NC LINC LI	PK
7.9.2.19	The instructions for use contain a unique version identifier:	Version	Р
7.9.3	Technical description	The Wall in	P
7.9.3.1	All essential data provided for safe operation, transport, storage, and measures or conditions necessary for installing ME EQUIPMENT, and preparing it for use	UC WC W	P
	Technical description separable from instruction information, as follows	ns for use contains required	Р
THIC	all applicable classifications in Clause 6, warning and safety notices, and explanation of safety signs marked on ME EQUIPMENT	C LANC LAN	P
TWIC	– a brief description of the ME EQUIPMENT, how the ME EQUIPMENT functions and its significant physical and performance characteristics; and	UC LAIC LA	CP
	a unique version identifier:	Version	Р
THIC	MANUFACTURER'S optional requirements for minimum qualifications of SERVICE PERSONNEL documented in technical description	NC LINC LE	C P
7.9.3.2	The technical description contains the following	required information	N/A
THINE	-type and full rating of fuses used in SUPPLY MAINS external to PERMANENTLY INSTALLED ME EQUIPMENT:	We LAVE LA	N/A
TMC	- a statement for ME EQUIPMENT with a non- DETACHABLE POWER SUPPLY CORD if POWER SUPPLY CORD is replaceable by SERVICE PERSONNEL, and	NC THIC TH	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
- WIC	- instructions for correct replacement of interchangeable or detachable parts specified by MANUFACTURER as replaceable by SERVICE PERSONNEL, and	The Tay Is	N/A
THIC	RISK MANAGEMENT FILE includes an assessment to determine if replacement of components results in any unacceptable RISKS	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
THIC	- warnings identifying nature of HAZARD when replacement of a component could result in an unacceptable RISK, and when replaceable by SERVICE PERSONNEL all information necessary to safely replace the component	NC THIC TH	N/A
7.9.3.3	Technical description indicates, MANUFACTURER will provide circuit diagrams, component part lists, descriptions, calibration instructions to assist to SERVICE PERSONNEL in parts repair	NC THIC TH	N/A
7.9.3.4	Means used to comply with requirements of 8.11.1 clearly identified in technical description	nc anc	N/A

8	PROTECTION AGAINST ELECTRICAL HAZARDS	S FROM ME EQUIPMENT	P
8.1	Limits specified in Clause 8.4 not exceeded for ACCESSIBLE PARTS and APPLIED PARTS in NORMAL or SINGLE FAULT CONDITIONS	We LANC LA	P
THIC	RISK MANAGEMENT FILE identifies conductors and connectors where breaking free results in a HAZARDOUS SITUATION: (ISO 14971 CI. 4.3)	RMF Reference to specific RISKS: (ISO 14971 CI)	P
8.2	Requirements related to power sources	in and in	N/A
8.2.1	Connection to a separate power source	4. 14. 14	N/A
THIC	When ME EQUIPMENT specified for connection to a separate power source other than SUPPLY MAINS, separate power source considered as part of ME EQUIPMENT or combination considered as an ME SYSTEM	ac Lauc La	N/A
MC	Tests performed with ME EQUIPMENT connected to separate power supply when one specified	NC THICK	N/A
.,(When a generic separate power supply specified, specification in ACCOMPANYING DOCUMENTS examined	aC .aC	N/A
8.2.2	Connection to an external d.c. power source	461 16	N/A
THIC	No HAZARDOUS SITUATION as described in 13.1 developed when a connection with wrong polarity made for ME EQUIPMENT from an external d.c. source	NC THIC TH	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
Y. W.	ME EQUIPMENT connected with correct polarity maintained BASIC SAFETY and ESSENTIAL PERFORMANCE	°C °C ′L	N/A
Lin	Protective devices that can be reset by anyone without a TOOL returns to NORMAL CONDITION on reset	M. Len Lu	N/A
8.3	Classification of APPLIED PARTS	inc anc ar	N/A
- (·	a) APPLIED PART specified in ACCOMPANYING DOCUMENTS as suitable for DIRECT CARDIAC APPLICATION is TYPE CF		N/A
THIN	b) An APPLIED PART provided with a PATIENT CONNECTION intended to deliver electrical energy or an electrophysiological signal to or from PATIENT is TYPE BF or CF APPLIED PART	and Line Lin	N/A
11/1	c) An APPLIED PART not covered by a) or b) is a TYPE B, BF, or CF	20 - 1 ly	N/A
8.4	Limitation of voltage, current or energy	, ,	P
8.4.2	ACCESSIBLE PARTS and APPLIED PARTS	in the H	P
	a) Currents from, to, or between PATIENT CONNECTIONS did not exceed limits for PATIENT LEAKAGE CURRENT & PATIENT AUXILIARY CURRENT:	See appended Table 8.7	P
1 m	b) LEAKAGE CURRENTS from, to, or between ACCESSIBLE PARTS did not exceed limits for TOUCH CURRENT	See appended Table 8.7	P
THIC	c) Limits specified in b) not applied to parts when probability of a connection to a PATIENT, directly or through body of OPERATOR, is negligible in NORMAL USE, and the OPERATOR is appropriately instructed	UC LANC LAN	P
LW.	Voltage to earth or to other ACCESSIBLE PARTS did not exceed 42.4 V peak a.c. or 60 V d.c. for above parts in NORMAL or single fault condition (V a.c. or d.c.)	See appended Table 8.4.2	P
Yh.	Energy did not exceed 240 VA for longer than 60 s or stored energy available did not exceed 20 J at a potential of 2 V or more (VA or J):	See appended Table 8.4.2	P
Line	d) Voltage and energy limits specified in c) above also applied to the following:	Me LINE LI	P
N/N	 internal parts touchable by test pin in Fig 8 inserted through an opening in an ENCLOSURE; and 	anc anc a	P



Report No.: TMC200313115-S EN 60601-1 Clause Requirement + Test Verdict Result - Remark P - internal parts touchable by a metal test rod with a diameter of 4 mm and a length 100 mm, inserted through any opening on top of **ENCLOSURE** or through any opening provided for adjustment of pre-set controls by RESPONSIBLE ORGANIZATION in NORMAL USE using a TOOL Test pin or the test rod inserted through Ρ relevant openings with minimal force of no more than 1 N Test rod inserted in every possible position through openings provided for adjustment of pre-set controls that can be adjusted in NORMAL USE, with a force of 10 N Test repeated with a TOOL specified in Ρ instructions for use Test rod freely and vertically suspended through openings on top of ENCLOSURE e) Devices used to de-energize parts when an ACCESS COVER opened without a TOOL gives access to parts at voltages above levels permitted by this Clause comply with 8.11.1 for mains isolating switches and remain effective in SINGLE FAULT CONDITION A TOOL is required when it is possible to Р prevent the devices from operating Worst case voltage between pins of plug and 8.4.3 See appended Table 8.4.3 between either supply pin and ENCLOSURE did not exceed 60 V one sec after disconnecting the plug of ME EQUIPMENT or its parts (V).....: When voltage exceeded 60 V, calculated or See appended Table 8.4.3 Р measured stored charge didn't exceed 45 µC...: 8.4.4 Р Residual voltage of conductive parts of See appended Table 8.4.4 capacitive circuits, having become accessible after ME EQUIPMENT was de-energized after removal of ACCESS COVERS, didn't exceed 60V or calculated stored charge didn't exceed 45µC...: A device manually discharging capacitors used when automatic discharging was not possible and ACCESS COVERS could be removed only with aid of a TOOL Capacitor(s) and connected circuitry marked with symbol 24 of Table D.1, and manual discharging device specified in technical description....:: 8.5 Separation of parts 8.5.1 **MEANS OF PROTECTION (MOP)**



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Clause	Requirement + Test	Result - Remark	Verdict
~ 10h	10 10 10	17 (1) (1)	
8.5.1.1	Two MEANS of PROTECTION provided for ME EQUIPMENT to prevent APPLIED and other ACCESSIBLE PARTS from exceeding limits in 8.4		P
THIC	Varnishing, enamelling, oxidation, and similar protective finishes and coatings with sealing compounds re-plasticizing at temperatures expected during operation and sterilization disregarded as MEANS OF PROTECTION	NC LINC LIN	P
./.	Components and wiring forming a MEANS OF PROTECTION comply with 8.10		Р
8.5.1.2	MEANS OF PATIENT PROTECTION (MOPP)	No Who W	N/A
7.	Solid insulation forming a MEANS OF PATIENT PROTECTION complied with dielectric strength test:	See appended Table 8.8.3	N/A
11/10	CREEPAGE and CLEARANCES forming a MEANS OF PATIENT PROTECTION complied with Table 12	ye Lang Lang	N/A
a'nC	PROTECTIVE EARTH CONNECTIONS forming a MEANS OF PATIENT PROTECTION complied with Cl. 8.6	nc onc or	N/A
YIP.	Y1 or Y2 capacitor complying with standard IEC 60384-14 considered one MEANS OF PATIENT PROTECTION:	See appended Tables 8.8.3 and 8.10	N/A
THINE	Single Y1 capacitor used for two MEANS OF PATIENT PROTECTION when the working voltage is less than 42,4 V peak a.c. or 60 V d.c:	See appended Tables 8.8.3 and 8.10	N/A
THIC	Two capacitors used in series, each RATED for total WORKING VOLTAGE across the pair and have the same NOMINAL capacitance	LANC LANC	N/A
	Voltage Total Working (V) and C Nominal (μF):	, ,	-
8.5.1.3	MEANS OF OPERATOR PROTECTION (MOOP)	The will in	N/A
7.	Solid insulation forming a MEANS OF OPERATOR PROTECTION complied with:	7, 7,	N/A
-inC	- dielectric strength test:	See appended Table 8.8.3	N/A
14	- requirements of IEC 60950-1 for INSULATION CO-ORDINATION	. 44, 41	N/A
MC	CREEPAGE and CLEARANCES forming a MEANS OF OPERATOR PROTECTION complied with:	NC THICK	N/A
	- limits of Tables 13 to 16 (inclusive); or		N/A
MC	- requirements of IEC 60950-1 for INSULATION CO-ORDINATION	NC INC IN	N/A
1.	PROTECTIVE EARTH CONNECTIONS forming a MEANS OF OPERATOR PROTECTION complied with CI. 8.6		N/A
· MC	- or with requirements and tests of IEC 60950-1 for protective earthing:	See Attachment No	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
10,	A Y2 (IEC 60384-14) capacitor is considered one MEANS OF OPERATOR PROTECTION:	See appended Tables 8.8.3 and 8.10	N/A
THIC	A Y1 (IEC 60384-14) capacitor is considered two MEANS OF OPERATOR PROTECTION:	See appended Tables 8.8.3 and 8.10	N/A
ain C	Two capacitors used in series each RATED for total WORKING VOLTAGE across the pair and have the same NOMINAL capacitance	nc anc ar	N/A
11,	Voltage Total Working (V) and C Nominal (μF)	, 11, 11,	_
THIC	Points and applied parts at which impedances of components, CREEPAGE, CLEARANCES, PROTECTIVE EARTH CONNECTIONS or insulation, prevent ACCESSIBLE PARTS from exceeding limits in 8.4 were examined whether a failure at any of these points is to be regarded as a NORMAL or SINGLE FAULT CONDITION		N/A
- W/C	A MEANS OF PROTECTION protecting APPLIED PARTS, or parts identified by 4.6 as parts subject to the same requirements, considered MEANS OF PATIENT PROTECTION	UC LAUC LA	N/A
7.	A MEANS OF PROTECTION protecting other parts considered MEANS OF OPERATOR PROTECTION:		N/A
3.5.2	Separation of PATIENT CONNECTIONS	in one on	N/A
8.5.2.1	PATIENT CONNECTIONS of F-TYPE APPLIED PART separated from all other parts by equivalent to one MEANS OF PATIENT PROTECTION for a WORKING VOLTAGE equal to the MAX. MAINS VOLTAGE	For additional RM information, see appended Tables 8.7 and 8.8.3 See also Table 11.6.1	N/A
.,(Separation requirement not applied between multiple functions of a single F-TYPE APPLIED PART		N/A
1 kg	PATIENT CONNECTIONS treated as one APPLIED PART in the absence of electrical separation between PATIENT CONNECTIONS of same or another function	"C "C "	N/A
14	MANUFACTURER has defined if multiple functions are to be considered as all within one APPLIED PART or as multiple APPLIED PARTS	a, 16, 14	N/A
THIC	Classification as TYPE BF, CF, or DEFIBRILLATION-PROOF applied to one entire APPLIED PART	We LANG LA	N/A
70	LEAKAGE CURRENT tests conducted per 8.7.4:	See appended Table 8.7	N/A
arn C	Dielectric strength test conducted per 8.8.3:	See appended Table 8.8.3	N/A
111	CREEPAGE and CLEARANCES measured:	Refer to Insulation Diagram	N/A



Report No.: TMC200313115-S EN 60601-1 Requirement + Test Verdict Clause Result - Remark P A protective device connected between PATIENT CONNECTIONS of an F-TYPE APPLIED PART and **ENCLOSURE to protect against excessive** voltages did not operate below 500 V r.m.s 8.5.2.2 N/A PATIENT CONNECTIONS of a TYPE B APPLIED PART not PROTECTIVELY EARTHED are separated by one MEANS OF PATIENT PROTECTION from metal ACCESSIBLE PARTS not PROTECTIVELY EARTHED: N/A - except when metal ACCESSIBLE PART is physically close to APPLIED PART and can be regarded as a part of APPLIED PART; and - RISK that metal ACCESSIBLE PART will make N/A contact with a source of voltage or LEAKAGE **CURRENT above permitted limits is acceptably** LEAKAGE CURRENT tests conducted per 8.7.4....: See appended Table 8.7 N/A Dielectric strength test conducted per 8.8.3....: See appended Table 8.8.3 N/A Relevant CREEPAGE and CLEARANCES measured N/A Refer to Insulation Diagram RISK MANAGEMENT FILE includes an assessment RMF Reference to specific N/A of the RISK of metal ACCESSIBLE PARTS RISKS: contacting a source of voltage or LEAKAGE (ISO 14971 CI. CURRENT above the limits..... (ISO 14971 CI. 4.2-4.4, 5) 8.5.2.3 A connector on a PATIENT lead or PATIENT cable located at the end of the lead N/A or cable remote from PATIENT, with conductive part not separated from all PATIENT CONNECTIONS by one MEANS OF PATIENT PROTECTION for a WORKING **VOLTAGE equal to MAXIMUM MAINS VOLTAGE** N/A - cannot be connected to earth or hazardous voltage while the PATIENT CONNECTIONS are in contact with PATIENT..... conductive part of connector not separated N/A from all PATIENT CONNECTIONS did not come into contact with a flat conductive plate of not less than 100 mm diameter - CLEARANCE between connector pins and a flat N/A surface is at least 0.5 mm conductive part pluggable into a mains N/A socket protected from making contact with parts at MAINS VOLTAGE by insulation with a CREEPAGE DISTANCE of at least 1.0 mm, a 1500 V dielectric strength and complying with 8.8.4.1 - required test finger did not make electrical N/A contact with conductive part when applied against access openings with a force of 10 N, Test finger test (10 N).....: | See appended Table 5.9.2 N/A



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	EN 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
TANC	Except when RISK MANAGEMENT PROCESS includes an assessment of RISKS resulting from contact with objects other than mains sockets or flat surfaces: (ISO 14971 Cl. 4.2-4.4, 5)	RMF Reference to specific RISKS: (ISO 14971 CI) See appended Table 5.9.2	N/A
8.5.4	WORKING VOLTAGE	2 2	N/A
LANC	- Input supply voltage to ME EQUIPMENT was RATED voltage or voltage within RATED range resulting in highest measured value (V):	We LINE LIN	N/A
THIC	- WORKING VOLTAGE for d.c. voltages with superimposed ripple was average value when peak-to-peak ripple less than 10% of average value or peak voltage when peak-to-peak ripple exceeding 10% of average value (V)::	NC THIC TH	N/A
THIC	- WORKING VOLTAGE for each MEANS OF PROTECTION forming DOUBLE INSULATION was voltage DOUBLE INSULATION, as a whole, subjected to (V):	See Insulation Diagram and Insulation Table	N/A
TIME	- Intentional or accidental earthing of PATIENT regarded as a NORMAL CONDITION for WORKING VOLTAGE involving a PATIENT CONNECTION not connected to earth	No Line Lin	N/A
THINC	- WORKING VOLTAGE between PATIENT CONNECTIONS of an F-TYPE APPLIED PART and ENCLOSURE was highest voltage appearing across insulation in NORMAL USE including earthing of any part of APPLIED PART (V)::	C WIC WILL	N/A
7 · · ·	- WORKING VOLTAGE for DEFIBRILLATION-PROOF APPLIED PARTS determined disregarding possible presence of defibrillation voltages		N/A
- WIC	- WORKING VOLTAGE was equal to resonance voltage in case of motors provided with capacitors between the point where a winding and a capacitor are connected together and a terminal for external conductors (V)	NC LANC LA	N/A
8.5.5	DEFIBRILLATION-PROOF APPLIED PARTS	7, 7,	N/A
8.5.5.1	Classification "DEFIBRILLATION-PROOF APPLIED PART" applied to one APPLIED PART in its entirety	nc onc or	N/A
71	Isolation of PATIENT CONNECTIONS of a DEFIBRILLATION-PROOF APPLIED PART from other parts of ME EQUIPMENT accomplished as follows:		N/A
11/1	a) No hazardous electrical energies appear during a discharge of cardiac defibrillator:	See appended Table 8.5.5.1a	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
LINC LIN	b) ME EQUIPMENT complied with relevant requirements of this standard, providing BASIC SAFETY and ESSENTIAL PERFORMANCE following exposure to defibrillation voltage, and recovery time stated in ACCOMPANYING DOCUMENTS:	See appended Table 8.5.5.1b	N/A
8.5.5.2	Means provided to limit energy delivered to a 100 Ω load:	See appended Table 8.5.5.2	N/A
8.6	Protective and functional earthing and potential	equalization of ME EQUIPMENT	<
8.6.1	Requirements of 8.6.2 to 8.6.8 applied		N/A
THIC	Parts complying with IEC 60950-1 for protective earthing and serving as MEANS OF OPERATOR PROTECTION but not PATIENT PROTECTION exempted from requirements of 8.6.2 to 8.6.8	We LANC LA	N/A
8.6.2	PROTECTIVE EARTH TERMINAL is suitable for connection to an external protective earthing system by a PROTECTIVE EARTH CONDUCTOR in a POWER SUPPLY CORD and a suitable plug or by a FIXED PROTECTIVE EARTH CONDUCTOR	NC THIC TH	N/A
1 km	Clamping means of PROTECTIVE EARTH TERMINAL of ME EQUIPMENT for FIXED supply conductors or POWER SUPPLY CORDS comply with 8.11.4.3, and cannot be loosened without TOOL	20 Lan Lu	N/A
LEN	Screws for internal PROTECTIVE EARTH CONNECTIONS completely covered or protected against accidental loosening from outside:	y Lin Lu	N/A
LANC	Earth pin of APPLIANCE INLET forming supply connection to ME EQUIPMENT regarded as PROTECTIVE EARTH TERMINAL	IMC IM	N/A
THIC	PROTECTIVE EARTH TERMINAL not used for mechanical connection between different parts of ME EQUIPMENT or securing components not related to protective or functional earthing	WC LANC LA	N/A
8.6.3	PROTECTIVE EARTH CONNECTION not used for a moving part,	nc inc in	N/A
THIC	except when MANUFACTURER demonstrated in RISK MANAGEMENT FILE connection will remain reliable during EXPECTED SERVICE LIFE	RMF Reference to proof of reliability: (ISO 14971 CI)	N/A
8.6.4	a) PROTECTIVE EARTH CONNECTIONS carried fault currents reliably and without excessive voltage drop:	See appended Table 8.6.4	N/A
0.170	6612 6613 6614 6	217 0217 017	



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Clause	Requirement + Test	Result - Remark	Verdict
LEN.	b) Allowable TOUCH CURRENT and PATIENT LEAKAGE CURRENT in SINGLE FAULT CONDITION were not exceeded, when impedance of PROTECTIVE EARTH CONNECTIONS exceeded values in 8.6.4 a) and Table 8.6.4, due to limited current capability of relevant circuits:	See appended Table 8.6.4 & Clause 8.7	N/A
8.6.5	Surface coatings	Ja Ja	(P
161	Poorly conducting surface coatings on conductive elements removed at the point of contact	y 164 14	P
THIC	Coating not removed when requirements for impedance and current-carrying capacity met	We LANG LA	C P
8.6.6	Plugs and sockets		N/A
THIC	PROTECTIVE EARTH CONNECTION where connection between SUPPLY MAINS and ME EQUIPMENT or between separate parts of ME EQUIPMENT made via a plug and socket was made before and interrupted after supply connections	We LANC LA	N/A
1	- applied also where interchangeable parts are PROTECTIVELY EARTHED	7, 7,	N/A
8.6.7	Terminal for connection of a POTENTIAL EQUALIZATION	TION CONDUCTOR	N/A
110	- Terminal is accessible to OPERATOR with ME EQUIPMENT in any position of NORMAL USE	. 14, 11	N/A
MC	-accidental disconnection avoided in NORMAL USE	C MIC WIN	N/A
	- Terminal allows conductor to be detached without a TOOL	2	N/A
TIME	- Terminal not used for a PROTECTIVE EARTH CONNECTION	We LANG LA	N/A
921	- Terminal marked with symbol 8 of Table D.1		N/A
THIC	- Instructions for use contain information on function and use of POTENTIAL EQUALIZATION CONDUCTOR together with a reference to requirements of this standard	We LAVE LA	N/A
THIC	POWER SUPPLY CORD does not incorporate a POTENTIAL EQUALIZATION CONDUCTOR	We LANC LA	N/A
8.6.8	FUNCTIONAL EARTH TERMINAL not used to provide a PROTECTIVE EARTH CONNECTION		N/A
8.6.9	Class II ME EQUIPMENT	The Marie Marie	N/A



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Clause	Requirement + Test	Result - Remark	Verdict	
LINC	Third conductor of POWER SUPPLY CORD connected to protective earth contact of MAINS PLUG provided with CLASS II ME EQUIPMENT with isolated internal screens used as functional earth connection to the screen's FUNCTIONAL EARTH TERMINAL, coloured green and yellow	NC LINC LIN	N/A	
THIC	ACCOMPANYING DOCUMENTS include a statement that the third conductor in the POWER SUPPLY CORD is only a functional earth.	UC LANC LA	N/A	
THIC	Two MEANS OF PROTECTION provided between insulation of internal screens and all internal wiring connected to them and ACCESSIBLE PARTS	NC THIC TH	N/A	
8.7	LEAKAGE CURRENTS and PATIENT AUXILIARY CURREN	ITS	N/A	
8.7.1	a) Electrical isolation providing protection against electric shock limits currents to values in 8.7.3:	See appended Tables 8.7	N/A	
THIC	b) Specified values of EARTH LEAKAGE, TOUCH, PATIENT LEAKAGE, and PATIENT AUXILIARY CURRENTS applied in combination of conditions in appended Table 8.7:	See appended Tables 8.7	N/A	
8.7.2	Allowable values specified in 8.7.3 applied under SINGLE FAULT CONDITIONS of 8.1 b), except	aC .aC .	N/A	
LEN	- where insulation used in conjunction with a PROTECTIVE EARTH CONNECTION, insulation short circuited only under conditions in 8.6.4 b)	y Len Lu	N/A	
THIC	the only SINGLE FAULT CONDITION for EARTH LEAKAGE CURRENT was interruption of one supply conductor at a time	LANC LANC	N/A	
THIC	- LEAKAGE CURRENTS and PATIENT AUXILIARY CURRENT not measured in SINGLE FAULT CONDITION of short circuiting of one constituent part of DOUBLE INSULATION	WC LANC LA	N/A	
THIC	SINGLE FAULT CONDITIONS not applied at same time as special test conditions of MAXIMUM MAINS VOLTAGE on APPLIED PARTS and non-PROTECTIVELY EARTHED parts of ENCLOSURE	NC LANC LA	N/A	
8.7.3	Allowable Values	.(.(.	N/A	
LEN	a) Allowable values in 8.7.3 b), c), and d) measured based on, and are relative to currents in Fig 12 a), or by a device measuring frequency contents of currents as in Fig 12 b.:	See appended Table 8.7	N/A	
LEN	b) Allowable values of PATIENT LEAKAGE and AUXILIARY CURRENTS are according to Tables 3 & 4, and values of a.c. are relative to currents having a frequency not less than 0.1Hz:	See appended Table 8.7	N/A	



TMC Testing Services(Shenzhen) Co., Ltd Report No.: TMC200313115-9 EN 60601-1 Requirement + Test Result - Remark Verdict Clause c) Touch current did not exceed 100 uA in See appended Table 8.7 N/A NORMAL CONDITION and 500 µA in SINGLE FAULT CONDITION (ITNC, ITSFC)....: d) EARTH LEAKAGE CURRENT did not exceed 5 mA See appended Table 8.7 N/A in NORMAL CONDITION and 10 mA in SINGLE FAULT CONDITION (I_{ENC}, I_{ESFC}).....: Higher values of EARTH LEAKAGE CURRENT See appended Table 8.7 N/A permitted for PERMANENTLY INSTALLED ME **EQUIPMENT** connected to a supply circuit supplying only this ME EQUIPMENT according to local regulations or IEC 60364-7-710.....: e) LEAKAGE CURRENTS, regardless of waveform See appended Table 8.7 N/A and frequency, did not exceed 10 mA r.m.s. in NORMAL or in SINGLE FAULT CONDITION (measured with a non-frequency-weighted device.....:: f) LEAKAGE CURRENTS flowing in a FUNCTIONAL See appended Table 8.7 N/A EARTH CONDUCTOR in a non-PERMANENTLY INSTALLED ME EQUIPMENT are 5 mA in NORMAL CONDITION, 10 mA in SINGLE FAULT CONDITION: 8.7.4 LEAKAGE and PATIENT AUXILIARY CURRENTS See appended Table 8.7 N/A measurements..... 8.8 Insulation 8.8.1 Insulation relied on as MEANS OF PROTECTION, N/A including REINFORCED INSULATION subjected to testing Insulation exempted from test (complies with N/A clause 4.8) **Insulation forming MEANS OF OPERATOR** N/A PROTECTION and complying with IEC 60950-1 for **INSULATION CO-ORDINATION not tested as in 8.8** 8.8.2 Distance through solid insulation or use of thin sheet material Р P Solid insulation forming SUPPLEMENTARY or REINFORCED INSULATION for a PEAK WORKING **VOLTAGE greater than 71 V provided with:** a) 0.4 mm, min, distance through insulation, or Ρ b) does not form part of an ENCLOSURE and not subject to handling or abrasion during NORMAL **USE**, and comprised of: See appended Table 8.8.3 Ρ at least two layers of material, each passed the appropriate dielectric strength test.....: - or three layers of material, for which all See appended Table 8.8.3 combinations of two layers together passed the appropriate dielectric strength test.....



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Clause Requirement + Test Verdict Result - Remark P Dielectric strength test for one or two lavers was same as for one MEANS OF PROTECTION for SUPPLEMENTARY INSULATION Р Dielectric strength test for one or two layers was same as for two MEANS OF PROTECTION for REINFORCED INSULATION BASIC, SUPPLEMENTARY, and REINFORCED Ρ **INSULATION required between windings of** wound components separated by interleaved insulation complying with a) or b), or both, except when c) Wire with solid insulation, other than solvent N/A based enamel, complying with a) d) Wire with multi-layer extruded or spirally N/A wrapped insulation complying with b) and complying with Annex L e) Finished wire with spirally wrapped or multi-N/A laver extruded insulation, complying with Annex L N/A BASIC INSULATION: minimum two wrapped layers or one extruded layer - SUPPLEMENTARY INSULATION: minimum two N/A layers, wrapped or extruded - REINFORCED INSULATION: minimum three layers, N/A wrapped or extruded In d) and e), for spirally wrapped insulation N/A with CREEPAGE DISTANCES between layers less than in Table 12 or 16 (Pollution Degree 1) depending on type of insulation, path between layers sealed as a cemented joint in 8.9.3.3 and test voltages of TYPE TESTS in L.3 equal 1.6 times of normal values Protection against mechanical stress provided N/A where two insulated wires or one bare and one insulated wire are in contact inside wound component, crossing at an angle between 45° and 90° and subject to winding tension....: Finished component complied with routine See appended Table 8.8.3 N/A dielectric strength tests of 8.8.3....:: Tests of Annex L not repeated since material See Table 8.10 and Material N/A data sheets confirm compliance....: Information Attachment 8.8.3 **Dielectric Strength** N/A Solid insulating materials with a safety function | See appended Table 8.8.3 N/A withstood dielectric strength test voltages:

Insulation other than wire insulation

8.8.4



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Clause	Requirement + Test	Result - Remark	Verdict		
8.8.4.1	Resistance to heat retained by all insulation and insulating partition walls during EXPECTED SERVICE LIFE of ME EQUIPMENT	VC VC	N/A		
160	ME EQUIPMENT and design documentation examined:	See attachment No	N/A		
THIC	RISK MANAGEMENT FILE examined in conjunction with resistance to moisture, dielectric strength, and mechanical strength tests: (ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A		
MC	Satisfactory evidence of compliance provided by manufacturer for resistance to heat:	See Attachment No	C N/A		
	Tests conducted in absence of satisfactory evidence for resistance to heat:	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	N/A		
1 My	a) ENCLOSURE and other external parts of insulating material, except insulation of flexible cords and parts of ceramic material, subjected to ball-pressure test using Fig 21 apparatus:	See appended Table 8.8.4.1	N/A		
THIC	b) Parts of insulating material supporting uninsulated parts of MAINS PART subjected to ball-pressure test in a), except at 125 °C ± 2 ° C or ambient indicated in technical description ±2°C plus temperature rise determined during test of 11.1 of relevant part, if higher (°C)	See appended Table 8.8.4.1	N/A		
CANC	Test not performed on parts of ceramic material, insulating parts of commutators, brush-caps, and similar, and on coil formers not used as REINFORCED INSULATION	C WIC THIC	N/A		
8.8.4.2	Resistance to environmental stress		Р		
THIC	Insulating characteristics and mechanical strength of all MEANS OF PROTECTION not likely to be impaired by environmental stresses including deposition of dirt resulting from wear of parts within EQUIPMENT, potentially reducing CREEPAGE and CLEARANCES below 8.9	WC LANC LA	N/A		
Zb.	Ceramic and similar materials not tightly sintered, and beads alone not used as SUPPLEMENTARY OF REINFORCED INSULATION	6. 4p. 4p	N/A		
1 Hills	Insulating material with embedded heating conductors considered as one MEANS OF PROTECTION but not two MEANS OF PROTECTION	EVE LINE LIN	P		
THIC	Parts of natural latex rubber aged by suspending samples freely in an oxygen cylinder containing commercial oxygen to a pressure of 2.1 MPa ± 70 kPa, with an effective capacity of at least 10 times volume of samples	INC THUC TH	N/A		



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Clause	Requirement + Test	Result - Remark	Verdict		
LO.	There were no cracks visible to naked eyes after samples kept in cylinder at 70 °C ± 2 °C for 96h, and afterwards, left at room temperature for at least 16h	UC LINC LIN	P		
8.9	CREEPAGE DISTANCES and AIR CLEARANCES		N/A		
8.9.1.1	CREEPAGE DISTANCES and AIR CLEARANCES are equal to or greater than values in Tables 12 to 16 (inclusive)	Refer to Insulation Diagram	N/A		
8.9.1.15	CREEPAGE DISTANCES and AIR CLEARANCES for DEFIBRILLATION-PROOF APPLIED PARTS are 4 mm or more to meet 8.5.5.1	nc anc a	N/A		
8.9.2	a) Short circuiting of each single one of CREEPAGE DISTANCES and CLEARANCES in turn did not result in a HAZARDOUS SITUATION, min CREEPAGE and CLEARANCES not applied:	See appended Table 8.9.2	N/A		
8.9.3	Spaces filled by insulating compound	1, 1,	N/A		
8.9.3.1	Only solid insulation requirements applied where distances between conductive parts filled with insulating compound	NC THIC TH	N/A		
	Thermal cycling, humidity preconditioning, and dielectric strength tests		N/A		
8.9.3.2	For insulating compound forming solid insulation between conductive parts, a single sample subjected to thermal cycling PROCEDURE of 8.9.3.4 followed by humidity preconditioning per 5.7 (for 48 hours), followed by dielectric strength test (cl. 8.8.3 at 1,6 x test voltage):	See appended Table 8.9.3.2	N/A		
	Cracks or voids in insulating compound affecting homogeneity of material didn't occur		N/A		
8.9.3.3	Where insulating compound forms a cemented joint with other insulating parts, three samples tested for reliability of joint	an Line Lin	N/A		
THIC	A winding of solvent-based enamelled wire replaced for the test by a metal foil or by a few turns of bare wire placed close to cemented joint, and three samples tested as follows:	ar Lauc La	N/A		
THIC	- One sample subjected to thermal cycling PROCEDURE of 8.9.3.4, and immediately after the last period at highest temperature during thermal cycling followed by dielectric strength test of cl. 8.8.3 at 1.6 x the test voltage::	See appended Table 8.9.3.3	N/A		
L MIL	- The other two samples subjected to humidity preconditioning of 5.7, except for 48 hours only followed by a dielectric strength test of cl. 8.8.3 at 1.6 times the test voltage	or Leg Lu	N/A		
8.10	Components and wiring	21 121 14	N/A		



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Clause	Requirement + Test	Result - Remark	Verdict
8.10.1	Components of ME EQUIPMENT likely to result in an unacceptable RISK by their movements mounted securely	20 40 40	N/A
LEN	RISK MANAGEMENT FILE includes an assessment of RISKS related to unwanted movement of components: (ISO 14791 CI. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
8.10.2	Conductors and connectors of ME EQUIPMENT adequately secured or insulated to prevent accidental detachment	Ma Line Lin	N/A
1 kille	Stranded conductors are not solder-coated when secured by clamping means to prevent HAZARDOUS SITUATIONS	Me LING LIN	N/A
8.10.3	Interconnecting flexible cords detachable without a TOOL used provided with means for connection to comply with requirements for metal ACCESSIBLE PARTS when a connection is loosened or broken:	See appended Table 5.9.2	N/A
8.10.4	Cord-connected HAND-HELD parts and cord-connectes	nected foot-operated control	N/A
8.10.4.1	Control devices of ME EQUIPMENT and their connection cords contain only conductors and components operating at 42.4 V peak a.c., max, or 60 V d.c. in circuits isolated from MAINS PART by two MEANS OF PROTECTION	anc LANC LA	N/A
8.10.4.2	Connection and anchorage of a flexible cord to a HAND-HELD or foot-operated control device of ME EQUIPMENT, at both ends of the cable to the control device, complies with the requirements for POWER SUPPLY CORDS in Cl. 8.11.3	C LANC LANC	N/A
THIN	Other HAND-HELD parts, if disturbance or breaking of one or more of the connections could result in a HAZARDOUS SITUATION, also comply with tests of CI. 8.11.3	en Len Len	N/A
8.10.5	Mechanical protection of wiring	EL LELL LE	N/A
n'n C	a) Internal cables and wiring adequately protected against contact with a moving part or from friction at sharp corners and edges:	anc anc ar	N/A
70	b) Wiring, cord forms, or components are not likely to be damaged during assembly or during opening or closing of ACCESS COVERS	40 40	N/A
8.10.6	Guiding rollers prevent bending of movable insulated conductors around a radius of less than five times the outer diameter of the lead	in Line Lin	N/A
8.10.7	a) Insulating sleeve adequately secured:	See appended Table 8.10	N/A
4777		V150 0215	-



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Clause	Requirement + Test	Result - Remark	Verdict
LW.	b) Sheath of a flexible cord not used as a MEANS OF PROTECTION inside ME EQUIPMENT when it is subject to mechanical or thermal stresses beyond its RATED characteristics		N/A
7.	c) Insulated conductors of ME EQUIPMENT subject to temperatures exceeding 70 °C:	See appended Table 8.10	N/A
3.11	MAINS PARTS, components and layout	in one air	N/A
8.11.1	a) ME EQUIPMENT provided with means of electrically isolating its circuits from SUPPLY MAINS simultaneously on all poles:	See appended Table 8.10	N/A
THIC	PERMANENTLY INSTALLED ME EQUIPMENT connected to a poly-phase SUPPLY MAINS equipped with a device not interrupting neutral conductor, provided local installation conditions prevent voltage on neutral conductor from exceeding limits in 8.4.2 c)	NC THIC TH	N/A
THIC	PERMANENTLY INSTALLED ME EQUIPMENT provided with means to isolate its circuits electrically from the SUPPLY MAINS are capable of being locked in the off position	NC THIC TH	N/A
٥.	- the isolation device specified in the ACCOMPANYING DOCUMENTS		N/A
LEN	b) Means of isolation incorporated in ME EQUIPMENT, or if external, described in technical description:	See appended Table 8.10	N/A
LINC	c) A SUPPLY MAINS switch used to comply with 8.11.1 a) complies with CREEPAGE / CLEARANCES for a MAINS TRANSIENT VOLTAGE of 4 kV	See appended Table 8.10	N/A
NAC	d) A SUPPLY MAINS switch not incorporated in a POWER SUPPLY CORD or external flexible lead	nc anc a	N/A
11.	e) Actuator of a SUPPLY MAINS switch used to comply with 8.11.1 a) complies with IEC 60447	10 10	N/A
THIC	f) A suitable plug device used in non- PERMANENTLY INSTALLED ME EQUIPMENT with no SUPPLY MAINS SWITCH:	See appended Table 8.10	C N/A
-inC	g) A fuse or a semiconductor device not used as an isolating means	nc anc a	N/A
THIC	h) ME EQUIPMENT not provided with a device causing disconnection of ME EQUIPMENT from SUPPLY MAINS by producing a short circuit resulting in operation of an overcurrent protection device	NC INC IN	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
THIC	i) Parts within ENCLOSURE of ME EQUIPMENT with a circuit > 42.4 V peak a.c. or 60 V d.c. that cannot be disconnected from its supply by an external switch or a plug device accessible at all times is protected against touch even after opening ENCLOSURE by an additional covering	We Line Li	N/A
THIC	A clear warning notice is marked on outside of ME EQUIPMENT to indicate it exceeds allowable touch voltage	NC LANC LA	C N/A
THIC	For a part that could not be disconnected from supply by an external switch or a plug device accessible at all times, the required cover or warning notice complied with this clause	UC LANC LA	P
	Standard test finger applied	, ,	N/A
8.11.2	MULTIPLE SOCKET-OUTLETS integral with ME EQUIPMENT complied with 16.2 d), second dash; and 16.9.2	We LANC LA	N/A
8.11.3	POWER SUPPLY CORDS	.6 .6	N/A
8.11.3.1	MAINS PLUG not fitted with more than one POWER SUPPLY CORD	an Line Li	N/A
8.11.3.2	POWER SUPPLY CORDS are no less robust than ordinary tough rubber sheathed flexible cord (IEC 60245-1:2003, Annex A, designation 53) or ordinary polyvinyl chloride sheathed flexible cord (IEC 60227-1:1993, Annex A, design 53):	See appended Table 8.10	N/A
THIC	Only polyvinyl chloride insulated POWER SUPPLY CORD with appropriate temperature rating used for ME EQUIPMENT having external metal parts with a temperature > 75 °C touchable by the cord in NORMAL USE:	See appended Table 8.10	N/A
8.11.3.3	NOMINAL cross-sectional area of conductors of POWER SUPPLY CORDS of ME EQUIPMENT is not less than in Table 17:	1 Len Le	N/A
8.11.3.4	APPLIANCE COUPLERS complying with IEC 60320-1 are considered to comply with 8.11.3.5 and 8.11.3.6	See appended Table 8.10	N/A
8.11.3.5	Cord anchorage	.((.	N/A
1 M	a) Conductors of POWER SUPPLY CORD provided with strain relief and insulation protected from abrasion at point of entry to ME EQUIPMENT or a MAINS CONNECTOR by a cord anchorage	The Things The	N/A
LEN	b) Cord anchorage of POWER SUPPLY CORD is an insulating material, or	an Line Li	N/A
MC	- metal, insulated from conductive ACCESSIBLE PARTS non-PROTECTIVELY EARTHED by a MEANS OF PROTECTION, or	NC WIC W	N/A



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Clause Requirement + Test Verdict Result - Remark - metal provided with an insulating lining N/A affixed to cord anchorage c) Cord anchorage prevents cord from being N/A clamped by a screw bearing directly on cord insulation d) Screws to be operated when replacing N/A POWER SUPPLY CORD do not serve to secure any components e) Conductors of POWER SUPPLY CORD arranged N/A to prevent PROTECTIVE EARTH CONDUCTOR against strain as long as phase conductors are in contact with their terminals f) Cord anchorage prevents POWER SUPPLY CORD N/A from being pushed into ME EQUIPMENT or MAINS CONNECTOR Conductors of POWER SUPPLY CORD supplied by See appended Table 8.11.3.5 MANUFACTURER disconnected from terminals or N/A from MAINS CONNECTOR and cord subjected 25 times to a pull applied with no jerks, each time for 1 s, on sheath of the value in Table 18.....: Cord subjected to a torque in Table 18 for one N/A minute immediately after pull tests Cord anchorage did not allow cord sheath to N/A be longitudinally displaced by more than 2 mm or conductor ends to move over a distance of more than 1 mm from their connected position CREEPAGE and CLEARANCES not reduced below N/A limits in 8.9 It was not possible to push the cord into ME N/A **EQUIPMENT OR MAINS CONNECTOR to an extent the** cord or internal parts would be damaged 8.11.3.6 POWER SUPPLY CORDS protected against N/A excessive bending at inlet opening of equipment Cord guard complied with test of IEC 60335-N/A 1:2001, Clause 25.14, or ME EQUIPMENT placed such that axis of cord Р See appended Table 8.11.3.6 guard projected at an angle of 45° with cord free from stress, and a mass equal 10 x D² gram attached to the free end of cord (g).....: Cord quard of temperature-sensitive material tested at 23 °C ± 2 °C, and flat cords bent in the plane of least resistance Curvature of the cord radius, immediately after See appended Table 8.11.3.6 mass attached, was not less than 1.5 x D......:



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Clause	Requirement + Test	Result - Remark	Verdict
0.44.4	" \(\lambda_{D_1} \) \(\	10, 10, 10	N/A
8.11.4	MAINS TERMINAL DEVICES		N/A
8.11.4.1	PERMANENTLY INSTALLED and ME EQUIPMENT with non-DETACHABLE POWER SUPPLY CORD provided with MAINS TERMINAL DEVICES ensuring reliable connection	WC LANC LA	N/A
o'nC	Terminals alone are not used to keep conductors in position	nc onc or	N/A
THE	Terminals of components other than terminal blocks complying with requirements of this Clause and marked accordingly used as terminals intended for external conductors	NC WIC W	N/A
11.	Screws and nuts clamping external conductors do not serve to secure any other component	4, 4,	N/A
8.11.4.2	Arrangement of MAINS TERMINAL DEVICES	in One on	○ N/A
Lin.	a) Terminals provided for connection of external cords or POWER SUPPLY CORDS together with PROTECTIVE EARTH TERMINAL grouped to provide convenient means of connection	NC INC IN	N/A
YIM.	d) Mains terminal devices not accessible without use of a TOOL	a, In, In	N/A
THIC	e) A MEANS OF PROTECTION are not short circuited when one end of a flexible conductor with NOMINAL cross-sectional area is stripped 8 mm and a single free wire is bent in each possible direction	NC THUC TH	N/A
8.11.4.3	Internal wiring not subjected to stress and CREEPAGE and CLEARANCES not reduced after fastening and loosening a conductor of largest cross-sectional area 10 times	LING LIN	N/A
8.11.4.4	Terminals with clamping means for a rewireable flexible cord did not require special preparation of conductors and conductors were not damaged and did not slip out when clamping means tightened	We the th	N/A
8.11.4.5	Adequate space provided inside ME EQUIPMENT designed for FIXED wiring or a rewireable POWER SUPPLY CORD to allow for connection of conductors	NC WIC W	N/A
7.	Correct connection and positioning of conductors before ACCESS COVER verified by an installation test	aC aC	N/A
8.11.5	Mains fuses and OVER-CURRENT RELEASES	My Lay Le	N/A
,,(A fuse or OVER-CURRENT RELEASE provided in each supply lead for CLASS I and CLASS II ME EQUIPMENT with a functional earth connection:	See appended Table 8.10	N/A



Report No.: TMC200313115-S EN 60601-1 Clause Requirement + Test Result - Remark Verdict - in at least one supply lead for other single-N/A phase CLASS II ME EQUIPMENT.....: neutral conductor not fused for PERMANENTLY N/A **INSTALLED ME EQUIPMENT** - fuses or OVER-CURRENT RELEASES omitted due N/A to provision of two MEANS OF PROTECTION between all parts within MAINS PART See appended Table 8.10 N/A Protective devices have adequate breaking capacity to interrupt the max. fault current.....: A fuse or OVER-CURRENT RELEASE not provided N/A in a PROTECTIVE EARTH CONDUCTOR Justification for omission of fuses or OVER-See Attachment No. N/A **CURRENT RELEASES documented.....:** 8.11.6 Internal wiring of the MAINS PART N/A N/A a) Cross-sectional area of internal wiring in a MAINS PART between MAINS TERMINAL DEVICE or APPLIANCE INLET and protective devices suitable b) Cross-sectional area of other wiring in MAINS See appended Table 8.10 for N/A PART and sizes of tracks on printed wiring details circuits are sufficient....:

9	PROTECTION AGAINST MECHANICAL HAZARD ME SYSTEMS	S OF ME EQUIPMENT AND	Р
9.2	HAZARDS associated with moving parts	C WILL WILL	P
9.2.1	When ME EQUIPMENT with moving parts PROPERLY INSTALLED, used per ACCOMPANYING DOCUMENTS or under foreseeable misuse, RISKS associated with moving parts reduced to an acceptable level:	NC LINC LI	P. L.
TMC	RISK from contact with moving parts reduced to an acceptable level using protective measures, (access, function, shape of parts, energy, speed of motion, and benefits to PATIENT considered)	INC THIC TH	P
THIC	RESIDUAL RISK associated with moving parts considered acceptable when exposure was needed for ME EQUIPMENT to perform its intended function, and	UC LANC LA	C N/A
an C	RISK CONTROLS implemented:	aC aC	N/A
14	RISK MANAGEMENT FILE includes an assessment of RISKS associated with moving parts: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A



			20
Clause	Requirement + Test	Result - Remark	Verdict
× 611.	× (0) × (0) × (0)	11 (61)	1
	All RISKS associated with moving parts have been reduced to an acceptable level		N/A
9.2.2	TRAPPING ZONE	inc ainc ai	N/A
9.2.2.1	ME EQUIPMENT with a TRAPPING ZONE complied with one or more of the following as feasible:	. 4. 4.	N/A
-nC	- Gaps in Clause 9.2.2.2, or	ac ac	◯ N/A
1.60.	- Safe distances in Clause 9.2.2.3, or	n. 161. 14	N/A
. C.	- GUARDS and other RISK CONTROL measures in 9.2.2.4, or		N/A
1 kg	- Continuous activation in Clause 9.2.2.5	no Line Lin	N/A
THIC	Control of relevant motion complied with 9.2.2.6 when implementation of above protective measures were inconsistent with INTENDED USE of ME EQUIPMENT OR ME SYSTEM	NC THIC TH	P
9.2.2.2	A TRAPPING ZONE considered not to present a MECHANICAL HAZARD when gaps of TRAPPING ZONE complied with dimensions per Table 20:	See appended Table 9.2.2.2	C P
9.2.2.3	A TRAPPING ZONE considered not to present a MECHANICAL HAZARD when distances separating OPERATOR, PATIENT, and others from TRAPPING ZONES exceeded values in ISO 13857:2008:	See appended Table 9.2.2.2	P
9.2.2.4	GUARDS and other RISK CONTROL measures		N/A
9.2.2.4.1	A TRAPPING ZONE do not to present a MECHANICAL HAZARD when GUARDS or other RISK CONTROL measures are of robust construction, not easy to bypass or render non-operational, and did not introduce additional unacceptable RISK:	See appended Table 15.3	N/A
9.2.2.4.2	FIXED GUARDS held in place by systems that can only be dismantled with a TOOL	y Lan La	N/A
9.2.2.4.3	Movable GUARDS that can be opened without a TOOL remained attached when GUARD was open	NC 511C 51	N/A
LINC.	- they are associated with an interlock preventing relevant moving parts from starting to move while TRAPPING ZONE is accessible, and stops movement when the GUARD is opened,	UC WILL W	N/A
110	 absence or failure of one of their components prevents starting, and stops moving parts 	40 40	N/A
THIC	Movable GUARDS complied with any applicable tests	UC LAUC LA	N/A
9.2.2.4.4	Other RISK CONTROL designed and incorporated into to the control system stops movement and		N/A
MI	- SINGLE FAULT CONDITIONS have a second RISK CONTROL, or	No Who I'M	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
101	ME EQUIPMENT IS SINGLE FAULT SAFE	21. Len Le	N/A
9.2.2.5	Continuous activation		N/A
9.2.2.5		nc nc	
1 la	Continuous activation used as a RISK CONTROL, complies with the following	13, Lu, Lu	N/A
	a) movement was in OPERATOR'S field of view	2	N/A
THIC	b) movement of ME EQUIPMENT or its parts was possible only by continuous activation of control by OPERATOR	ENC LANC LA	N/A
THIC	c) a second RISK CONTROL provided for SINGLE FAULT CONDITION of continuous activation system, or	INC LANC LA	N/A
. (- the continuous activation system is SINGLE FAULT SAFE		N/A
9.2.2.6	Speed of movement(s) positioning parts of ME EQUIPMENT or PATIENT limited to allow OPERATOR control of the movement	En Line Li	N/A
THIC	Over travel of such movement occurring after operation of a control to stop movement, did not result in an unacceptable RISK	MC LINC LI	N/A
9.2.3	Other MECHANICAL HAZARDS associated with movi	ing parts	N/A
9.2.3.1	Controls positioned, recessed, or protected by other means so that they cannot be accidentally actuated	The The	N/A
1 MIC	- unless for the intended PATIENT, the USABILITY ENGINEERING PROCESS concludes otherwise (e.g. PATIENT with special needs), or	C LANC LAN	N/A
an C	- activation does not result in an unacceptable	anc anc	N/A
9.2.3.2	Over travel past range limits of the ME EQUIPMENT prevented:	10. 14. 14	N/A
THIC	Over travel means provided with mechanical strength to withstand loading in NORMAL CONDITION & reasonably foreseeable misuse:	See appended Table 9.2.3.2	N/A
9.2.4	Emergency stopping devices	, ,	N/A
THIC	Where necessary to have one or more emergency stopping device(s), emergency stopping device complied with all the following, except for actuating switch capable of interrupting all power:	WC LANC LA	N/A
14	a) Emergency stopping device reduced RISK to an acceptable level	24 - 1 /4	N/A



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Clause Requirement + Test Verdict Result - Remark RISK MANAGEMENT FILE indicates the use of an RMF Reference to specific N/A emergency stopping device reduces the RISK to RISKS: an acceptable level.....:: (ISO 14971 Cl. __) (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.6) b) Proximity and response of OPERATOR to N/A actuate emergency stopping device could be relied upon to prevent HARM c) Emergency stopping device actuator was N/A readily accessible to OPERATOR d) Emergency stopping device(s) are not part of N/A normal operation of ME EQUIPMENT e) Emergency switching operation or stopping N/A means neither introduced further HAZARD nor interfered with operation necessary to remove original MECHANICAL HAZARD f) Emergency stopping device was able to N/A break full load of relevant circuit, including possible stalled motor currents and the like g) Means for stopping of movements operate as N/A a result of one single action h) Emergency stopping device provided with an N/A actuator in red and easily distinguishable and identifiable from other controls i) An actuator interrupting/opening mechanical N/A movements marked on or immediately adjacent to face of actuator with symbol 18 of Table D.1 or "STOP" j) Emergency stopping device, once actuated, N/A maintained ME EQUIPMENT in disabled condition until a deliberate action, different from that used to actuate it, was performed k) Emergency stopping device is suitable for its N/A application 9.2.5 N/A Means provided to permit quick and safe release of PATIENT in event of breakdown of ME EQUIPMENT or failure of power supply, activation of a RISK CONTROL measure, or emergency and uncontrolled or unintended movement of N/A ME EQUIPMENT that could result in an unacceptable RISK prevented - Situations where PATIENT is subjected to N/A unacceptable RISKS due to proximity of moving

HAZARDS prevented

parts, removal of normal exit routes, or other



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Clause	Requirement + Test	Result - Remark	Verdict
LO.	- Measures provided to reduce RISK to an acceptable level when after removal of counterbalanced parts, other parts of ME EQUIPMENT can move in a hazardous way	UC INC IN	N/A
THIC	RISK MANAGEMENT FILE includes an assessment of RISKS to the PATIENT related to breakdown of the ME EQUIPMENT	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
9.3	Rough surfaces, sharp corners and edges of ME EQUIPMENT that could result in injury or damage avoided or covered:	nc anc an	N/A
9.4	Instability HAZARDS	12. 112. 11	P
9.4.1	ME EQUIPMENT and its parts, other than FIXED, for placement on a surface did not overbalance (tip over) or move unexpectedly in NORMAL USE	NC WIC W	P
9.4.2	Instability – overbalance		Р
9.4.2.1	ME EQUIPMENT or its parts did not overbalance when prepared per ACCOMPANYING DOCUMENTS, or when tested:	See appended Table 9.4.2.1	CP
9.4.2.2	Instability excluding transport		
THINC	ME EQUIPMENT or its did not overbalance when placed in different positions of NORMAL USE,:	See appended Table 9.4.2.2	C P
7	A warning provided when overbalance occurred during 10° inclined plane test	, ,	N/A
9.4.2.3	Instability from horizontal and vertical forces	WILL WILL	P
,nC	a) ME EQUIPMENT or its parts with a mass of 25kg or more, intended to be used on the floor, didn't overbalance due to pushing, leaning against it		N/A
1 kg	Surfaces of ME EQUIPMENT or its parts where a RISK of overbalancing exists from pushing, etc., permanently marked with a warning of the RISK	1. 14. 14	N/A
THIC	ME EQUIPMENT did not overbalance when tested according to Cl. 9.4.2.3 a)	See appended Table 9.4.2.3	Р
- WC	b) ME EQUIPMENT, for use on the floor or on a table, did not overbalance due to sitting or stepping	NC WC W	N/A
- MC	ME EQUIPMENT or its parts, for use on the floor or on a table, where RISK of overbalancing exists, permanently marked with the RISK warning	NC THE TH	N/A
	ME EQUIPMENT did not overbalance when tested according to CI. 9.4.2.3b):	See appended Table 9.4.2.3	Р
9.4.2.4	Castors and wheels	.C .C .	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
9.4.2.4.1	Means used for transportation of MOBILE ME EQUIPMENT did not result in an unacceptable RISK when MOBILE ME EQUIPMENT moved or parked in NORMAL USE	an ten ten	N/A
9.4.2.4.2	Force required to move MOBILE ME EQUIPMENT did not exceed 200 N:	See appended Table 9.4.2.4.2	N/A
9.4.2.4.3	MOBILE ME EQUIPMENT exceeding 45 kg able to pass over threshold:	See appended Table 9.4.2.4.3	N/A
9.4.3	Instability from unwanted lateral movement (inc	luding sliding)	N/A
9.4.3.1	a) Brakes of power-driven MOBILE ME EQUIPMENT normally activated and could only be released by continuous actuation of a control	WC LINC LIA	C N/A
an C	b) Mobile ME Equipment provided with locking means to prevent unwanted movements	nc inc in	N/A
LIN.	c) No unwanted lateral movement resulted when MOBILE ME EQUIPMENT placed in its transport position when test per 9.4.3.1	See appended Table 9.4.3.1	N/A
9.4.3.2	Instability excluding transport	in the in	Р
	a) MOBILE ME EQUIPMENT provided with wheel locks or braking system compliant with 5° tilt test:	See appended Table 9.4.3.2	N/A
LEN	b) MOBILE ME EQUIPMENT provided with wheel locks or braking system compliant with lateral stability test	See appended Table 9.4.3.2	N/A
9.4.4	Grips and other handling devices	ic in inc	N/A
THIC	a) ME EQUIPMENT with a mass of over 20 kg requiring lifting in NORMAL USE or transport provided with suitable handling means, or ACCOMPANYING DOCUMENTS specify safe lifting method	NC LINC LIN	N/A
THIC	Handles, suitably placed to enable ME EQUIPMENT or its part to be carried by two or more persons and by examination of EQUIPMENT, its part, or ACCOMPANYING DOCUMENTS	INC LANC LA	N/A
THIC	b) PORTABLE ME EQUIPMENT with a mass > 20 kg provided with one or more carrying-handles suitably placed to enable carrying by two or more persons as confirmed by actual carrying	EUC LEUC LEU	N/A
	c) Carrying handles and grips and their means of attachment withstood loading test:	See appended Table 9.4.4	N/A
9.5	Expelled parts HAZARD	10. × 10, × 10	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
9.5.1	Suitability of means of protecting against expelled parts determined by assessment and examination of RISK MANAGEMENT FILE: (ISO 14971 Cl. 4.3, 4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	All identified RISKS associated with expelled parts mitigated to an acceptable level		N/A
9.5.2	Cathode Ray tube(s) complied with IEC 60065:2001, Clause 18, or IEC 61965:	See appended Table 8.10	N/A
9.6	Acoustic energy (including infra- and ultrasound	d) and vibration	N/A
9.6.1	Human exposure to acoustic energy and vibration from ME EQUIPMENT doesn't result in unacceptable RISK and	NC LINC LIN	N/A
	If necessary, confirmed in RISK MANAGEMENT FILE including audibility of auditory alarm signals, and PATIENT sensitivity:	NC THIC TH	N/A
THIC	If necessary, confirmed in RISK MANAGEMENT FILE including audibility of auditory alarm signals, PATIENT sensitivity, and (ISO 14971 Cl. 4.2-44, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
-nC	All identified RISKS mitigated to an acceptable level	aC .aC .	N/A
9.6.2	Acoustic energy	14, 16, 16	N/A
9.6.2.1	PATIENT, OPERATOR, and other persons are not exposed to acoustic energy from ME EQUIPMENT in NORMAL USE	C WIC WI	N/A
1	- 80 dBA for a cumulative exposure of 24 h over a 24 h period (dBA)	4. 4.	_
THIC	- 83 dBA (when halving the cumulative exposure time) (dBA):	UC LAUC LA	_
	- 140 dBC (peak) sound pressure level for impulsive or impact acoustic energy (dB):	, ,	_
9.6.2.2	RISK MANAGEMENT FILE examined	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
9.6.3	Hand-transmitted vibration	inc ainc ai	N/A
4WC	Means provided to protect PATIENT and OPERATOR when hand-transmitted frequency-weighted r.m.s. acceleration generated in NORMAL USE exceeds specified values	UC WUC W	N/A
14	- 2.5 m/s ² for a cumulative time of 8 h during a 24 h period (m/s ²):	. 14, 14	N/A
OTAC	- Accelerations for different times, inversely proportional to square root of time (m/s²):	NC MIC MI	N/A



Clause	Requirement + Test	-	Result - Remark	Verdict
Clause	Requirement : Test	- Mrs.	Result Remark	Volume
9.7	Pressure vessels and parts subject to pneumatic and hydraulic pressure		N/A	
9.7.2	Pneumatic and hydraulic part or ACCESSORIES met requireme examination of RISK MANAGEME (ISO 14971 Cl. 4.3-4.4, 5, 6.2-6	ents based on ENT FILE::	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
NIC	No unacceptable RISK result pressure or loss of vacuum	ed from loss of	INC WINC	N/A
7.	No unacceptable RISK result caused by leakage or a composite composite caused.			N/A
TIME	- Elements of ME EQUIPMENT of especially pipes and hoses le unacceptable RISK protected a external effects	ading to an	We LANC	N/A
THIC	- Reservoirs and similar vess unacceptable RISK are automa depressurized when ME EQUIPT from its power supply	tically	WC LINC	N/A
LINC	Means provided for isolation, depressurizing reservoirs and and pressure indication when possible	l similar vessels,	anc Line	N/A
LANC	- All elements remaining under isolation of ME EQUIPMENT or a its power supply resulting in a RISK provided with clearly idea devices, and a warning to depelements before setting or ma	n ACCESSORY from an unacceptable ntified exhaust pressurize these	SUC LINC	INC P
9.7.3	Maximum pressure a part of No be subjected to in NORMAL and CONDITIONS considered to be he following:	SINGLE FAULT	INC THIC	N/A
	a) RATED maximum supply pre external source	ssure from an		N/A
1 Miles	b) Pressure setting of a press provided as part of assembly	ure-relief device	Me LANCE	N/A
T NIA C	c) Max pressure that can deve of pressure that is part of ass pressure limited by a pressure	embly, unless	INC THIC	N/A
9.7.4	Max pressure in NORMAL and S CONDITIONS did not exceed MAX WORKING PRESSURE for EQUIPME allowed in 9.7.7, confirmed by MANUFACTURER'S data for the C EQUIPMENT, and by functional for	KIMUM PERMISSIBLE ENT part, except as inspection of THE omponent, ME		N/A



Clause	Requirement + Test	Result - Remark	Verdict
Jiause	Troquiroment - rest	Nosuit - Nomain	Verdict
9.7.5	A pressure vessel withstood a HYDRAULIC TEST PRESSURE when pressure was more than 50 kPa, and product of pressure and volume was more than 200 kPal	See appended Table 9.7.5	N/A
9.7.6	Pressure-control device regulating pressure in ME EQUIPMENT with pressure-relief device completed 100,000 cycles of operation under RATED load and prevented pressure from exceeding 90 % of setting of pressure-relief device in different conditions of NORMAL USE.:	NC LINC LIN	N/A
7.77 C	Pressure-relief device(s) used where MAXIMUM PERMISSIBLE WORKING PRESSURE could otherwise be exceeded met the following, as confirmed by MANUFACTURER'S data, ME EQUIPMENT, RISK MANAGEMENT FILE, and functional tests::	WC LINC LIN	N/A
1 My	a) Connected as close as possible to pressure vessel or parts of system it is to protect	We Line Lin	N/A
-inC	b) Installed to be readily accessible for inspection, maintenance, and repair	nc inc	N/A
In.	c) Could be adjusted or rendered inoperative without a TOOL	y, Ly, Ly	N/A
LANC	d) With discharge opening located and directed as to not to release material towards any person	anc Linc Lin	N/A
MC	e) With discharge opening located and directed as to not to deposit material on parts that could result in an unacceptable RISK		N/A
THIC	f) Adequate discharge capacity provided to ensure that pressure will not exceed MAXIMUM PERMISSIBLE WORKING PRESSURE of system it is connected to by more than 10 % when failure occurs in control of supply pressure	INC THIC TH	N/A
ىر.	g) No shut-off valve provided between a pressure-relief device and parts it is to protect	nc .nc	N/A
In.	h) Min number of cycles of operation 100 000, except for one-time use devices (bursting disks)	n. 14, 14	N/A
1 king	RISK MANAGEMENT FILE includes an assessment of the risks associated with the discharge opening of the pressure relief device: (ISO 14971 Cl. 4.3, 4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
0.8	HAZARDS associated with support systems	Mr Mr M	N/A
9.8.1	ME EQUIPMENT parts designed to support loads or provide actuating forces when a mechanical fault could constitute an unacceptable RISK:	See appended Table 8.10	N/A



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Clause	Deguirement + Teet	Result - Remark	Verdict
Clause	Requirement + Test	Result - Remark	verdict
√.C.	Construction of support, suspension, or actuation system complied with Table 21 and TOTAL LOAD		N/A
LIM	Means of attachment of ACCESSORIES prevent possibility of incorrect attachment that could result in an unacceptable RISK	y Lay Lu	N/A
LANC	- RISK ANALYSIS of support systems included MECHANICAL HAZARDS from static, dynamic, vibration, foundation and other movements, impact and pressure loading, temperature, environmental, manufacture and service conditions	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
TIMC	- RISK ANALYSIS included effects of failures such as excessive deflection, plastic deformation, ductile/brittle fracture, fatigue fracture, instability (buckling), stress-assisted corrosion cracking, wear, material creep and deterioration, and residual stresses from manufacturing PROCESSES	NC THIC TH	N/A
THIC	- Instructions on attachment of structures to a floor, wall, ceiling, included in ACCOMPANYING DOCUMENTS making adequate allowances for quality of materials used to make the connection and list the required materials	UC LAUC LA	N/A
MC	Additional instructions provided on checking adequacy of surface of structure parts will be attached to	C MIC THIC	N/A
0.8.2	Support systems maintain structural integrity during EXPECTED SERVICE LIFE, and TENSILE SAFETY FACTORS are not less than in Table 21, except when an alternative method used to demonstrate structural integrity throughout EXPECTED SERVICE LIFE, or for a foot rest	UC LAUC LA	N/A
THIC	Compliance with 9.8.1 and 9.8.2 confirmed by examination of ME EQUIPMENT, RISK MANAGEMENT FILE, specifications and material processing:	UC LAUC LA	N/A
THINC	RISK MANAGEMENT FILE includes an assessment of the structural integrity of support system: (ISO 14971 Cl. 4.3-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
.(.	All identified RISKS are mitigated to an acceptable level		N/A
L WILC	When test were conducted, testing consisted of application of a test load to support assembly equal to TOTAL LOAD times required TENSILE SAFETY FACTOR while support assembly under test was in equilibrium after 1 min, or not resulted in an unacceptable RISK:	See appended Table 8.10	N/A



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Clause Requirement + Test Verdict Result - Remark Where the equipment is not at equilibrium after RMF Reference to specific N/A 1 min, the RISK MANAGEMENT FILE includes an RISK: assessment of the test results.....: (ISO 14971 Cl.) (ISO 14971 Cl. 4.3-4.4, 5, 6.2-6.5) 9.8.3 Strength of PATIENT or OPERATOR support or suspension systems N/A 9.8.3.1 ME EQUIPMENT parts supporting or immobilizing N/A PATIENTS presents no unacceptable RISK of physical injuries and accidental loosening of secured joints....: RISK MANAGEMENT FILE includes assessment of RMF Reference to specific N/A the RISKS associated with physical injuries and RISKS: accidental loosening of fixings.....: (ISO 14971 CI. (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) SAFE WORKING LOAD OF ME EQUIPMENT OR ITS parts N/A supporting or suspending PATIENTS or OPERATORS is sum of mass of PATIENTS or mass of OPERATORS plus mass of ACCESSORIES supported by ME EQUIPMENT or its parts Supporting and suspending parts for adult N/A human PATIENTS or OPERATORS designed for a PATIENT OF OPERATOR with a min mass of 135 kg and ACCESSORIES with a min mass of 15 kg, unless stated by MANUFACTURER Maximum mass of PATIENT included in SAFE N/A WORKING LOAD OF ME EQUIPMENT OR ITS parts supporting or suspending PATIENTS adapted when MANUFACTURER specified applications Max allowable PATIENT mass < 135 kg marked N/A ON ME EQUIPMENT and stated in ACCOMPANYING DOCUMENTS Max allowable PATIENT mass over 135 kg stated N/A IN ACCOMPANYING DOCUMENTS Examination of markings, ACCOMPANYING See copy of Marking Label N/A DOCUMENTS, and RISK MANAGEMENT FILE confirmed compliance: 9.8.3.2 a) Entire mass of PATIENT or OPERATOR N/A distributed over an area of 0.1 m² on a foot rest temporarily supporting a standing PATIENT or OPERATOR.....: Compliance confirmed by examination of ME See appended Tables 8.10 N/A **EQUIPMENT specifications of materials and their** and 9.8.3.2 processing, and tests.....: b) Deflection of a support surface from PATIENT N/A or OPERATOR loading on an area of support/ suspension where a PATIENT or OPERATOR can sit did not result in an unacceptable RISK



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Clause	Requirement + Test	Result - Remark	Verdict
4 (g))	Compliance confirmed by examination of ME EQUIPMENT, specifications of materials and their processing, and by a test:	See appended Tables 8.10 and 9.8.3.2	N/A
0.8.3.3	Dynamic forces that can be exerted on equipment parts supporting or suspending a PATIENT OR OPERATOR IN NORMAL USE maintained BASIC SAFETY and ESSENTIAL PERFORMANCE confirmed test	See appended Table 9.8.3.3	N/A
0.8.4	Systems with MECHANICAL PROTECTIVE DEVICES		N/A
).8.4.1	a) A MECHANICAL PROTECTIVE DEVICE provided for the support system	nc anc a	N/A
1,	b) MECHANICAL PROTECTIVE complies with the requirements as follows:	. 40 40	N/A
wa C	- Designed based on TOTAL LOAD	ac anc ar	○ N/A
Yh.	 Has TENSILE SAFETY FACTORS for all parts not less than Table 21, row 7 	3. 14. 14	N/A
NIC	- Activated before travel produced an unacceptable RISK	NC WIC W	N/A
	- Takes into account Clauses 9.2.5 and 9.8.4.3	./.	N/A
THINC	Compliance confirmed by examination of ME EQUIPMENT over travel calculations and evaluation plus functional tests	See appended Table 8.10	P
0.8.4.2	Activation of MECHANICAL PROTECTIVE DEVICE is made obvious to OPERATOR when ME EQUIPMENT can still be used after failure of suspension or actuation means and activation of a MECHANICAL PROTECTIVE DEVICE	C LAUC LAUC	P
- WIC	MECHANICAL PROTECTIVE DEVICE requires use of a TOOL to be reset or replaced	NC WC W	N/A
.8.4.3	MECHANICAL PROTECTIVE DEVICE intended to functi	on once	N/A
T MINC	-use of ME EQUIPMENT not possible until replacement of MECHANICAL PROTECTIVE DEVICE	AC THIC TH	N/A
n'nC	- ACCOMPANYING DOCUMENTS provided with required information on replacement by service personal	NC SINC SI	N/A
14	ME EQUIPMENT permanently marked with safety sign 2 of Table D.	. 40 40	N/A
T MILC	- Marking is adjacent to MECHANICAL PROTECTIVE DEVICE	UC LAUC LA	N/A
	Compliance confirmed by examination and following test:	See appended Table 8.10	N/A
- (



9.8.5

EN 60601-1 Clause Requirement + Test Result - Remark Verdict A chain, cable, band, spring, belt, jack screw N/A nut, pneumatic or hydraulic hose, structural part or the like, employed to support a load, defeated by a convenient means causing maximum normal load to fall from most adverse position permitted by construction of ME **EQUIPMENT** Load included SAFE WORKING LOAD in 9.8.3.1 N/A when system was capable of supporting a **PATIENT OF OPERATOR** N/A No evidence of damage to MECHANICAL PROTECTIVE DEVICE affecting its ability to perform its intended function

Systems without MECHANICAL PROTECTIVE DEVICES

Support Systems does not require MECHANICAL

PROTECTIVE DEVICES.....:

RISK MANAGEMENT FILE includes an assessment

of RISKS associated with wear on the support

(ISO 14971 CI. 4.3,4.4,5,6.2-6.5)

10	PROTECTION AGAINST UNWANTED AND EXCE	SSIVE RADIATION HAZARDS	N/A
10.1	X-Radiation	19. 119. 14.	N/A
10.1.1	The air kerma did not exceed 5 µGy/hat 5 cm from surface of ME EQUIPMENT	See Table 10.1.1	N/A
LENC	Annual exposure reduced taking into account the irradiated body part, national regulations, and/or international recommendations for ME EQUIPMENT that has permanent proximity to a PATIENT as part of the INTENDED USE	NC LEW LEW	N/A
10.1.2	RISK from unintended X-radiation from ME EQUIPMENT producing X-radiation for diagnostic and therapeutic purposes addressed application of applicable particular and collateral standards, or	AC LINC LIN	N/A
THIC	RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
10.2	RISK associated with alpha, beta, gamma, neutron, and other particle radiation, addressed in RISK MANAGEMENT PROCESS as shown in RISK MANAGEMENT FILE: (ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
10.3	The power density of unintended microwave radiation at frequencies between 1 GHz and 100 GHz does not exceed 10 W/m2	AC LANC LAN	N/A

RMF Reference to specific

RISKS:

(ISO 14971 CI.

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N/A

N/A

N/A



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Clause	Requirement + Test	Result - Remark	Verdict
101	Microwave radiation is propagated intentionally	y, 10, 10,	N/A
10.4	Relevant requirements of IEC 60825-1:2007 applied to lasers, laser light barriers or similar with a wavelength range of 180nm to 1 mm.	NC THIC TH	N/A
10.5	RISK associated with visible electromagnetic radiation other than emitted by lasers and LEDS, when applicable, addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
10.6	RISK associated with infrared radiation other than emitted by lasers and LEDS addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
10.7	RISK associated with ultraviolet radiation other than emitted by lasers and LEDS addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A

11 m	PROTECTION AGAINST EXCESSIVE TEMPERATHAZARDS	TURES AND OTHER	P
11.1	Excessive temperatures in ME EQUIPMENT	h. 4h. 4h	N/A
11.1.1	Temperatures on ME EQUIPMENT parts did not exceed values in Tables 22 and:	See appended Table 11.1.1	Р
10,	Surfaces of test corner did not exceed 90 °C	10, 10,	P(E)
	THERMAL CUT-OUTS did not operate in NORMAL CONDITION		N/A
THINC	RISK MANAGEMENT FILE includes an assessment of the duration of contact for all APPLIED PARTS and ACCESSIBLE PARTS	RMF Reference to specific RISK: (ISO 14971 CI)	N/A
11.1.2	Temperature of APPLIED PARTS	1/2, 1/4, 1/4)	N/A
11.1.2.1	APPLIED PARTS (hot or cold intended to supply heat to a PATIENT comply:		N/A
Lin	Clinical effects determined and documented in the RISK MANAGEMENT FILE (ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
THIC	Temperature (hot or cold) of APPLIED PARTS intended to supply heat to a PATIENT disclosed in the instructions for use	NC LINC LIN	N/A
11.1.2.2	APPLIED PARTS not intended to supply heat to a PATIENT complies with the limits of Table 24 in NORMAL CONDITION and SINGLE FAULT CONDITION.:	MC THIC TH	N/A



Report No.: TMC200313115-8 EN 60601-1 Requirement + Test Verdict Clause Result - Remark APPLIED PARTS surface temperature exceeds N/A 41°C disclosed in the instruction manual: Maximum Temperature....: Conditions for safe contact, e.g. duration or condition of the PATIENT.....: Clinical effects with respect to characteristics RMF Reference to specific N/A taken or surface pressure documented in the RISKS: **RISK MANAGEMENT FILE** (ISO 14971 Cl. (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) APPLIED PARTS surface temperature of equal to N/A or less than 41°C Ρ Analysis documented in the RISK MANAGEMENT RMF Reference to specific FILE show that APPLIED PART temperatures are RISKS: not affected by operation of the ME EQUIPMENT including SINGLE FAULT CONDITIONS. Measurement of APPLIED PART temperature according to 11.1.3 is not conducted..... N/A Surfaces of APPLIED PARTS that are cooled RMF Reference to specific below ambient temperatures evaluated in the RISKS: RISK MANAGEMENT PROCESS.....: (ISO 14971 Cl.) (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) 11.1.3 See appended Table 11.1.3d Measurements not made when engineering N/A and RMF Reference to specific judgment and rationale by MANUFACTURER indicated temperature limits could not exceed. RISKS: as documented in RISK MANAGEMENT FILE.....:: (ISO 14971 CI.) (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) N/A Test corner not used where engineering RMF Reference to specific judgment and rationale by MANUFACTURER RISKS: indicated test corner will not impact (ISO 14971 CI. measurements, as documented in RISK MANAGEMENT FILE..... (ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5) Probability of occurrence and duration of RMF Reference to specific N/A contact for parts likely to be touched and for RISKS: APPLIED PARTS documented in RISK MANAGEMENT (ISO 14971 CI. FILE.....: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) N/A e) Where thermal regulatory devices make this RMF Reference to specific method inappropriate, alternative methods for RISKS: measurement are justified in the RISK MANAGEMENT FILE..... 11.1.4 **GUARDS** preventing contact with hot or cold N/A accessible surfaces removable only with a TOOL 11.2 Fire prevention



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Clause	Requirement + Test	Result - Remark	Verdict
11.2.1	ENCLOSURE has strength and rigidity necessary to prevent a fire and met mechanical strength tests for ENCLOSURES in 15.3	20 20 10 10 10 10 10 10 10 10 10 10 10 10 10	N/A
1.2.2	Me equipment and me systems used in conjunct ENVIRONMENTS	tion with OXYGEN RICH	N/A
11.2.2.1	RISK of fire in an OXYGEN RICH ENVIRONMENT reduced by means limiting spread of:	See appended Table 8.10	N/A
74	a) No sources of ignition discovered in an OXYGEN RICH ENVIRONMENT under any of the following conditions		N/A
LIN	1) when temperature of material raised to its ignition temperature	We Live Lin	Р
THIC	2) when temperatures affected solder or solder joints causing loosening, short circuiting, or other failures causing sparking or increasing material temperature to its ignition temperature	NC THIC TH	N/A
THIC	3) when parts affecting safety cracked or changed outer shape exposing temperatures higher than 300°C or sparks due to overheating	NC THIC TH	N/A
THAC	4) when temperatures of parts or components exceeded 300°C, atmosphere was 100 % oxygen, contact material solder, and fuel cotton	UC LAUC LA	N/A
, MC	5) when sparks provided adequate energy for ignition by exceeding limits of Figs 35 to 37 (inclusive), atmosphere was 100 % oxygen, contact material solder, and fuel cotton	C THIC THIC	N/A
THIC	Deviations from worst case limits in 4) and 5) above based on lower oxygen concentrations or less flammable fuels justified and documented in RISK MANAGEMENT FILE: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
THIC	Alternative test in this clause did not identify existence of ignition sources at highest voltage or current, respectively:	See appended Table 11.2.2.1	C P
- MAC	A safe upper limit determined by dividing upper limit of voltage or current, respectively, with safety margin factor of three:	UC LAUC LA	N/A
THIC	b) RESIDUAL RISK of fire in an OXYGEN RICH ENVIRONMENT as determined by application of RISK MANAGEMENT PROCESS is based on following configurations, or in combination: (ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 Cl)	Р



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Oleves a M	Demoins wheat 1 Test	Descrit Demonstr	/ Manallar
Clause	Requirement + Test	Result - Remark	Verdict
LINC LINC	1) Electrical components in an OXYGEN RICH ENVIRONMENT provided with power supplies having limited energy levels lower than those considered sufficient for ignition in 11.2.2.1 a) as determined by examination, measurement or calculation of power, energy, and temperatures in NORMAL and SINGLE FAULT CONDITIONS identified in 11.2.3	See appended Tables 4.11, 11.1.1, 11.2.2.1 and 13.2	N/A
LINC	2) Max oxygen concentration measured until it did not exceed 25 % in ventilated compartments with parts that can be a source of ignition only in SINGLE FAULT CONDITION and can be penetrated by oxygen due to an undetected leak (%):	NC LINC LIN	N/A
TWIC	3) A compartment with parts or components that can be a source of ignition only under SINGLE FAULT CONDITION separated from another compartment containing an OXYGEN RICH ENVIRONMENT by sealing all joints and holes for cables, shafts, or other purposes	WC LANC LA	N/A
LINC	Effect of possible leaks and failures under SINGLE FAULT CONDITION that could cause ignition evaluated using a RISK ASSESSMENT to determine maintenance intervals by examination of documentation and RISK MANAGEMENT FILE	See Attachment No	N/A
L MUC	4) Fire initiated in ENCLOSURE of electrical components in a compartment with OXYGEN RICH ENVIRONMENT that can become a source of ignition only under SINGLE FAULT CONDITIONS self-extinguished rapidly and no hazardous amount of toxic gases reached PATIENT as determined by analysis of gases	See Attachment No	N/A
11.2.2.2	RISK of ignition did not occur and oxygen concentration did not exceed 25% in immediate surroundings due to location of external exhaust outlets of an OXYGEN RICH ENVIRONMENT	INC LANC LA	N/A
11.2.2.3	Electrical connections within a compartment containing an OXYGEN RICH ENVIRONMENT under NORMAL USE did not produce sparks	INC FRICE FRI	N/A
,nC	 Screw-attachments protected against loosening during use by varnishing, use of spring washers, or adequate torques 	aC aC	N/A
Len	- Soldered, crimped, and pin-and-socket connections of cables exiting ENCLOSURE include additional mechanical securing means	a, Len Lu	N/A
1.2.3	SINGLE FAULT CONDITIONS related to OXYGEN RICH E and ME SYSTEMS considered	ENVIRONMENTS ME EQUIPMENT	N/A



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Clause Requirement + Test Verdict Result - Remark - Failure of a ventilation system constructed in accordance with 11.2.2.1 b) 2).....: - Failure of a barrier constructed in N/A accordance with 11.2.2.1 b) 3)..... - Failure of a component creating a source of N/A ignition (as defined in 11.2.2.1 a).....: - Failure of solid insulation or creepage and N/A clearances providing equivalent of at least one MEANS OF PATIENT PROTECTION but less than two MEANS OF PATIENT PROTECTION that could create a source of ignition defined in 11.2.2.1 a).....: - Failure of a pneumatic component resulting N/A in leakage of oxygen-enriched gas.....: 11.3 Constructional requirements for fire ENCLOSURES of ME EQUIPMENT N/A ME EQUIPMENT met this clause for alternate N/A means of compliance with selected HAZARDOUS SITUATIONS and fault conditions in 13.1.2....: Constructional requirements were met, or N/A - constructional requirements specifically RMF Reference to specific N/A analysed in RISK MANAGEMENT FILE RISKS: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) Specific Requirements not met: (ISO 14971 CI. Ρ Justification, when requirement not met.....: a) Flammability classification of insulated wire See appended Table 8.10 N/A within fire ENCLOSURE is FV-1. or better, based on IEC 60695 series as determined by examination of data on materials.....: Flammability classification of connectors, See appended Table 8.10 N/A printed circuit boards, and insulating material on which components are mounted is FV-2, or better, based on IEC 60695-11-10 as decided by examination of materials data..... If no FV Certification, FV tests based on IEC 60695-11-10 conducted on 3 samples of complete parts (or sections of it), including area with min. thickness, ventilation openings b) Fire ENCLOSURE met following: N/A 1) No openings at bottom or, as specified in N/A Fig 39, constructed with baffles as in Fig 38, or made of perforated metal as in Table 25, or a metal screen with a mesh ≤ 2 × 2 mm centre to centre and wire diameter of at least 0.45 mm N/A 2) No openings on the sides within the area included within the inclined line C in Fig 39



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Clause	Requirement + Test	Result - Remark	Verdict
160,	3) ENCLOSURE, baffles, and flame barriers have adequate rigidity and are made of appropriate metal or of non-metallic materials:	See appended Table 8.10	N/A
11.4	ME EQUIPMENT and ME SYSTEMS intended for use	with flammable anaesthetics	N/A
o'N'C	ME EQUIPMENT, ME SYSTEMS and parts described in ACCOMPANYING DOCUMENTS for use with flammable with Annex G	inc sinc sin	N/A
11.5	ME EQUIPMENT and ME SYSTEMS intended for use agents	in conjunction with flammable	N/A
THIC	MANUFACTURER'S RISK MANAGEMENT PROCESS addresses possibility of fire and associated mitigations as confirmed by examination of RISK MANAGEMENT FILE	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
-aC	(ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	ac ac	C
11.6	Overflow, spillage, leakage, ingress of water or disinfection, sterilization and compatibility with EQUIPMENT		N/A
11.6.1	Sufficient degree of protection provided against overflow, spillage, leakage, ingress of water or particulate matter, cleaning, disinfection and sterilization, and compatibility with substances used with ME EQUIPMENT	See Appended Table 11.6.1	N/A
11.6.2	Overflow in ME EQUIPMENT	1. Lu, Lu	N/A
THIC	ME EQUIPMENT incorporates a reservoir or liquid storage that did not wet any MEANS OF PROTECTION, nor result in the loss of BASIC SAFETY OR ESSENTIAL PERFORMANCE	See Appended Table 11.6.1	N/A
THIC	Maximum fill level is indicated by marking on the ME EQUIPMENT and a warning or safety notice is given, no HAZARDOUS SITUATION (as specified in 13.1) or unacceptable RISK due to overflow developed when the reservoir or liquid storage chamber is filled to its maximum capacity and the TRANSPORTABLE ME EQUIPMENT is tilted through an angle of 10°, or for MOBILE ME EQUIPMENT exceeding 45 kg, is moved over a threshold as described in 9.4.2.4.3.	UC LAUC LA	N/A
THIC	No warning or safety notice provided regarding the maximum fill level, no HAZARDOUS SITUATION (as specified in 13.1) or unacceptable RISK due to overflow developed when the reservoir or liquid storage chamber was filled to 15 % above the maximum capacity and the TRANSPORTABLE ME EQUIPMENT was tilted through an angle of 10°, or in MOBILE ME EQUIPMENT exceeding 45 kg, was moved over a threshold	NC LEVE LE	N/A
	as described in 9.4.2.4.3.	and and all	C



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Clause	Requirement + Test	Result - Remark	Verdict	
× 611.	(1) (1) (1)	11 (11 (1)	· /	
11.6.3	Spillage on ME EQUIPMENT and ME SYSTEM		N/A	
THIC	ME EQUIPMENT and ME SYSTEMS handling liquids constructed that spillage does not wet parts as determined by review of the RISK MANAGEMENT FILE and test: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	See appended Tables 11.6.1; 8.7, 8.8.3 and RMF Reference to specific RISK: (ISO 14971 CI)	N/A	
THIC	RISK ANALYSIS identifies the type of liquid, volume, duration and location of the spill:	We LANCE LAN	N/A	
11.6.5	Ingress of water or particulate matter into ME EQ	UIPMENT and ME SYSTEMS	N/A	
1 MIC	ME EQUIPMENT with IP Code placed in least favourable position of NORMAL USE and subjected to tests of IEC 60529 (IP Code):	See Appended Table 11.6.1	N/A	
THIC	ME EQUIPMENT met dielectric strength and LEAKAGE CURRENT tests and there were no bridging of insulation or electrical components that could result in the loss of BASIC SAFETY or ESSENTIAL PERFORMANCE in NORMAL CONDITION or in combination with a SINGLE FAULT CONDITION:	See appended Tables 8.7 8.8.3	N/A	
11.6.6	Cleaning and disinfection of ME EQUIPMENT and M	NE SYSTEMS	N/A	
, NIA	ME EQUIPMENT/ME SYSTEM and their parts and ACCESSORIES cleaned or disinfected using methods specified in instructions for use:	See Appended Tables 11.6.1, 8.7, and 8.8.3	N/A	
	Effects of multiple cleanings/disinfections during EXPECTED SERVICE LIFE of EQUIPMENT evaluated by MANUFACTURER:		N/A	
11.6.7	Sterilization of ME EQUIPMENT and ME SYSTEMS	IN WAY	N/A	
an C	ME EQUIPMENT, ME SYSTEMS and their parts or ACCESSORIES intended to be sterilized assessed and documented and compliant with tests:	See appended Tables 8.7 8.8.3, and 11.6.1	N/A	
THE	RISK MANAGEMENT FILE includes an assessment of the RISKS associated with any deterioration following sterilization: (ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A	
11.6.8	RISKS associated with compatibility of substances used with ME EQUIPMENT addressed in RISK MANAGEMENT PROCESS(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A	
11.7	ME EQUIPMENT, ME SYSTEM, and ACCESSORIES coming into direct or indirect contact with biological tissues, cells, or body fluids assessed and documented	NC THIC TH	N/A	
11.8	Interruption and restoration of power supply did not result in a loss of BASIC SAFETY or ESSENTIAL PERFORMANCE	aC aC a	N/A	



Clause Re	quirement + Test	/	Result - Remark	Verdict
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12	ACCURACY OF CONTROLS AND INSTRUMENTS AGAINST HAZARDOUS OUTPUTS	S AND PROTECTION	Р
12.1	RISKS associated with accuracy of controls and instruments stated: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
2.2	RISK of poor USABILITY, including identification, marking, and documents addressed in a USABILITY ENGINEERING:	See Report based on IEC 60601-1-6	N/A
2.3	MANUFACTURER implemented an ALARM SYSTEM compliant with IEC 60601-1-8:	See Report based on IEC 60601-1-8	N/A
2.4	Protection against hazardous output		N/A
12.4.1	RISKS associated with hazardous output arising from intentional exceeding of safety limits addressed in RISK MANAGEMENT PROCESS	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
2.4.2	- need for indication associated with hazardous output addressed in RISK MANAGEMENT PROCESS: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	11/ - 11/	N/A
2.4.3	RISKS associated with accidental selection of excessive output values for ME EQUIPMENT with a multi-purpose unit addressed in RISK MANAGEMENT PROCESS	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
2.4.4	RISKS associated with incorrect output addressed in RISK MANAGEMENT PROCESS: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
2.4.5	Diagnostic or therapeutic radiation	INC THE THE	(P
2.4.5.1	Adequate provisions to protect OPERATORS, PATIENTS, other persons and sensitive devices in vicinity of unwanted or excessive radiation	a.	P
LANG	Radiation safety ensured by compliance with requirements of appropriate standards	No LANG LA	Р
2.4.5.2	ME EQUIPMENT and ME SYSTEMS designed to produce X-radiation for diagnostic imaging purposes complied with IEC 60601-1-3	See IEC 60601-1-3 Report	P
2.4.5.3	RISKS associated with radiotherapy addressed in RISK MANAGEMENT PROCESS as(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
12.4.5.4	RISKS associated with ME EQUIPMENT producing diagnostic or therapeutic radiation other than diagnostic X-rays and radiotherapy addressed in RISK MANAGEMENT PROCESS as	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A



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Clause	Requirement + Test	Result - Remark	Verdict
12.4.6	RISKS associated with diagnostic or therapeutic acoustic pressure addressed in RISK MANAGEMENT: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A

13	HAZARDOUS SITUATIONS AND FAULT CONDIT	TIONS	Р
13.1	Specific HAZARDOUS SITUATIONS	n	(P
13.1.2	Emissions, deformation of ENCLOSURE or exceed	ling maximum temperature	Р
MC	- Emission of flames, molten metal, poisonous or ignitable substance in hazardous quantities did not occur	ac anc an	Р
7.	Deformation of ENCLOSURE impairing compliance with 15.3.1 did not occur	4. 4.	Р
THIC	- Temperatures of APPLIED PARTS did not exceed allowable values in Table 24:	See appended Table 11.1.1	Р
o'nC	- Temperatures of ME EQUIPMENT parts that are not APPLIED PARTS likely to be touched did not exceed values in Table 23:	See appended Table 11.1.1	P
110	-Allowable values for "other components and materials" in Table 22 times 1.5 minus 12.5 °C were not exceeded	40. 40	P
LINE	Limits for windings in Tables 26, 27, and 31 not exceeded	We LANG LAN	Р
	Table 22 not exceeded in all other cases	, , ,	Р
THIC	After tests of this Clause, settings of THERMAL CUT-OUTS and OVER-CURRENT RELEASES did not change sufficiently to affect their safety function	See appended Table 13.1.2	P
13.1.3	- limits for LEAKAGE CURRENT IN SINGLE FAULT CONDITION did not exceed:	See appended Table 8.7	Р
۵۵	- voltage limits for ACCESSIBLE PARTS including APPLIED PARTS did not exceed:	See appended Table 8.7	Р
13. 2	SINGLE FAULT CONDITIONS	1/41 / 1/41	Р
13.2.1	During the application of the SINGLE FAULT CONDITIONS listed in 13.2.2 to 13.2.13 (inclusive), the NORMAL CONDITIONS identified in 8.1 a) also applied in the least favourable combination	UC LANC LAN	Р
2	ME EQUIPMENT complied with 13.2.2 -13.2.12:	See appended Table 13.2	Р
THIC	RISK MANAGEMENT FILE includes and assessment of RISKS associated with leakage of liquid in a SINGLE FAULT CONDITION	RMF Reference to specific RISKS: (ISO 14971 CI)	Р
THIC	RISK MANAGEMENT FILE defines the appropriate test conditions	UC LAIC LA	Р



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Clause	Requirement + Test	Result - Remark	Verdict
13.2.13	ME EQUIPMENT remained safe after tests of 13.2.13.2 to 13.2.13.4, and cooling down to within 3 °C of the temperature in the test environment	NC WINC IN	Р
.,, C	ME EQUIPMENT examined for compliance or appropriate tests such as dielectric strength of motor insulation according to 8.8.3 conducted		P
LINC LIN	For insulation of thermoplastic materials relied upon as a MEANS OF PROTECTION, the ball-pressure test specified in 8.8.4.1 a) performed at a temperature 25 °C higher than temperature of insulation measured during tests of 13.2.13.2 to 13.2.13.4 (inclusive).	anc Lanc La	P
13.2.13.2	ME EQUIPMENT with heating elements		P
LINC.	a 1) thermostatically controlled ME EQUIPMENT with heating elements for building-in, r for unattended operation, or with a capacitor not protected by a fuse connected in parallel with THERMOSTAT contacts met tests	UC LAIC LA	N/A
Yla.	a 2) ME EQUIPMENT with heating elements RATED for non-CONTINUOUS OPERATION met tests	a, 1/4, 1/	N/A
NAC	a 3) other ME EQUIPMENT with heating elements met test	NC WIC TO	N/A
, n C	When more than one test was applicable to same ME EQUIPMENT, tests performed consecutively		N/A
L WIL	Heating period stopped when a heating element or an intentionally weak part of a non-SELF-RESETTING THERMAL CUT-OUT ruptured, or current interrupted before THERMAL STABILITY without possibility of automatic restoration	NC LEW LEW	N/A
·nC	Test repeated on a second sample when interruption was due to rupture of a heating element or an intentionally weak part	nc inc	N/A
IM.	Both samples met 13.1.2, and open circuiting of a heating element or an intentionally weak part in second sample not considered a failure by itself	"C "C"	N/A
LW.	b) ME EQUIPMENT with heating elements without adequate heat discharge, and supply voltage set at 90 or 110 % of RATED supply voltage, least favourable of the two (V):	a Lin. Li	P
YW.	Operating period stopped when a non-SELF- RESETTING THERMAL CUT-OUT operated, or current interrupted without possibility of automatic restoration before THERMAL STABILITY	, 40, 41	P



1/2/		72	- 2
Clause	Requirement + Test	Result - Remark	Verdict
× 611	Ell Ell Ell	6/1 / 6/11 / 6	37
	ME EQUIPMENT switched off as soon as THERMAL STABILITY established and allowed to cool to room temperature when current not interrupted	aC aC	P
160	Test duration was equal to RATED operating time for non-CONTINUOUS OPERATION	14 14 11	P
THIC	c) Heating parts of ME EQUIPMENT tested with ME EQUIPMENT operated in NORMAL CONDITION at 110 % of RATED supply voltage and as in 11.1, and	ALC LINC LE	N/A
	1) Controls limiting temperature in NORMAL CONDITION disabled, except THERMAL CUT-OUTS	. ((.	N/A
LIN	2) When more than one control provided, they were disabled in turn	EN LINE LE	N/A
THIC	3) ME EQUIPMENT operated at RATED DUTY CYCLE until THERMAL STABILITY achieved, regardless of RATED operating time	ANC THIC TH	N/A
13.2.13.3	ME EQUIPMENT with motors		N/A
THIC	a 1) For the motor part of the ME EQUIPMENT, compliance checked by tests of 13.2.8- 13.2.10, 13.2.13.3 b), 13.2.13.3 c), and 13.2.13.4, as applicable	MC LINC LE	N/A
THAC	To determine compliance with 13.2.9 and 13.2.10 motors in circuits running at 42.4 V peak a.c./ 60 V d.c. or less are covered with a single layer of cheesecloth which did not ignite during the test	AUC LINC LE	N/A
THINC	a 2) Tests on ME EQUIPMENT containing heating parts conducted at prescribed voltage with motor & heating parts operated simultaneously to produce the least favourable condition	LANG LAN	N/A
LINE	a 3) Tests performed consecutively when more tests were applicable to the same ME EQUIPMENT		N/A
-inC	b) Motor met running overload protection test of this clause when:	nc inc	N/A
In.	1) it is intended to be remotely or automatically controlled by a single control device with no redundant protection, or	10. 10. 11	N/A
THINE	2) it is likely to be subjected to CONTINUOUS OPERATION while unattended	ing Line Li	N/A
THIC	Motor winding temperature determined during each steady period and maximum value did not exceed Table 27 (Insulation Class, Maximum temperature measured °C):	AC THIC TH	N/A
a'nC	Motor removed from ME EQUIPMENT and tested separately when load could not be changed in appropriate steps	anc anc	P



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Clause Requirement + Test Result - Remark Verdict Running overload test for motors operating at Р 42.4 V peak a.c./60 V d.c. or less performed only when examination and review of design indicated possibility of an overload Test not conducted where electronic drive circuits maintained a substantially constant drive current Test not conducted based on other justifications (justification)..... Р c) ME EQUIPMENT with 3-phase motors operated with normal load, connected to a 3-phase SUPPLY MAINS with one phase disconnected, and periods of operation per 13.2.10 13.2.13.4 ME EQUIPMENT RATED for NON-CONTINUOUS OPERATION N/A ME EQUIPMENT (other than HAND-HELD) operated N/A under normal load and at RATED voltage or at upper limit of RATED voltage range until increase in temperature was ≤ 5 °C in one hour, or a protective device operated When a load-reducing device operated in N/A NORMAL USE, test continued with ME EQUIPMENT running idle Motor winding temperatures did not exceed N/A values in 13.2.10.....:

14	PROGRAMMABLE ELECTRICAL MEDICAL SYST	TEMS (PEMS)	C P
14.1	Requirements of this clause not applied to PESS when it provided no BASIC SAFETY OR ESSENTIAL PERFORMANCE, or	n Lyn Ly	Р
THIC	- when application of RISK MANAGEMENT showed that failure of PESS does not lead to unacceptable RISK	We LANC LA	Р
THIC	RISK MANAGEMENT FILE contains an assessment of RISKS associated with the failure of the PESS: (ISO 14971 Cl. 4.2-4.4, 5)	RMF Reference to specific RISKS: ISO 14971 Cl)	N/A
.,(Requirements of 14.13 not applied to PEMS intended to be incorporated into an IT NETWORK	aC aC .	P
14	Software development process for Software Classification applied in accordance with Clause 4.3 of IEC 62304:	Software Class:	N/A
1 MC	Software development process applied according to Clause 5 of IEC 62304	No LANG LA	Р

Insulation Class.....:

Maximum temperature measured (°C).....:



A1		B	2
Clause	Requirement + Test	Result - Remark	Verdict
× 61.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	$(\beta_1, \cdots, \beta_p) = (\beta_1, \cdots, \beta_p)$	in.
` . (Software development process for Software risk management applied according to Clause 7 of IEC 62304		N/A
Lin	Software development process Configuration Management applied according to Clause 8 of IEC 62304		N/A
1 Mil	Software development process for Software Problem Resolution applied according to Clause 9 of IEC 62304	inc Linc L	N/A
14.2	Documents required by Clause 14 reviewed, approved, issued and revised according to a formal document control process	THIC THIC T	N/A
14.3	RISK MANAGEMENT plan required by 4.2.2 includes reference to PEMS VALIDATION plan		N/A
14.4	A PEMS DEVELOPMENT LIFE-CYCLE including a set of defined milestones has been documented	Lange Line L.	N/A
THIC	At each milestone, activities to be completed, and VERIFICATION methods to be applied to activities have been defined	THE THE	N/A
THIC	Each activity including its inputs and outputs defined, and each milestone identifies RISK MANAGEMENT activities that must be completed before that milestone	1	N/A
a'nC	PEMS DEVELOPMENT LIFE-CYCLE tailored for a specific development by making plans detailing activities, milestones, and schedules	nc anc an	N/A
I In	PEMS DEVELOPMENT LIFE-CYCLE includes documentation requirements	40. 40	N/A
14.5	A documented system for problem resolution within and between all phases and activities of PEMS DEVELOPMENT LIFE-CYCLE has been developed and maintained	WALL LAND	N/A
14.6	RISK MANAGEMENT PROCESS	,nC ,nC	N/A
14.6.1	MANUFACTURER considered HAZARDS associated with software and hardware aspects of PEMS including those associated with the incorporating PEMS into an IT-NETWORK, components of third-party origin, legacy subsystems when compiling list of known or foreseeable HAZARDS	INC THIC T	N/A
THIC	RISK MANAGEMENT FILE includes known or foreseeable HAZARDS associated with software hardware, incorporation of the PEMS into an ITNETWORK, components of 3rd party origin and legacy subsystems:		N/A



Clause	Requirement + Test	Result - Remark	Verdict
- W	The Mar Mar	10 10	
14.6.2	Suitably validated tools and PROCEDURES assuring each RISK CONTROL measure reduces identified RISK(s) satisfactorily provided in addition to PEMS requirements in Clause 4.2.2.:	anc who is	N/A
THIC	RISK MANAGEMENT FILE documents the suitability of tools and procedures to validate each RISK CONTROL measure	RMF Reference to specific RISKS: (ISO 14971 Cl)	N/A
14.7	A documented requirement specification for PEMS and each of its subsystems (e.g. for a PESS) which includes ESSENTIAL PERFORMANCE and RISK CONTROL measures implemented by that system or subsystem	RMF Reference to specific RISK CONTROLS: (ISO 14971 Cl)	N/A
14.8	An architecture satisfying the requirement is specified for PEMS and each of subsystems: (ISO 14971 CI. 6.3)	RMF Reference to specific RISK CONTROLS: (ISO 14971 CI)	N/A
14.9	Design is broken up into sub systems and descriptive data on design environment documented:	AUC LAUC LA	N/A
14.10	A VERIFICATION plan containing the specified information used to verify and document functions implementing BASIC SAFETY, ESSENTIAL PERFORMANCE, or RISK CONTROL measures: (ISO 14971 CI. 6.3)	RMF Reference to specific RISK CONTROLS: (ISO 14971 CI)	N/A
LANC	- milestone(s) when VERIFICATION is to be performed for each function	IC THIC THI	N/A
THIC	- selection and documentation of VERIFICATION strategies, activities, techniques, and appropriate level of independence of the personnel performing the VERIFICATION	MC THIC TH	N/A
	- selection and utilization of VERIFICATION tools		N/A
-inC	- coverage criteria for VERIFICATION	nc inc	N/A
Ym.	The VERIFICATION performed according to the VERIFICATION plan and results of the VERIFICATION activities documented	h. 14. 11	N/A
14.11	A PEMS VALIDATION plan containing validation of BASIC SAFETY & ESSENTIAL PERFORMANCE:	ENC LINE LI	Р
THIC	The PEMS VALIDATION performed according to the PEMS VALIDATION plan with results of PEMS VALIDATION activities and methods used for PEMS VALIDATION documented	MC THIC TH	P
	The person with overall responsibility for PEMS VALIDATION is independent	, ,	, P



Clause	Requirement + Test	Result - Remark	Verdict
LINC	All professional relationships of members of PEMS VALIDATION team with members of design team documented in RISK MANAGEMENT FILE (ISO 14971 CI. 6.3)	RMF Reference to specific RISK CONTROLS: (ISO 14971 Cl)	N/A
14.12	Continued validity of previous design documentation assessed under a documented modification/change PROCEDURE	nc inc	N/A
In.	Software Classification for Software changes applied in accordance with Clause 4.3 of IEC 62304	Software Class:	N/A
1 kill	Software Process for Software changes applied according to Clause 5 of IEC 62304:	No LANG LA	N/A
	RISK MANAGEMENT for Software changes applied according to Clause 7 of IEC 62304:	aC .aC	N/A
16,	Configuration management of software changes applied per Clause 8 of IEC 62304:	21. Lun Lu	N/A
MC	Problem resolution for Software changes applied according to Clause 9 of IEC 62304:	NC WIC W	N/A
14.13	For PEMS incorporated into an IT-NETWORK not VALIDATED by the PEMS MANUFACTURER, instructions made available for implementing the connection include the following:	UC "UC "	N/A
10	a) Purpose of the PEMS connection to an IT- NETWORK		N/A
-INC	b) required characteristics of the IT-NETWORK	C MC M	N/A
In.	c) required configuration of the IT-NETWORK	Lu, Lu,	N/A
	d) technical specifications of the network connection, including security specifications	aC aC	N/A
160.	e) intended information flow between the PEMS, the IT-NETWORK and other devices on the IT-NETWORK, and the intended routing through the IT-NETWORK	oc voc	N/A
14.	f) a list of HAZARDOUS SITUATIONS resulting from failure of the IT-NETWORK to provide the characteristics required (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.3)	RMF Reference to specific hazardous situations: (ISO 14971 Cl)	N/A
Ib.	ACCOMPANYING DOCUMENTS for the RESPONSIBLE OF following:	RGANIZATION include the	N/A
THIC	- statement that connection to IT-NETWORKS including other equipment could result in previously unidentified RISKS TO PATIENTS, OPERATORS or third parties	NC THIC TH	N/A



Report No.: TMC200313115-S EN 60601-1 Clause Requirement + Test Result - Remark Verdict - Notification that the RESPONSIBLE N/A ORGANIZATION should identify, analyse, evaluate and control these RISKS - Notification that changes to the IT-NETWORK N/A could introduce new RISKS that require additional analysis - Changes to the IT-NETWORK include: N/A - changes in network configuration - connection of additional items - disconnection of items - update of equipment - upgrade of equipment

15	CONSTRUCTION OF ME EQUIPMENT		C P
15.1	RISKS associated with arrangement of controls and indicators of ME EQUIPMENT addressed through the application of a USABILITY ENGINEERING PROCESS	See Attached IEC 60601-1-6	P
15.2	Parts of ME EQUIPMENT subject to mechanical wear, electrical, environmental degradation or ageing resulting in unacceptable RISK when unchecked for a long period, are accessible for inspection, replacement, and maintenance	NC INC IN	N/A
- MC	Inspection, servicing, replacement, and adjustment of parts of ME EQUIPMENT can easily be done without damage to or interference with adjacent parts or wiring	C WIC WIC	N/A
15.3	Mechanical strength	7. 7.	P
15.3.1	Mould stress relief, push, impact, drop, and rough handling tests did not result in loss of BASIC SAFETY OF ESSENTIAL PERFORMANCE	UC LENC LE	C P
15.3.2	Push test conducted:	See Appended Table 15.3	Р
~ MC	No damage resulting in an unacceptable RISK sustained	UC THIC TH	C P
15.3.3	Impact test conducted:	See Appended Table 15.3	Р
MC	No damage resulting in an unacceptable RISK sustained	nc who we	C P
15.3.4	Drop test		Р
15.3.4.1	Sample of HAND-HELD ME EQUIPMENT, ACCESSORIES and HAND-HELD part with SAFE WORKING LOAD tested:	See Appended Table 15.3	C P
7	No unacceptable RISK resulted	3	Р



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Clause	Requirement + Test	Result - Remark	Verdict
15.3.4.2	Sample of PORTABLE ME EQUIPMENT, ACCESSORIES and PORTABLE part with SAFE WORKING LOAD withstood stress as demonstrated by test:	See Appended Table 15.3	Р
LEN	No damage resulting in an unacceptable RISK sustained	y Lay La	P
15.3.5	MOBILE ME EQUIPMENT and MOBILE part with SAFE WORKING LOAD and in most adverse condition in NORMAL USE passed Rough Handling tests:	See Appended Table 15.3	C P
. (No damage resulting in an unacceptable RISK sustained		Р
15.3.6	Examination of ENCLOSURE made from moulded or formed thermoplastic material indicated that material distortion due to release of internal stresses by moulding or forming operations will not result in an unacceptable RISK	We LANG LA	N/A
THIC	Mould-stress relief test conducted by placing one sample of complete ME EQUIPMENT, ENCLOSURE or a portion of larger ENCLOSURE, for 7 hours in a circulating air oven at 10°C over the max temperature measured on ENCLOSURE in 11.1.3, but no less than 70 °C:	UC LINC LIN	N/A
. (No damage resulting in an unacceptable RISK	. C C	N/A
15.3.7	INTENDED USE, EXPECTED SERVICE LIFE, and conditions for transport and storage were taken into consideration for selection and treatment of materials used in construction of ME EQUIPMENT	C LINC LINC	N/A
THIC	Based on review of EQUIPMENT, ACCOMPANYING DOCUMENTS, specifications and processing of materials, and MANUFACTURER'S relevant tests or calculations, corrosion, ageing, mechanical wear, degradation of biological materials due to bacteria, plants, animals and the like, will not result in an unacceptable RISK	UC LINC LIN	N/A
15.4	ME EQUIPMENT components and general assemble	VI WILL W	N/A
15.4.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where an unacceptable RISK exists,: (ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
THIC	a) Plugs for connection of PATIENT leads or PATIENT cables cannot be connected to outlets on same ME EQUIPMENT intended for other functions,:	See attachment No	N/A
an C	b) Medical gas connections on ME EQUIPMENT for different gases to be operated in NORMAL USE are not interchangeable inspection	See attachment No	N/A



Clause	Requirement + Test	Result - Remark	Verdict
-iaase	responding to 1000	Account Homan	Toruice
15.4.2	Temperature and overload control devices	1. 1. 1.	N/A
15.4.2.1	a) THERMAL CUT-OUTS and OVER-CURRENT RELEASES with automatic resetting not used in ME EQUIPMENT when their use could lead to a HAZARDOUS SITUATION	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
THIC	(ISO 14971 Cl. 4.2-4.4, 5) b) THERMAL CUT-OUTS with a safety function with reset by a soldering not fitted in ME EQUIPMENT	WE LANG LA	N/A
THIC	c) An additional independent non-SELF- RESETTING THERMAL CUT-OUT is provided	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
THIC	d) Operation of THERMAL CUT-OUT OR OVER CURRENT RELEASE doesn't result in a HAZARDOUS SITUATION OR loss of ESSENTIAL PERFORMANCE: (ISO 14971 Cl. 4.2-4.4)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
MC	e) Capacitors or other spark-suppression devices not connected between contacts of THERMAL CUT-OUTS	NC WIC W	N/A
71	f) Use of THERMAL CUT-OUTS or OVER-CURRENT RELEASES do not affect safety as verified by following tests:		N/A
1 kills	- Positive temperature coefficient devices) complied with IEC 60730-1: 2010, Clauses 15, 17, J.15, and J.17	y Lan La	N/A
THIC	- ME EQUIPMENT containing THERMAL CUT-OUTS and OVER-CURRENT RELEASES operated under the conditions of Clause 13:	See appended Table 13.2	N/A
THIC	- SELF-RESETTING THERMAL CUT-OUTS and OVER-CURRENT RELEASES including circuits performing equivalent functions Certified according to appropriate standards	UC LINC LIN	N/A
THIC	- In the absence of Certification in accordance with IEC standards, SELF-RESETTING THERMAL CUT-OUTS and OVER-CURRENT RELEASES including circuits performing equivalent functions operated 200 times	WC LANC LA	N/A
1 MC	Manual reset THERMAL CUT-OUTS and OVER- CURRENT RELEASES Certified in accordance with appropriate IEC standards	We LING LIN	N/A
- WC	manual reset THERMAL CUT-OUTS and OVER- CURRENT RELEASES operated 10 times	NC -WC -W	N/A
1.	Thermal protective devices tested separately from ME EQUIPMENT when engineering judgment indicated test results would not be impacted	7.	N/A



Report No.: TMC200313115-8 TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Clause Requirement + Test Result - Remark Verdict g) Protective device incorporating a fluid filled N/A container with heating means, operated when heater switched on with container empty and prevented an unacceptable RISK due to overheating h) ME EQUIPMENT with tubular heating elements RMF Reference to specific N/A provided with protection against overheating.: RISKS: (ISO 14971 CI. 4.2-4.4) (ISO 14971 Cl.) 15.4.2.2 Temperature settings clearly indicated when N/A means provided to vary setting of THERMOSTATS 15.4.3 N/A 15.4.3.1 Battery housings provided with ventilation....: RMF Reference to specific N/A RISKS: (ISO 14971 CI. 4.2-4.4) (ISO 14971 CI. Battery compartments designed to prevent N/A accidental short circuiting 15.4.3.2 Means provided to prevent incorrect N/A connection of polarity....:: **RISK MANAGEMENT FILE includes an assessment** RMF Reference to specific N/A of RISKS associated with incorrect connection RISKS: or replacement of batteries....: (ISO 14971 CI. (ISO 14971 CI. 4.2-4.4) 15.4.3.3 Overcharging of battery prevented by virtue of N/A design....:: RMF Reference to specific RISK MANAGEMENT FILE includes an assessment N/A of RISKS associated with overcharging of batteries.....: (ISO 14971 CI. (ISO 14971 CI. 4.2-4.4) 15.4.3.4 Primary lithium batteries comply with IEC N/A 80086-4 Secondary lithium batteries comply with IEC N/A 15.4.3.5 A properly RATED protective device provided N/A within Internal Electrical Power source to protect against fire....:: Protective device has adequate breaking N/A capacity Justification for OVER-CURRENT RELEASES or N/A **FUSE exclusion is documented** Short circuit test between the positive and N/A negative poles of an INTERNAL ELECTRICAL POWER SOURCE between the output and protective device(s) omitted where 2 MOOPS provided, or



TMC Testing Services(Shenzhen) Co., Ltd Report No.: TMC200313115-S EN 60601-1 Clause Requirement + Test Result - Remark Verdict Short circuit between the positive and negative N/A poles of an INTERNAL ELECTRICAL POWER SOURCE between the output and protective device(s) does not result in any HAZARDOUS SITUATION 15.4.4 Indicator lights provided to indicate ME N/A EQUIPMENT is ready for....:: An additional indicator light provided on ME N/A **EQUIPMENT** with a stand-by state or a warm-up state exceeding 15 s, Indicator lights provided on ME EQUIPMENT N/A incorporating non-luminous heaters to indicate heaters are operational RISK MANAGEMENT FILE includes an assessment RMF Reference to specific N/A of RISKS associated with the use of indicator RISKS: lights for EQUIPMENT incorporating non-(ISO 14971 CI luminous heaters.....: (ISO 14971 CI. 4.2-4.4) N/A Requirement not applied to heated stylus-pens for recording purposes Indicator lights provided on ME EQUIPMENT to N/A indicate an output exists Colours of indicator lights complied with 7.8.1 N/A N/A Charging mode visibly indicated 15.4.5 N/A RISKS associated with pre-set controls RMF Reference to specific addressed in RISK MANAGEMENT PROCESS.....::::::: RISKS: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5) (ISO 14971 CI. 15.4.6 Actuating parts of controls of ME EQUIPMENT N/A 15.4.6.1 a) Actuating parts cannot be pulled off or Р loosened during NORMAL USE b) Controls secured so that the indication of P any scale always corresponds to the position of the control c) Incorrect connection prevented by adequate P construction when it could be separated without use of a TOOL When torque values per Table 30 applied See appended Table 15.4.6 N/A knobs did not rotate Tests conducted with no unacceptable RISK ..: See appended Table 15.4.6 N/A 15.4.6.2 Stops on rotating/ movable parts of controls See appended Table 15.4.6 N/A are of adequate mechanical strength: N/A Torque values in Table 30 applied....:: See appended Table 15.4.6 No unexpected change of the controlled See appended Table 15.4.6 N/A

parameter when tested.....:



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Clause	Requirement + Test	Result - Remark	Verdict
15.4.7	Cord-connected HAND-HELD and foot-operated co	ontrol devices	N/A
15.4.7.1	a) HAND-HELD control devices of ME EQUIPMENT complied with 15.3.4.1	nc oinc oin	N/A
14	b) Foot-operated control device supported an actuating force of 1350 N in its position of NORMAL USE with no damage:	. <-	N/A
15.4.7.2	Control device of HAND-HELD and foot-operated control devices turned in all possible abnormal positions and placed on a flat surface:	We LANCE LAN	N/A
THINC	No unacceptable RISK caused by changing control setting when accidentally placed in an abnormal position	WC LANC LAN	N/A
15.4.7.3	a) Foot-operated control device is at least rated IPX1	See appended Table 11.6.1 IP Code =	N/A
14.	b) ENCLOSURE of foot operated control devices containing electrical circuits is at least IPX6:	See appended Table 11.6.1 IP Code =	N/A
15.4.8	Aluminium wires less than 16 mm ² in cross- sectional area are not used	NC WIC W	O N/A
15.4.9	a) Oil container in PORTABLE ME EQUIPMENT allows for expansion of oil and is adequately sealed	aC aC a	N/A
16,	b) Oil containers in MOBILE ME EQUIPMENT sealed to prevent loss of oil during transport	n. Len Les	N/A
MC	A pressure-release device operating during NORMAL USE is provided	C WIC WIC	N/A
()	c) Partially sealed oil-filled ME EQUIPMENT and its parts provided with means for checking the oil level to detect leakage		N/A
THIN	ME EQUIPMENT and technical description examined, and manual tests conducted to confirm compliance with above requirements	y Lay La	N/A
15.5	MAINS SUPPLY TRANSFORMERS OF ME EQUIPMENT an separation in accordance with 8.5	d transformers providing	N/A
15.5.1	Overheating		Р
15.5.1.1	Transformers of ME EQUIPMENT are protected against overheating:	See appended Tables 15.5.1.2 and 15.5.1.3	C P
- MC	During tests, windings did not open, no HAZARDOUS SITUATION occurred, and maximum temperatures of windings did not exceed values in Table 31	NC THE TH	N/A
	Dielectric strength test conducted after short circuit and overload tests:	See appended Table 15.5.2	N/A
- (·		C.



Report No.: TMC200313115-S EN 60601-1 Clause Requirement + Test Result - Remark Verdict 15.5.1.2 Transformer output winding short circuited, See appended Table 15.5.1.2 N/A and test continued until protective device operated or THERMAL STABILITY achieved:: Short circuit applied directly across output N/A windings 15.5.1.3 See appended Table 15.5.1.3 N/A Multiple overload tests conducted on windings . 15.5.2 N/A Transformers operating at a frequency above 1kHz tested according to clause 8.8.3....: Transformer windings provided with adequate N/A insulation Dielectric strength tests were conducted: See appended Table 15.5.2 N/A Transformers forming MEANS OF PROTECTION as 15.5.3 See appended Table 8.10 N/A required by 8.5 comply with....:: N/A - Means provided to prevent displacement of end turns - protective earth screens with a single turn N/A have insulated overlap - Exit of wires form internal windings of toroid N/A transformers protected with double sleeving - insulation between primary and secondary N/A windings complies with 8.8.2 - CREEPAGE DISTANCES and AIR CLEARANCE N/A comply with 8.9.4

16	ME SYSTEMS		N/A
16.1	After installation or subsequent modification, ME SYSTEM didn't result in an unacceptable RISK	UC LANC LA	N/A
THIC	RISK MANAGEMENT FILE includes an assessment of RISKS associated with installation and modification of an ME SYSTEM	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
٠.	Only HAZARDS arising from combining various equipment to form a ME SYSTEM considered	۰ ۵ ۵	N/A
LEN	- ME SYSTEM provides the level of safety within the PATIENT ENVIRONMENT equivalent to ME EQUIPMENT complying with this standard	21 - Ley	N/A
THIC	- ME SYSTEM provides the level of safety outside PATIENT ENVIRONMENT equivalent to equipment complying with their respective IEC or ISO safety standards	We LANC LAN	N/A
THIC	- tests performed in NORMAL CONDITION, except as specified	UC LANC LA	N/A



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Clause	Requirement + Test	Result - Remark	Verdict	
Ya.	tests performed under operating conditions specified by MANUFACTURER of ME SYSTEM	n, 16,	N/A	
1 MC	Safety tests previously conducted on individual equipment of ME SYSTEM according to relevant standards not repeated	NC LINC	N/A	
THIC	RISK MANAGEMENT methods used by MANUFACTURER of an ME SYSTEM reconfigurable by RESPONSIBLE ORGANIZATION OF OPERATOR	INC THIC	N/A	
	Non-ME EQUIPMENT used in ME SYSTEM complied with applicable IEC or ISO safety standards		N/A	
THE	Equipment relying only on BASIC INSULATION for protection against electric shock not used in ME SYSTEM	in Line	N/A	
16.2	ACCOMPANYING DOCUMENTS of an ME SYSTEM	"C "C	N/A	
LIM.	Documents containing all data necessary for ME SYSTEM to be used as intended by MANUFACTURER including a contact address accompany ME SYSTEM or modified ME SYSTEM	"C "C	N/A	
1 kg	ACCOMPANYING DOCUMENTS regarded as a part of ME SYSTEM	n, Ly	N/A	
THIC	a) ACCOMPANYING DOCUMENTS provided for each item of ME EQUIPMENT supplied by MANUFACTURER	UC LINC	N/A	
MC	b) ACCOMPANYING DOCUMENTS provided for each item of non-ME EQUIPMENT supplied by MANUFACTURER	C THIC T	N/A	
	c) the required information is provided:		N/A	
THIC	- specifications, instructions for use as intended by MANUFACTURER, and a list of all items forming the ME SYSTEM	NC THIC	N/A	
MC	- instructions for installation, assembly, and modification of ME SYSTEM to ensure continued compliance with this standard	nc wic	N/A	
- MC	instructions for cleaning and, when applicable, disinfecting and sterilizing each item of equipment or equipment part forming part of the ME SYSTEM	NC THE	N/A	
	- additional safety measures to be applied during installation of ME SYSTEM		N/A	
THIC	- identification of parts of ME SYSTEM suitable for use within the PATIENT ENVIRONMENT	No LING	N/A	
7.5	- additional measures to be applied during		N/A	



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Requirement + Test Verdict Clause Result - Remark - a warning forbidding placement of MULTIPLE N/A SOCKET-OUTLET, when provided and it is a separate item, on the floor - a warning indicating an additional MULTIPLE N/A SOCKET-OUTLET or extension cord not to be connected to ME SYSTEM - a warning to connect only items that have N/A been specified as part of ME SYSTEM or specified as being compatible with ME SYSTEM N/A maximum permissible load for any MULTIPLE SOCKET-OUTLET(S) used with ME SYSTEM - instructions indicating MULTIPLE SOCKET-N/A **OUTLETS** provided with the ME SYSTEM to be used only for supplying power to equipment intended to form part of ME SYSTEM an explanation indicating RISKS of connecting N/A non-ME EQUIPMENT supplied as a part of ME SYSTEM directly to wall outlet when non-ME EQUIPMENT is intended to be supplied via a MULTIPLE SOCKET-OUTLET with a separating transformer - an explanation indicating RISKS of connecting N/A any equipment supplied as a part of ME SYSTEM to MULTIPLE SOCKET-OUTLET permissible environmental conditions of use N/A for ME SYSTEM including conditions for transport and storage N/A - instructions to OPERATOR not to, simultaneously, touch parts referred to in 16.4 and PATIENT d) the following instructions provided for use N/A by RESPONSIBLE ORGANIZATION: - adjustment, cleaning, sterilization, and N/A disinfection PROCEDURES N/A assembly of ME SYSTEMS and modifications during actual service life shall be evaluated based on the requirements of this standard 16.3 Instructions for use of ME EQUIPMENT intended N/A to receive its power from other equipment in an ME SYSTEM, describe the other equipment to ensure compliance with these requirements Transient currents restricted to allowable levels N/A for the specified IPS or UPS.....: Technical description and installation N/A instructions specify the actual transient currents where an IPS or UPS is not specified



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Clause	Requirement + Test	Result - Remark	Verdict	
16.4	Parts of non-ME EQUIPMENT in PATIENT ENVIRONMENT subject to contact by OPERATOR during maintenance, calibration, after removal of covers, connectors operated at a voltage ≤ voltage in 8.4.2 c)	UC LINC LIN	N/A	
16.5	Safety measures incorporating a SEPARATION DEVICE applied when FUNCTIONAL CONNECTION between ME EQUIPMENT and other items of an ME SYSTEM or other systems can cause allowable values of LEAKAGE CURRENT to exceed	UC LINC LIN	N/A	
THIC	SEPARATION DEVICE has dielectric strength, CREEPAGE and CLEARANCES required for one MEANS OF OPERATOR PROTECTION	UC LANC LA	N/A	
THIC	WORKING VOLTAGE was highest voltage across SEPARATION DEVICE during a fault condition, but not less than MAXIMUM MAINS VOLTAGE (V):	NC THIC TH	N/A	
16.6	LEAKAGE CURRENTS			
16.6.1	TOUCH CURRENT IN NORMAL CONDITION did not exceed 100 µA	See appended Table 16.6.1	N/A	
, (C	TOUCH CURRENT did not exceed 500 µA in event of interruption of any non-PERMANENTLY INSTALLED PROTECTIVE EARTH CONDUCTOR:	See appended Table 16.6.1	N/A	
16.6.2	Current in PROTECTIVE EARTH CONDUCTOR of MULTIPLE SOCKET-OUTLET didn't exceed 5 mA:	n 144 14	N/A	
16.6.3	PATIENT LEAKAGE CURRENT and total PATIENT LEAKAGE CURRENT of ME SYSTEM IN NORMAL CONDITION did not exceed values:	See appended Tables 8.7 8.7.4.7 and 16.6.1	N/A	
16.7	ME SYSTEM complied with applicable requirements of Clause 9:	See applicable appended Tables in section 9	N/A	
16.8	Interruption and restoration power to the ME SYSTEM or any part of the ME SYSTEM did not result in a loss of BASIC SAFETY OR ESSENTIAL PERFORMANCE	UC LINC LIN	N/A	
16.9	ME SYSTEM connections and wiring	A KALL YEL	N/A	
16.9.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where unacceptable RISK can result:	NC SINC SI	N/A	
THIC	RISK MANAGEMENT FILE includes an assessment of RISKS associated with plugs for connection of PATIENT leads or cables likely to be located in the PATIENT ENVIRONMENT: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A	



Report No.: TMC200313115-S TMC Testing Services(Shenzhen) Co., Ltd EN 60601-1 Clause Requirement + Test Verdict Result - Remark - Plugs for connection of PATIENT leads or N/A PATIENT cables could not be connected to other outlets of the same ME SYSTEM likely to be located in PATIENT ENVIRONMENT, except when examination of connectors and interchanging them proved no unacceptable RISK results Medical gas connections on the ME SYSTEM for N/A different gasses operated in NORMAL USE are not interchangeable 16.9.2 MAINS PARTS, components and layout N/A 16.9.2.1 a) - MULTIPLE SOCKET-OUTLET only allows N/A connection using a TOOL, or - MULTIPLE SOCKET-OUTLET is of a type that N/A cannot accept MAINS PLUGS of any of the kinds specified in IEC/TR 60083, or - MULTIPLE SOCKET-OUTLET is supplied via a N/A separating transformer b) - MULTIPLE SOCKET-OUTLET marked with safety N/A sign 2 of Table D.2 visible in NORMAL USE, and marked either individually or in combinations, N/A with the maximum allowed continuous output in amperes or volt-amperes, or N/A marked to indicate the equipment or equipment parts it may safely be attached to - MULTIPLE SOCKET-OUTLET is a separate item or N/A an integral part of ME EQUIPMENT or non-ME **EQUIPMENT** c) MULTIPLE SOCKET-OUTLET complied with IEC N/A 60884-1 and the following requirements: - CREEPAGE and CLEARANCES complied with 8.9 N/A - It is class I, and protective Earth conductor N/A is connected to earthing contacts in socketoutlets - PROTECTIVE EARTH TERMINALS and PROTECTIVE N/A **EARTH CONNECTIONS comply with 8.6:** - ENCLOSURE complied with 8.4.2 d) N/A - MAINS TERMINAL DEVICES and wiring complied N/A with 8.11.4, when applicable RATINGS of components are not in conflict See appended Table 8.10 N/A with conditions of use: Electrical terminals and connectors of N/A **MULTIPLE SOCKET-OUTLETS prevent incorrect** connection of accessible connectors removable without a TOOL



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Clause	Requirement + Test	Result - Remark	Verdict	
-07		17 17 17	21/2	
1.	- POWER SUPPLY CORD complied with 8.11.3	7. 7.	N/A	
THIC	d) Additional requirements applied when MULTIPLE SOCKET-OUTLET combined with a separating transformer:	INC THIC T	N/A	
	- Separating transformer complied with this standard or IEC 61558-2-1,:	See appended Table 8.10	N/A	
- 13/1 C	- Separating transformer is CLASS I	Me Line	N/A	
	- Degree of protection against ingress of water specified as in IEC 60529		N/A	
THUC	 Separating transformer assembly marked according to 7.2 and 7.3 	We LANG L	N/A	
THIC	 MULTIPLE SOCKET-OUTLET permanently connected to separating transformer, or socket-outlet of separating transformer assembly cannot accept MAINS PLUGS as identified in IEC/TR 60083 	ac Thic L	N/A	
16.9.2.2	The impedance between the protective earth pin in the MAINS PLUG and any part that is PROTECTIVELY EARTHED did not exceed 200 m Ω	INC THIC T	N/A	
THIC	Removal of any single item of equipment in ME SYSTEM will not interrupt the protective earthing of any other part without simultaneous disconnection of electrical supply to that part	NC THIC T	N/A	
an C	Additional PROTECTIVE EARTH CONDUCTORS can be detachable only by use of a TOOL	C ,nC ,n	N/A	
16.9.2.3	Conductors connecting different items within an ME SYSTEM protected against mechanical damage	14, 14,	N/A	

17	ELECTROMAGNETIC COMPATIBILITY OF ME EGSYSTEMS	QUIPMENT AND ME	Р
-inC	RISKS associated confirmed by review:	nc 200 30	Р
In.	electromagnetic phenomena at locations where ME EQUIPMENT or ME SYSTEM is to be used as stated in ACCOMPANYING DOCUMENTS::	3, \(\lambda \) \(\lambda \)	P
THIC	RISK MANAGEMENT FILE includes an assessment of risks associated with the introduction of electromagnetic phenomena into the environment by the EQUIPMENT or SYSTEM: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
THE	- introduction of electromagnetic phenomena into environment by ME EQUIPMENT OR ME SYSTEM that might degrade performance of other devices, electrical equipment, and systems	See IEC 60601-1-2 Report	N/A



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Clause	Requirement + Test		Result - Remark		Verdict

ANNEX G	PROTECTION AGAINST HAZARDS OF IGNITION ANESTHETIC MIXTURES	OF FLAMMABLE	N/A
G.2	Locations and basic requirements	4. 16. 16.	N/A
G.2.1	Parts of CATEGORY APG ME EQUIPMENT in which a FLAMMABLE ANAESTHETIC MIXTURE WITH AIR OCCURS are CATEGORY AP Or APG ME EQUIPMENT and complied with G.3, G.4, and G.5	UC LANC LANG	N/A
G.2.2	FLAMMABLE AESTHETIC MIXTURE WITH		N/A
G.2.3	A FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OF NITROUS OXIDE	NC LANC LANG	N/A
G.2.4	ME EQUIPMENT specified for use with FLAMMABLE AESTHETIC MIXTURE WITH AIR complied with G.4 and G.5	nc sinc sinc	N/A
G.2.5	ME EQUIPMENT or parts thereof for use with FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE comply with G.4 and G.6		N/A
THINE	ME EQUIPMENT in G.2.4 to G.2.5 met appropriate tests of G.3-G.5 conducted after tests of 11.6.6 and 11.6.7	y Line Line	N/A
G.3	Marking, ACCOMPANYING DOCUMENTS	inc inc in	N/A
G.3.1	CATEGORY APG ME EQUIPMENT prominently marked "APG" (symbol 23 in Table D.1):	See copies of Marking Labels	N/A
THIC	Length of green-coloured band is ≥ 4 cm, and size of marking is as large as possible for particular case	C LAUC LAUC	N/A
,nC	When above marking not possible, relevant information included in instructions for use:	nc on on	N/A
Lin	Marking complied with tests and criteria of 7.1.2 and 7.1.3	n. 14n, 14n.	N/A
G.3.2	CATEGORY AP ME EQUIPMENT prominently marked, with a green-coloured circle "AP" (symbol 22 in Table D.1):		N/A
. C.	Marking is as large as possible for the particular case	. (. ((N/A
LIM	When above marking not possible, the relevant information included in instructions for use:	y Lay Lay	N/A
J. Miles	Marking complied with tests and criteria of 7.1.2 and 7.1.3	nc one on	N/A
G.3.3	The marking placed on major part of ME EQUIPMENT for CATEGORY AP or APG parts	a. In. In.	N/A



EN 60601-1 Requirement + Test Verdict Clause Result - Remark G.3.4 ACCOMPANYING DOCUMENTS contain an indication N/A enabling the RESPONSIBLE ORGANIZATION to distinguish between CATEGORY AP and APG parts Marking clearly indicates which parts are G.3.5 N/A CATEGORY AP or APG when only certain ME **EQUIPMENT parts are CATEGORY AP or APG G.4** Common requirements for CATEGORY AP and CATEGORY APG ME EQUIPMENT N/A G.4.1 N/A a) CREEPAGE and CLEARANCES are according to Table 12 for one MEANS OF PATIENT PROTECTION b) Connections protected against accidental N/A disconnection c) CATEGORY AP and APG not provided with a N/A DETACHABLE POWER SUPPLY CORD, G.4.2 Construction details N/A N/A a) Opening of an ENCLOSURE protecting against penetration of gases or vapours into ME EQUIPMENT or its parts possible only with a TOOL b) ENCLOSURE complies with....: See appended Table 8.10 N/A no openings on top covers of ENCLOSURE, N/A openings in side-covers prevented N/A penetration of a solid cylindrical test rod openings in base plates prevented N/A penetration of a solid cylindrical test c) Short circuiting conductor(s) to a conductive N/A part (when no explosive gasses) did not result in loss of integrity of the part, an unacceptable temperature, or any HAZARDOUS SITUATION G.4.3 a) Electrostatic charges prevented on CATEGORY N/A AP and APG ME EQUIPMENT by a combination of appropriate measures Use of antistatic materials with a limited N/A See appended Table 8.10 electrical resistance....: Provision of electrically conductive paths N/A from ME EQUIPMENT or its parts to a conductive floor, protective earth or potential equalization system, or via wheels to an antistatic floor N/A b) Electrical resistance limits of aesthetic tubing, mattresses/ pads, castor tires & other antistatic material comply with ISO 2882.....: G.4.4 Corona cannot be produced by components or N/A parts of ME EQUIPMENT operating at more than 2000 V a.c. or 2400 V d.c. and not included in **ENCLOSURES complying with G.5.4 or G.5.5 G.5** Requirements and tests for CATEGORY AP ME EQUIPMENT, parts and components N/A

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Clause	Requirement + Test	Result - Remark	Verdict
Ciause	Requirement + rest	Result - Remark	Verdict
G.5.1	ME EQUIPMENT, its parts or components do not ignite FLAMMABLE AESTHETIC MIXTURES WITH AIR under NORMAL USE and CONDITIONS based on compliance with G.5.2 to G.5.5	AC THE T	N/A
THIC	Alternatively, ME EQUIPMENT, its parts, and components complied with requirements of IEC 60079-0 for pressurized ENCLOSURES (IEC 60079-2); for sand-filled ENCLOSURES, IEC 60079-5; or for oil immersed equipment, IEC 60079-6; and with this standard excluding G.5.2 to G.5.5:		N/A
G.5.2	Temperature limits:	See appended Tables 11.1.1 and 11.2.2.1	N/A
G.5.3	ME EQUIPMENT, its parts, and components producing sparks in NORMAL USE and CONDITION complied with temperature requirements of G.5.2, and U _{max} and I _{max} occurring in their circuits, and complied as follows:	MC LINC LI	N/A
THIC	Measured $U_{max} \le U_{zR}$ with I_{zR} as in Fig. G.1:	U _{max} =V U _{zR} =V I _{zR} =A	N/A
o'nC	Measured U _{max} ≤ U _c with C _{max} as in Fig. G.2:	U _{max} =V U _c =V C _{max} =μF	N/A
14	Measured $I_{max} \le I_{zR}$ with U_{zR} as in Fig G.1:	I _{max} =A I _{zR} =A U _{zR} =V	N/A
THINC	Measured $I_{max} \le I_{zL}$ with L_{max} and a $U_{max} \le 24$ V as in Fig G.3:	I _{max} =A I _{zL} =A L _{max} =mH	N/A
THIC	 Combinations of currents and corresponding voltages within the limitations IzR.UzR ≤ 50 W extrapolated from Fig G.1 	AC LANC LA	N/A
	No extrapolation made for voltages above 42 V	j j	N/A
THIC	 Combinations of capacitances and corresponding voltages within limitations of C/2U² ≤ 1.2 mJ extrapolated from Fig G.2 	AUC LANC LA	N/A
. (No extrapolation made for voltages above 242V	.((.	N/A
1 191	U _{max} determined using actual resistance R	EL LEY LE	N/A
MC	 Combinations of currents and corresponding inductances within limitations L/2l² ≤ 0.3 mJ extrapolated from Fig G.3 	anc anc a	N/A
11.	No extrapolation made for inductances larger than 900 mH	1, 1,	N/A



TMC Testing Services(Shenzhen) Co., Ltd Report No.: TMC200313115-S EN 60601-1 Verdict Clause Requirement + Test Result - Remark U_{max} was the highest supply voltage occurring N/A in circuit under investigation with sparking contact open - Imax was the highest current flowing in circuit N/A under investigation with sparking contact closed N/A - C_{max} and L_{max} taken as values occurring at the component under investigation producing sparks Peak value considered when a.c. supplied N/A - An equivalent circuit calculated to determine N/A equivalent max capacitance, inductance, and equivalent U_{max} and I_{max} , either as d.c. or a.c. peak values in case of a complicated circuit: Temperature measurements made according to See appended Table 11.1.1 N/A 11.1, and Umax, Imax, R, Lmax, and Cmax determined with application of Figs G.1-G.3...: Alternatively, compliance was verified by N/A examination of design data....: External ventilation with internal overpressure G.5.4 N/A N/A ME EQUIPMENT, its parts, and components enclosed in an ENCLOSURE with external ventilation by means of internal overpressure complied with the following requirements: a) FLAMMABLE AESTHETIC MIXTURES WITH AIR t N/A removed by ventilation before EQUIPMENT energized, b) Overpressure inside ENCLOSURE was 75 Pa, N/A min., in NORMAL CONDITION (Pa)....:: Overpressure maintained at the site of potential N/A ignition ME EQUIPMENT could be energized only after the N/A required minimum overpressure was present long enough to ventilate the ENCLOSURE N/A ME EQUIPMENT energized at will or repeatedly when overpressure was continuously present c) Ignition sources de-energized automatically N/A when during operation overpressure dropped below 50 Pa (Pa).....:: d) External surface of ENCLOSURE did not N/A exceed 150 °C in 25 °C.....: G.5.5 **ENCLOSURES with restricted breathing** N/A



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Clause	Requirement + Test	Result - Remark	Verdict
× 611.	10 10 10 10 10 X	d) (d)	(17)
. (ME EQUIPMENT, its parts, and components enclosed in an ENCLOSURE with restricted breathing complied with the following:		N/A
Lin	a) A FLAMMABLE AESTHETIC MIXTURE WITH AIR did not form inside ENCLOSURE with restricted breathing	In In	N/A
LANC	b) Gasket or sealing material used to maintain tightness complied with aging test B-b of IEC 60068-2-2, Clause 15, at 70 °C ± 2 °C and 96 h.:	See appended Table 8.10	N/A
MAC	c) Gas-tightness of ENCLOSURE containing inlet for flexible cords maintained	S C MIC	N/A
110	Cords are fitted with adequate anchorages to limit stresses as determined by test		N/A
-inC	Overpressure not reduced below 200 Pa	Jac C	N/A
Lu.	Tests waived when examination of ENCLOSURE indicated it is completely sealed or gas-tight without a doubt (100 % degree of certainty)	10. 1m.	N/A
THINC	Operating temperature of external surface of ENCLOSURE was ≤ 150 °C in 25 °C (°C):	INC THICK	N/A
	Steady state operating temperature of ENCLOSURE also measured (°C):	٥, ٥	N/A
3.6	CATEGORY APG ME EQUIPMENT, parts and compor	nents thereof	N/A
G.6.1	ME EQUIPMENT, its parts, and components did not ignite FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE under NORMAL USE and SINGLE FAULT CONDITION	C THIC T	N/A
NAC	ME EQUIPMENT, its parts, and components not complying with G.6.3 subjected to a CONTINUOU OPERATION test	s of the	N/A
G.6.2	Parts and components of CATEGORY APG ME EQUIPMENT operating in a FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE supplied from a source isolated from earth by insulation equal to one MEANS OF PATIENT PROTECTION and from electrical parts by insulation twice the MEANS OF PATIENT PROTECTION	AND LAND	N/A
3.6.3	Test of G.6.1 waived when the following requirements were met in NORMAL USE and under NORMAL and SINGLE FAULT CONDITIONS	THE THICK	N/A
NAC	a) no sparks produced and temperatures did not exceed 90 °C, or	See Tables 11.1.1, 11.2.2. and 13.2	1 N/A



Clause	Requirement + Test	Result - Remark	Verdict
-iau3c	roquilenent - rest	Rooult - Romain	Voluict
THIC	b) a temperature limit of 90 °C not exceeded, sparks produced in NORMAL USE, and SINGLE FAULT CONDITIONS, except U_{max} and I_{max} occurring in their circuits complied with requirements, taking C_{max} and L_{max} into consideration:	See Tables 11.1.1 and 13.2	N/A
TANC	Measured $U_{max} \le U_{zR}$ with I_{zR} as in Fig. G.4:	U _{max} =V U _{zR} =V I _{zR} =A	N/A
MAC	Measured $U_{max} \le U_{zC}$ with C_{max} as in Fig. G.5:	U _{max} =V U _c =V C _{max} =μF	N/A
.nC	Measured $I_{max} \le I_{zR}$ with U_{zR} as in Fig G.4:	I _{max} =A I _{zR} =A U _{zR} =V	N/A
14.	Measured $I_{max} \le I_{zL}$ with L_{max} and a $U_{max} \le 24$ V as in Fig G.6	I _{max} =A I _{zL} =A L _{max} =mH	N/A
LANC	- Extrapolation from Figs G.4, G.5, and G.6 was limited to areas indicated	We Line Lin	N/A
THIC	 U_{max} was the highest no-load voltage occurring in the circuit under investigation, taking into consideration mains voltage variations as in 4.10 	NC THIC TH	N/A
MC	- I _{max} was the highest current flowing in the circuit under investigation, taking into account MAINS VOLTAGE variations as in 4.10	C MIC MIC	N/A
	– C_{max} and L_{max} are values occurring in relevant circuit		N/A
1 MC	– U_{max} additionally determined with actual resistance R when equivalent resistance R in Fig G.5 was less than 8000 Ω	NC LINC LIN	N/A
. (- Peak value considered when a.c. supplied	. (. (.	N/A
LEN	- An equivalent circuit calculated to determine max capacitance, inductance, and U_{max} and I_{max} , either as d.c. or a.c. peak values in case of a complicated circuit:	ac Len Lu	N/A
LENC LENC	- When energy produced in an inductance or capacitance in a circuit is limited by voltage or current-limiting devices, two independent components applied, to obtain the required limitation even when a first fault (short or open circuit) in one of these components	We Line Lin	N/A
٥٥	- requirement not applied to transformers complying with this standard	aC aC .	N/A
1120	0 1/2 1/2 1/2	110 110	



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Clause	Requirement + Test	Result - Remark	Verdict
10		677 - 677 - 678	7/
- WC	- requirement not applied to wire-wound current-limiting resistors provided with a protection against unwinding of the wire in case of rupture	EUC LIUC LI	N/A
	Compliance verified by examination of CATEGORY APG ME EQUIPMENT, parts, and components, or		N/A
160	Temperature measurements made in accordance with 11.1:	See Table 11.1.1	N/A
TIMC	- or U_{max} , I_{max} , R , L_{max} and C_{max} determined together with application of Figs G.4-G.6:	$\begin{array}{lll} U_{max} &=& _V \\ I_{max} &=& _A \\ R &=& _\Omega \\ L_{max} &=& _mH \\ C_{max} &=& _\mu F \end{array}$	N/A
LING	Alternatively, compliance verified by comparison with design data:	ANC LANC LA	N/A
G.6.4	ME EQUIPMENT, its parts, and components heating a FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE provided with a non-SELF-RESETTING THERMAL CUT-OUT and complied with 15.4.2.1	See appended Table 8.10	N/A
THIC	Current-carrying part of heating element is not in direct contact with FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE	AUC LAUC LA	N/A
G.7	Test apparatus for flammable mixtures according to this Clause and Fig G.7	C aC a	N/A

ANNEX L	INSULATED WINDING WIRES FOR USE WITHOUNSULATION	JT INTERLEAVED	N/A
L.1	BASIC, SUPPLEMENTARY, DOUBLE, and REINFORCED INSULATION in wound components without interleaved insulation complied with this Annex	y - 444 - 44	N/A
L.2	Wire construction	The age of	N/A
J. Lin	Overlap of layers when wire is insulated with two or more spirally wrapped layers of tape is adequate to ensure continued overlap during manufacture of wound component	VC "IVC "	N/A
110	Layers of spirally wrapped wire insulation are sufficiently secured to maintain the overlap	. 40	N/A
L.3	Type Test	nc inc	N/A
14.	The wire subjected to tests of L.3.1 to L.3.4 at a temperature and a relative humidity specified	n. 14, 14	N/A
. (Temperature (°C):		_
1/1/1	Humidity (%):	ye Liye Li	_



Clause	Requirement + Test	Result - Remark	Verdict
-iaus c	Troduitement , 169f	Nesult - Nemark	Veruici
L.3.1	Dielectric strength	10 10	N/A
THIC	Dielectric strength test of Clause 8.8.3 for the appropriate type and number of MOP(s) conducted with no breakdown:	AC THIC TH	N/A
	- 3000 V for BASIC and SUPPLEMENTARY INSULATION (V):	(N/A
- WILL	- 6000 V for REINFORCED INSULATION (V):	in the t	N/A
L.3.2	Flexibility and adherence		N/A
- (Sample subjected to flexibility and adherence	((N/A
1 Miles	Sample examined per IEC 60851-3: 1997, cl. 5.1.1.4, followed by dielectric test of cl. 8.8.3, with no breakdown	And Live Li	N/A
THIC	Test voltage was at least the voltage in Tables 6 and 7 but not less than the following:	ANC THIC TH	N/A
	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V):	, ,	N/A
- W	- 3000 V for REINFORCED INSULATION (V):	in the river	N/A
7,	Tension applied to wire during winding on mandrel calculated from the wire diameter equivalent to 118 MPa ± 11.8 MPa:		N/A
L.3.3	Heat Shock	My LAND LA	N/A
MC	Sample subjected to heat shock test 9 of IEC 60851-6:1996, followed by dielectric strength test of clause 8.8.3	C WC W	N/A
1,	Test voltage was at least the voltage in Tables 6 and 7, but not less than the following:	7. 7.	N/A
THIC	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V):	AC TENC TE	N/A
3	- 3000 V for REINFORCED INSULATION (V):		N/A
	Oven temperature based on Table L.2 (°C):	nC .nC	_
14	Mandrel diameter and tension applied as in clause L.3.2, (MPa; N/mm²):	a, 14, 1	N/A
NAC	Dielectric strength test conducted at room temperature after removal from the oven	anc inc	N/A
L.3.4	Retention of electric strength after bending	. 1, 1	N/A
N'AC	Five samples prepared as in L.3.2 subjected to dielectric strength and bending tests	anc anc a	N/A
111	Test voltage was at least the voltage in Tables 6 and 7, but not less than the following:	. 40 4	N/A
NAC	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V):	ENC WICE	C N/A



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Clause	Requirement + Test	Result - Remark	Verdict
101		10 10 1E	·
7.	- 3000 V for REINFORCED INSULATION (V):	7. 7.	N/A
a'nC	Test voltage applied between the shot and conductor	anc anc an	N/A
1/2	Mandrel diameter and tension applied as in L.3.2, (MPa; N/mm²)	p	N/A
L.4	Tests during manufacture	nc onc on	N/A
L.4.1	Production line dielectric strength tests done by the manufacture per L.4.2 and L.4.3:	See attached manufacturer's routine testing verification	N/A
L.4.2	Test voltage for routine testing (100 % testing) is at least the voltage in Tables 6 and 7 but not less than the following:	anc Thuc The	N/A
	- 1500 V r.m.s. or 2100 V peak for BASIC and SUPPLEMENTARY INSULATION (V)	See manufacturer's routine testing verification	N/A
110	- 3000 V r.m.s. or 4200 V peak for REINFORCED INSULATION (V)	See manufacturer's routine testing verification	N/A
L.4.3	Sampling tests conducted using twisted pair samples (IEC 60851-5:1996, clause 4.4.1):	See manufacturer's routine testing verification	N/A
110	Minimum breakdown test voltage at least twice the voltage in Tables 6 and 7 but not less than:	. 10. 10	N/A
NAC	- 3000 V r.m.s. or 4200 V peak for BASIC and SUPPLEMENTARY INSULATION:	See manufacturer's routine testing verification	N/A
	- 6000 V r.m.s. or 8400 V peak for REINFORCED INSULATION	See manufacturer's routine testing verification	N/A



500		 	9
Clause	Requirement + Test	 Result - Remark	Verdict

Operating Conditions / Ratings	Voltage (V)	Frequency (Hz)	Current (A)	Power (W or VA)	Power factor (cos φ)
Normal	3V	- 4h		¹ C <	WC - <
. (. ((.				. (. (.

5.9.2	TABLE: Determ	N/A		
Location		Determination method (NOTE1)	Comments	
Suppleme	ntary information	<u> </u> n:		

NOTE 1 - The determination methods are: visual; rigid test finger; jointed test finger; test hook.



Clause	Requirement + Test	. C.	Result - Remark	Verdict
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Tivio rooming	Services(Shenzhen) Co., Ltd		. topo.t.	IO.: TMC200313115-S

7.1.2	TABLE: Legibility of Marking			N/A
Markings	tested	Ambient Illuminance (lx)	Remarks	
Outside I	Markings (Clause 7.2):	200	Obviously visik	ole
Inside Markings (Clause 7.3)		200	Obviously visible	
Controls & Instruments (Clause 7.4):		200	Obviously visible	
Safety Si	gns (Clause 7.5):	200	Obviously visik	ole
Symbols	(Clause 7.6):	200	Obviously visib	ole

Supplementary information:

Observer, with a visual acuity of 0 on the log Minimum Angle of Resolution (log MAR) scale or 6/6 (20/20) and is able to read N6 of the Jaeger test card in normal room lighting condition (~500lx), reads marking at ambient illuminance least favourable level in the range of 100 lx to 1,500 lx. The ME EQUIPMENT or its part was positioned so that the viewpoint was the intended position of the OPERATOR or if not defined at any point within the base of a cone subtended by an angle of 30° to the axis normal to the centre of the plane of the marking and at a distance of 1 m.

7.1.3	TABLE: Durability of marking test	- Pill	T PIN CO	P
Characte	Remarks			
Material	of Marking Label:	. (.		. C.
Ink/other	r printing material or process:	1 1/1	41/1	1 kh 1
Material	(composition) of Warning Label:			-
Ink/other	r printing material or process:			C-
Other	:	1 611	110	1611 - 16
	Marking Label Tested:			Remarks
first for 1	5 s with a cloth rag soaked with distilled water	1nC	JAC .	Obviously visible
then for 1	15 s with a cloth rag soaked with ethanol 96%	10.	14.	Obviously visible
				7, 1
- 4() a) a) a (AC.

Supplementary information:

Marking rubbed by hand, first for 15 s with a cloth rag soaked with distilled water, then for 15 s with a cloth rag soaked with ethanol 96%, and then for 15 s with a cloth rag soaked with isopropyl alcohol.



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8.4.2	TABLE: TAB	LE: Working		N/A					
Test suppl	y voltage/freq	uency (V/Hz)	1			50	N/NC		
Location			Measured values	S					
From/To	Vrms	Vpk or Vdc	Peak-to- peak ripple ²	Power W/VA	Energy (J)	Remarks			
- 1/1/2	- William	19/10	- 19/10	- 10/10	- 10	-	M		

Supplementary Information:

- 1. The input supply voltage to the ME EQUIPMENT was the RATED voltage or the voltage within the RATED voltage range which results in the highest measured value. See clause 8.5.4.
- 2. If the d.c peak-to-peak ripple >10%, waveform considered as a.c. See clause 8.4.2.2

8.4.3	TABLE: ME EQUIPM - measurement of disconnection of	voltage	or cal	culation	of store				<	, I	I/A
Maximur	n allowable voltage (\	V)							: 60	M	_ <
			Vo	Itage me	easured	(V)					
Voltage l	Measured Between:	W/C	2	3	4	5	6	~7	8	9	10
Plug pin	s 1 and 2	12	11	12	11	10	9	10	11	12	10
Plug pin	1 and plug earth pin	.7.		. 		-				. c -	
Plug pin	2 and plug earth pin	411	70	2/-	7	V	75		7	<u>-</u>	4-11
Plug pin	1 and enclosure	0	0	0	0	0	0	0	0	0	0
Plug pin	2 and enclosure	0	0	0	0	100	0	0	0	0	0
Maximur	n allowable stored cl	harge w	hen m	easured	voltage	excee	ded 60	v (μc)	: 45		
		(Calcula	ated sto	red cha	rge (μc)	1		·		
Voltage l	Measured Between:	(PI	2 /	3	4	5	6 <	7	8<	9	10
Plug pin	s 1 and 2										
(1 and plug earth pin	CAPC.		NAC.)	W.C	,	W.C.	>	W.C	
Plug pin											
1	2 and plug earth pin										
Plug pin	2 and plug earth pin 1 and enclosure	. <u></u> C		C	"	.		<u>.</u>		·	



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8.4.4	TABLE: Internal capacitive calculation of the stored capacitors or circuit parts	charge in capacitive	circuits (i.e., accessi			
Maximum	allowable residual voltage	(V):	1, 1,	60 V		
Maximum	allowable stored charge w	hen residual voltage	exceeded 60 V:	45 μC		
Description of the capacitive circuit (i.e., accessible capacitor or circuit parts)		Measured residual voltage (V) Calculated stored charge (μC)		Remarks		
						
Suppleme	entary information:	< P	112 112	110		

	FABLE: defibrillation- electrical energies	proof applied parts –	measurement o	of hazardous	N/A
Test Condition: Figs. 9 & 10		Applied part with test voltage	Test voltage polarity	Measured voltage between Y1 and Y2 (mV)	Remarks
					-
TRIC	LAIC LAI	TAIC	(BIC	Thic T	WC LE
Supplement	ary information:	C nC	.nC	.,,C	an C

8.5.5.1b	TABLE: defib	ne N/A	,			
	part with test oltage	Test voltage polarity	Recovery time from documents (s)	Measured recovery time (s)	Remarks	
`						1
٠,٠	٠,۵۲	-aC	-aC	٠, ٥	٠,,,	
10,	1 les	100	14, 16	1, 10,	1 lon	1
Suppleme	ntary informati	on:	inC .	nc inc	Jn.	



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8.5.5.2	TABLE: DEFIBRILLATION-PROOF APD DEFIBRILLATION-PROOF APPLIED PARENCE Energy delivered to a 100 Ω load	RTS - Energy reduction		N/A ent of
	Test Voltage applied to	Measured Energy E1 (mJ)	Measured Energy E2 (mJ)	Energy E1 as % of E2 (%)
PATIENT CO	ONNECTION 1 or APPLIED PART with ONNECTIONS 2, 3, and 4 of the same ART connected to earth	BUC LINC	- LINC	- MC
PATIENT CO	ONNECTION 2 or APPLIED PART with ONNECTIONS 1, 3, and 4 of the same ART connected to earth	KINC THIC	- TINC	- TWC
PATIENT CO	ONNECTION 3 or APPLIED PART with DNNECTIONS 1, 2, and 4 of the same ART connected to earth	anc anc	- WC	- WC
PATIENT CO	ONNECTION 4 or APPLIED PART with DNNECTIONS 1, 2, and 3 of the same ART connected to earth		^_	

Supplementary information: For compliance: E1 must at least 90% of E2 E1= Measured energy delivered to 100 Ω with ME Equipment connected; E2= Measured energy delivered to 100 Ω without ME equipment connected.

8.6.4	TABLE: Impedance and current-carrying capability of PROTECTIVE EARTH CONNECTIONS								
Туре	of ME EQUIPMENT measured betwo	•		Test current (A) /Duration (s)	Voltage drop measured between parts (V)	Maximum calculated impedance (mΩ)	Maximum allowable impedance (mΩ)		
- MC	TANC	THIC	1	W. L	Mc 1	AC TE	UC -		
THIC	TINC	TINC	<u></u>	WC Y	WC T	NC TO	VC V		

Supplementary information:

Permanently installed me equipment, impedance between protective earth terminal and a protectively earthed part - Limit 100 m Ω Me equipment with an appliance inlet, impedance between earth pin in the appliance inlet and a protectively earthed part - Limit 100 m Ω

ME EQUIPMENT with an APPLIANCE INLET, impedance between earth pin in the protective earth pin on the DETACHABLE POWER SUPPLY CORD and a PROTECTIVELY EARTHED part - Limit 200 m Ω

ME EQUIPMENT with a non-DETACHABLE POWER SUPPLY CORD, impedance between the protective earth pin in the MAINS PLUG and a PROTECTIVELY EARTHED part - Limit 200 m Ω



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Clause	Requirement + Test	. C	Result - Remark	Verdict

	Cummlur	Supply	Measured	
Type of leakage current and test condition (including single faults)	Supply voltage (V)	Supply frequency (Hz)		Remarks
Fig. 13 - Earth Leakage (ER)	_	_	_	Maximum allowed values: 5 mA NC; 10 mA SFC
normal operation	120		an C	ail ail
110%Supply voltage	14	<		(p. 1 p. 1
and and and	1120	Ć,	an C	ainC ainC
Fig. 14 - Touch Current (TC)	_	_	_	Maximum allowed values: 100 μA NC; 500 μA SFC
normal operation		e.	(((
110%Supply voltage	147	~ <'	W.	IN THE
		C		
Fig. 15 - Patient Leakage Current (P)	_	_	_	Maximum allowed values: Type B or BF AP: 10 μA NC; 50 μA SFC (d.c. current); 100 μA NC; 500 μA SFC (a.c.) Type CF AP: 10 μA NC; 50 μA SFC (d.c. or a.c. current)
1. 1. 1.	7.			
THE THE THE	~WC	~ (il)		UC LANC LA
Fig. 16 - Patient leakage current with mains on the F-type applied parts (PM)	_	_	_	Maximum allowed values: Type B: N/A Type BF AP: 5000 μA Type CF AP: 50 μA
2n 2n 2n	40	C	-nC	nc nc
Ly, Ly, Ly,	14	<	91	Las Less
Fig. 17 - Patient leakage current with external voltage on Signal Input/Output part (SIP/SOP)	_	_	_	Maximum allowed values: Type B or BF AP: 10 μA NC; 50 μ/ SFC(d.c. current); 100 μA NC; 500 μA SFC (a.c.); Type CF AP: 10 μA NC; 50 μA SFC (d.c. or a.c. current)
In, In, In,	160	<	g ₁ ,	len Len
).).).	.6			aC aC
1 /41 / 1/41 / 1/41	~ 40	\ \tag{\tag{\tag{\tag{\tag{\tag{\tag{	Mr.	My My



7			EN 6	60601-1			
Clause	Requirement	t + Test	- a C		Result - Re	mark	Verdict
100	101	100	10,	~ <	en.	(6),	1 101 1
external vo	atient leakage coltage on metal and not Protectively	Accessible	-	-	_	Maximum allov Type B or BF / Type CF: N/A	
			.53			7:	
			(_	. (. (.	
1 kill	1 Mills	TEN	14/1	_ <	RIT	(till)	LANG L
Fig. 19 – F	Patient Auxiliary	Current	-	_	-	SFC (d.c. curre 100 µA NC; 50	AP: 10 μA NC; 50 μA ent); 00 μA SFC (a.c.) ; 0 μA NC;50 μA SFC
No.	NINC.	N/C	No.	e.	an C	NIN C	M
1,,	11	110	1,0	1		11	1, 1
-	/	-			7	1	-
-11/10	- Will	- William	11/10	-	W.	die	W
	d 20 – Total Pati th all AP of sam together		-	_	_		AP: 50 μA NC; .c. current); 000 μA SFC (a.c.); 50 μA NC; 100 μA
-inC	ONC	an C	ain C	72	C .	MC.	ain C air
I.b.	10.	110.	10.	11	1	, <	10. 11
Current wit	d 20 – Total Pati th all AP of sam together with ex SIP/SOP	e type	-	-	_		AP: 50 μA NC; .c. current); 00 μA SFC (a.c.); 50 μA NC; 100 μA
14.	YE.	14.	14.	<	<i>b</i> .	(b).	Ib. 1
- win C	- anc	- N/C	7/20		SIL.	anc.	NAC .
11.	11	11.	11.	_ 1		1,,	1, 1
Current wit	d 20 – Total Pat th all AP of sam together with e F-type AP	e type	_	_	_	Maximum allow Type B: NA Type BF: 5000 Type CF: 100) μΑ
·nC	Jan C	an C	-10		an C	-10 C	-10 C
	2.4612	101,	101	- 0	101,	* [1] ,	10.



Clause Requirement + Test Result - Remark Fig. 18 and 20 – Total Patient Leakage Current with all AP of same type connected together with external voltage on metal Accessible Part not Protectively Earthed Result - Remark Maximum allowed value Type B & BF: 1000 μA Type CF: N/A	
Current with all AP of same type connected together with external voltage on metal — Type B & BF: 1000 µA	Verdict
Current with all AP of same type connected together with external voltage on metal — Type B & BF: 1000 µA	~
Current with all AP of same type connected	
LAUC LAUC LAUC LAUC LAUC LAUC	es:
THICKNEY THICKNEY THE THICKNEY	_
Function Earth Conductor Leakage Maximum allowed value Current (FECLC) 5 mA NC; 10 mA SFC	es:
LING LING LING LING LING LING	4
THIC THIC THIC THIC THIC THIC	
Supplementary information:	

Supplementary information:

- Note 1: For EARTH LEAKAGE CURRENT see 8.7.3 d) and 8.7.4.5;
- Note 2: For TOUCH CURRENT see 8.7.3 c) and 8.7.4.6;
- Note 3: For PATIENT LEAKAGE CURRENT SEE 8.7.3.b) and 8.7.4.7
- Note 4: Total PATIENT LEAKAGE CURRENT values are only relative to equipment with multiple APPLIED PARTS of the same type. See 8.7.4.7 h). The individual APPLIED PARTS complied with the PATIENT LEAKAGE CURRENT values.

Note 5: In addition to conditions indicated in the Table, tests conducted at operating temperature and after humidity preconditioning of 5.7, EQUIPMENT energized in stand-by condition and fully operating, max rated supply frequency, at 110 % of the max RATED MAINS VOLTAGE, and after relevant tests of Clause 11.6 (i.e., overflow, spillage, leakage, ingress of water and particulate matter, cleaning & disinfection, & sterilization).

ER - Earth leakage current

TC - Touch current

P - Patient leakage current

PA – Patient auxiliary current

TP - Total Patient current

PM - Patient leakage current with mains on the applied parts

MD - Measuring device

A - After humidity conditioning

B - Before humidity conditioning

1 - Switch closed or set to normal polarity

0 - Switch open or set to reversed polarity

NC - Normal condition

SFC - Single fault condition



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Clause	Requirement + Test		Result - Remark	Verdict

8.8.3 TABLE: Dielectric strength test of solid insulating materials with safety function – MEANS OF OPERATOR PROTECTION (MOOP) / MEANS OF PATIENT PROTECTION (MOPP)								
(area from insulation			Reference	· Voltage		D.		
		Insulation Type (1 or 2 MOOP/MOPP)	PEAK WORKING VOLTAGE (U) V peak	PEAK WORKING VOLTAGE (U) V d.c.	A.C. test voltages in V r.m.s ¹	Dielectric breakdown after 1 minute Yes/No ²		
	(2	420V	. (-	3000	No		
11/1	1/1/1	1411	1 kg	Can	Less 1	Les 1		
	. (C		. C	. C			

Supplementary information:

ME EQUIPMENT de-energized, C) after reaching steady state operating temperature as during heating test of 11.1.1, and D) after relevant tests of 11.6 (i.e., overflow, spillage, leakage, ingress of water, cleaning, disinfection, and sterilization).

8.8.4.1	TABLE: Resistance to heat - Ball pressure test of	f th	ermoplastic parts	P
1	Allowed impression diameter (mm):	≤ 2	2 mm	7 -
	Force (N):	20	/	
Part/mate	rial	Test temperature (°C)	Impression diameter (mm)	
Enclosure	e/External insulating parts			
Plastic en	nclosure	10	75°C	0.56mm
[1p, 1p, 1p, 1,	14.	14	14.
Insulating	material supporting un-insulated Mains Parts			2.5
РСВ	one one	120	125°C	0.64mm
1/4	1 1 1 1 1 1 1 1	14.	110	14.
Suppleme	entary information:			

¹ Alternatively, per the Table (i.e., __dc), a d.c. test voltage equal to the peak value of the a.c. test voltage used.

² A) Immediately after humidity treatment of 5.7, ME EQUIPMENT de-energized, B) after required sterilization PROCEDURE,

ME EQUIPMENT de-energized, C) after reaching steady state operating temperature as during beating test of 11.1.1, and D)



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10,	160.	1 kg	1 la	100	10,	I'M.	<
8.9.2	CLEARANCES	for insulation	of each single on n in the MAINS PAF ing with the requ	RT between pa	rts of opposite	and AIR N/	Α
•	c areas of circu ted and test co		Test in lieu of CREEPAGE DISTANCE OF AIR CLEARANCE ¹	observed (i. shock haza discharge d	US SITUATION e., fire hazard, rd, explosion, of parts, etc.)? es/No	Remarks	
	entary informat AC - AIR CLEA		CD - CREEPAGE DIS	TANCE	THIC	THIC	<

8.9.3.2		Table: Thermal cycling tests on one sample of insulating compound fo solid insulation between conductive parts		forming	N/A
Part Test	8.9.3.4 - Test duration and temperature for 10 cycles after which the sample was subjected to Humidity Preconditioning per Cl. 5.7	Dielectric test voltage	Dielectric strength test after humidity preconditioning per cl. 5.7 except for 48 h only, Breakdown: Yes/No	the ir	or voids in nsulating and: Yes/No
14.	68 h at T1 ± 2 °C = °C 1	. 44	1. (b)	In.	10
	1 h at 25 °C ± 2 °C	5000			
NINC.	2 h at 0 °C ± 2 °C	SINC.	anc anc	120	C .
1/2	1 or more h at 25 °C ± 2 °C	L. 4	In Lin.	1/4	· <
THIC	TANC TANC	W.C.	WC LWC	~ N	IC T
	, ,		, ,		/

Supplementary information:

¹ T1 = 10 °C above the maximum temperature of relevant part determined per 11.1.1, or 85 °C, the higher of the two. 10 °C not added to T1 when temperature measured by an embedded thermocouple. Used gradual transition from one temperature to another.



|--|--|

8.9.3.3		ermal cycling tests on one sample of g parts (see 8.9.3.3)	cemented join	t with other	N/A	
Part tested	Sample	Sample Each test duration and temperature		Dielectric strength test, Breakdown: Yes/No		
1 Miles	1 719	10 Cycles conducted of the following:	Mr. 1	Mr TH	1	
		1 - 68 h at T1 ± 2 °C =°C1				
MAC	1/2	2 - 1 h at 25 °C ± 2 °C	MINC	Mr. Mr.	10	
110	110	3 - 2 h at 0 °C ± 2 °C	1.	10 40		
/	-	4 - 1 or more h at 25 °C ± 2 °C	/	2	/	
NO	2	Humidity Conditioning per 5.7	W.C.	11 - W	10	
1.	3	Humidity Conditioning per 5.7				
THIC	T KIN	TINC TINC	MC T	WC TH	VC .	
THIC	T NIN	- KAUC KAUC	M/C T	MAC TH	NC .	
				. ((t.	

Supplementary information:

¹ T1 = 10 °C above the maximum temperature of relevant part determined per 11.1.1, or 85 °C, the higher of the two. 10 °C not added to T1 when temperature measured by an embedded thermocouple. Used gradual transition from one temperature to another.



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8.11.3.5 TABLE: Cord a	3.11.3.5 TABLE: Cord anchorages								
Cord under test	Mass of equipment (kg)	Pull (N)	Torque Nm)	Remarks					
POWER CORD	5.8kg	100	0.35	PASS					
- nc nc	JAC .	a C	200	in C					
Supplementary information	11/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1	la. <	la. Lla.	1 la. 1					

8.11.3.6 T	ABLE: Cord gua	rd	100	600	14	N/A
Cord under to	est	Test mass	Measured curvature		Remarks	
- 100	an C	nc 2n	J. In C	an C	an C	
14.	14.	(b). (b).	10.	La.	14.	_ <
Supplementa	ry information:					

9.2.2.2	TABLE:	Measurement of gap	"a" according to Tab	ole 20 (ISO 13852: 1990	6) N/A
Part of b	oody	Allowable adult gap ¹ , mm	Measured adult gap, mm	Allowable children gap ¹ , mm	Measured childr gap, mm
Body		> 500	30.	> 500	
Head		> 300 or < 120	. (> 300 or < 60	. (.
Leg	- 120	> 180	47 47	> 180	- M
Foot		> 120 or < 35		> 120 or < 25	
Toes		> 50	,	> 50	- /
Arm	To.	> 120	NA NA	> 120	- W
Hand, wrist,	, fist	> 100	1, 1,	> 100	1,,
Finger		> 25 or < 8		> 25 or < 4	2.1

Supplementary information: ¹ In general, gaps for adults used, except when the device is specifically designed for use with children, values for children applied.

9.2.3.2	TABLE: Over-travel End Stop Test		N/A
ME EQUIPMENT end stop		Test Condition (cycles, load, speed)	Remarks
Suppleme	entary information:		<u>'</u>



Clause Requirement + Test	Result - Remark	Verdict
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ME EQUIPMENT preparation	Test Condition (transport position)	Remarks		
Medical infrared thermometer	10°	PASS		
Taylor Lange	THE THE THE	LANG LANG		

9.4.2.2 TABLE: Inst	ability—overba	lance excludin	g transport pos	ition	N/A	1
ME EQUIPMENT preparation	position) T	ndition (exclud est either 5 ° ir ng marking or	ncline and verify		Remarks	
Medical infrared thermometer	-WC	10°	- MC	PASS	WIC	
	7		7	7.	7	
. (. (
Supplementary informa	tion:	L HIVE	NIN	L WILL	TON	1

	TABLE: Insta QUIPMENT paration	Test Cond	dition (force us	rizontal and vert ed, direction of ent, location of	7 17	Remarks	I/A
-7 kg	THIN	1411	Thin	1 km	1 kills	Thin	<
Suppleme	ntary informati	ion:<	- MC	- MC	CALC	MC	



TMC Testing Services(Shenzhen) Co., Ltd Report No.: TMC200313115-S EN 60601-1 Clause Requirement + Test Result - Remark Verdict 9.4.2.4.2 TABLE: Castors and wheels - Force for propulsion N/A **ME EQUIPMENT Test Condition (force location and height)** Remarks preparation Medical infrared 30N **PASS** thermometer **Supplementary information:** 9.4.2.4.3 TABLE: Castors and wheels - Movement over a threshold N/A **ME EQUIPMENT Test Condition (speed of movement)** Remarks preparation Supplementary information:

9.4.3.1	TABLE: Instat		wanted lateral	luding sliding) in P			
ME EQUIPMENT Preparation		Test Condition (transport position, working load, locking device(s), caster position)			Remarks		
	Medical infrared thermometer		locking device(s)				7.
400	MIC	- MC	- MC	MC	- MC	MC	
Supplem	entary information	on:	7.	7.	7.	7.	



TMC Testing Services(Shenzhen) Co., Ltd Report No.: TMC200313115-S EN 60601-1 Clause Requirement + Test Result - Remark Verdict Ρ 9.4.3.2 TABLE: Instability from unwanted lateral movement (including sliding) excluding transport position **ME EQUIPMENT** Test Condition (working load, locking Remarks **Preparation** device(s), caster position, force, force location, force direction) Medical infrared **PASS** locking device(s) thermometer **Supplementary information:**

Clause and Name of Test		Test Condition	Remarks			
-						
WILL WILL	W/C	W/C	"ILC	anc.	NI C	
1/2 /12	1/2	1/4	1/2	1/1/1	1/2	-



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9.7.5 Hydrau Pneumat Suitable I and Te	llic, tic or Media		el Burst	Permanent Deformation	Leaks	Vessel fluid substance	Remarl	
Pressu		Gr.	1 km	TWI	1 km	THI	144	4
THIC	<	άΛC	Till I	CTMC	THIC	TAIC	THIC	_
Suppleme	ntary I	 nformati	on:	C anc	- NC	O Nie	- NE	

ME EQUIPMENT part or area	Position	Load	Area	Re	emarks
THIC TH	CTINC	THIC	THIC	(Inc.	(N/C
INC LINE	TIME	1 MyC	WC I	inc T	inc 1
Supplementary Info	rmation:	o'AC	n'AC	a'nC	MAC

9.8.3.3	TABLE: persons		ion System – Dy	ynamic forces du	e to loading from	N/A
ME EQU		Position	Safe Working	Area	Remark	s

ME EQUIF		Position	Safe Working Load	Area		Remarks	
	1,	1.	71	1.	1.	7.	1
TENC	180	C LAUC	1 MC	THIC	(MC	TALC	< 5
Supplemen	tary Info	rmation:	an C	31AC	ayl C	11 C	



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TABLE: Meas	urement of X	- radiation				N/A
n allowable radi	ation pA/kg(_I	uSv/h) (mR/h)	36 (5 μSv/h) (0			
		ı			Rema	arks
nC	-nC	JnC.	-nC	-11/		<u></u>
14.	10.	110.	14.	10.	10.	<
· inc	-inC	-inC	-inC	-100	-10	
14.	110.	14.	14.	10.	1/4.	~
· ·	-inC	and C	- INC	-10C	100	
110.	11/2.	110.	1/2.	1/4.	14.	<
						_
· who	and C	arn C	an C	anc.	Ara	_
110	14.	140	110	14.	110.	
	allowable radi	n allowable radiation pA/kg(p Surface area under test		n allowable radiation pA/kg (μSv/h) (mR/h) 36 (5 μSv/h) (0 Surface area under test Measured F	allowable radiation pA/kg (μSv/h) (mR/h) 36 (5 μSv/h) (0.5 mR/h) Surface area under test Measured Radiation,	n allowable radiation pA/kg (μSv/h) (mR/h) 36 (5 μSv/h) (0.5 mR/h) Surface area under test Measured Radiation, Rema

Supplementary information: ¹ Measurements made at a distance of 5 cm from any surface to which OPERATOR (other than SERVICE PERSONNEL) can gain access without a TOOL, is deliberately provided with means of access, or is instructed to enter regardless of whether or not a TOOL is needed to gain access



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Clause	Requirement + Test		Result - Remark	Verdict

-mC	1.1	РСВ	-11/	86	54.9	-10 C
Model No.	Thermo- couple No.	Thermocouple	location ³	Max allowable temperature ¹ from Table 22, 23 or 24 or RM file for AP ⁵ (°C)	Max measured temperature ² , (°C)	Remarks
Test suppl	y voltage/f	requency (V/Hz) ⁴	.: 3V			2
Test ambie	ent (°C)		.: 25.3	711	11.	
Model No			1 20	- dillo	-970	W/C
11.1.1	TABLE: E	xcessive tempera	tures in ME	EQUIPMENT	-	Р

60

26.4

Supplementary information:

¹ Maximum allowable temperature on surfaces of test corner is 90 °C

PLASTIC ENCLOSURE

- ² Max temperature determined in accordance with 11.1.3e)
- ³When thermocouples used to determine temperature of windings, limits of Table 22 reduced by 10 °C.
- ⁴Supply voltage:
 - ME EQUIPMENT with heating elements 110 % of the maximum RATED voltage;
 - Motor operated ME EQUIPMENT least favourable voltage between 90 % of the minimum RATED and 110 % of the maximum RATED voltage. ME EQUIPMENT operated under normal load and normal DUTY CYCLE.
- Combined heating and motor operated and other ME EQUIPMENT tested both at 110 % of the maximum RATED voltage and at 90 % of the minimum RATED voltage.

Information from Risk Management, as applicable:

11.1.3d	TABLE: Tempera	ture of wir	ndings by ch	nange-of-re	esistance	method		N/A
Tempera	ture T of winding:	t₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulatio n class
	· · · · · · · ·	Jac C	-nC		a C	-aC		
14.	In.	(10)	1/10.	~	3.	Ila.	10.	_ <
Suppleme	entary information:	JUC.	-1n C		nC.	3110	100	

⁵ **APPLIED PARTS** intended to supply heat to a **PATIENT - S**ee RISK MANAGEMENT FILE containing temperatures and clinical effects. Also, see instructions for use.



01		50 K 5 L0	234 11 4
Clause	Requirement + Test	 Result - Remark	Verdict

Areas where sparking might cause igni	tion:			Remarks	
1.					
2. 11 11 11	- W	- WC	MIL	- W	
3.	7.	7.			
4.				- (
5. 19 19 19	THI	THI	(Pill)	THE	
6.			7.		
Materials of the parts between which sp Grade Designation, Manufacturer):	oarks could o	ccur (Compositio	n,	Remarks	
1.	.// .	./.		-/-	
2.				. (
3. 197 7 197	1 1/1 m	1/3/1	Chillian	L lille	
4.					
5. ,,, ,,,	in C		-nC	inC	,
e (La,	1 64	110.	1. 60.	1/1/21	~
Test parameters selected representing EQUIPMENT:	worst case c	onditions for ME		Remarks	
Oxygen concentration (%):	100	100	121	16/1	17
Fuel::					
Current (A):	-inC	anc.	-INC	-in C	-
Voltage (V)::	14.	110.	14.	Ya.	_
Capacitance (μF):		,			
Inductance or resistance (h or Ω):	· WC	- WILC	· WC	· W	/
No. of trials (300 Min):	1	1,1		1	
Sparks resulted in ignition (Yes/No):	-				
Supplementary information: Test proced	dure of 11.2.2.	1 a) 5) & Figs 35-3	7 used for test	s. For circuit	s not in



		EN 60601-1		
Clause	Requirement + Test	. (.	Result - Remark	Verdict

11.6.1		flow, spillage, leakage, compatibility with subs	ingress of water, cleaning stances	, disinfection, N/A
Clause / T	est Name	Test Condition	Part under test	Remarks
THIC	THIC	LANC LA	IC THIC	MC THIC T
JAC.	ntary informat	ion: Ianagement, as applica	ble:	MC THIC T

13.1.2	waive SINGI	easurement of power LE FAULT CONDITIONS If flames, molten me	in 4.7, 8.1	b), 8.7.2, a	and 13.2	.2 relative to	nents to	N/A
Power diss	ipated less	than (W)	:	15			,	
Energy dis	sipated less	than (J)	·····:	900				
Part or co	omponent ted	Measured power dissipated (W)	Calculate dissipa			FAULT CONDITION (Yed (Yes/No)	ONS Re	marks
- all C	- WC	W/C	- WC	1/2		- WC	-MC	72
7.	7.	7.	1.	7.		1,	7	1.
THE	TANC	THE	THE	<u> </u>	NC	TANC	F IN	
THIC	THIC	1 MC	1 MC	18	VC	THIC	(FIN	
THIC	THIC	THAC	THIC	18	VC	THIC	T HAT	
Supplemen	ntary inform	ation:	a ₁ nC	الثم	NC.	ON'C	Nia	



Clause Requirement + Test	Result - Remark	Verdict
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13.2	TABLE: SINGLE FAULT CONDITIONS in accordance with 13.2.2 to 13.2.13, inclusive					
Clause No.	Description of SINGLE FAULT CONDITION	Results observed	HAZARDOUS SITUATION (Yes/No)			
13.2.2	Electrical SINGLE FAULT CONDITIONS per Clause 8.1:	_	_			
110	Le Le Le L					
		/				
13.2.3	Overheating of transformers per Clause 15.5:	-				
- 1		1 1	(
13.2.4	Failure of THERMOSTATS according to 13.2.13 & 15.4.2, overloading - THERMOSTATS short circuited or interrupted, the less favourable of the two:	_	_			
-00	nC nC nC	aC .aC	a C			
1 611	14, 14, 14, 14	n. 1/2, 1/2	2,			
13.2.5	Failure of temperature limiting devices according to 13.2.13 & 15.4.2, overloading, THERMOSTATS short circuited or interrupted, the less favourable of the two:	_	-			
MC	ain ain ain ain	C 2/10 2/10				
13.2.6	Leakage of liquid - RISK MANAGEMENT FILE examined to determine the appropriate test conditions (sealed rechargeable batteries exempted)	_	_			
110	40 40 40 4	. 11. 1				
		1 1	2.5			
13.2.7	Impairment of cooling that could result in a HAZARD using test method of 11.1:		_			
	Single ventilation fans locked consecutively					
LANC	Ventilation openings on top and sides impaired by covering openings on top of ENCLOSURE or positioning of ME EQUIPMENT against walls	WC LINC LE	UC ~			
	Simulated blocking of filters	, ,	,			
THIC	Flow of a cooling agent interrupted	No Line Li	No 4			
13.2.8	Locking of moving parts – Only one part locked at a time – Also see 13.2.10 below:	_	-			



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Clause Requirement + Test Result - Remark Verdict

Clause No.	Description of SINGLE FAULT CONDITION	Results observed	HAZARDOUS SITUATION (Yes/No)
160	Les Les Les Les	1, 144, 1,	1
13.2.9	Interruption and short circuiting of motor capacitors – Motor capacitors short & open circuited ¹ – Also see 13.10	_	_
,	, , ,	V measured =	
THIC	THE THE THE TE	V measured =	AL T
13.2.10	Additional test criteria for motor operated ME EQUIPMENT in 13.2.8 &13.2.9:	_	-
LIN.	For every test in SINGLE FAULT CONDITION of 13.2.8 and 13.2.9, motor-operated EQUIPMENT stared from COLD CONDITION at RATED voltage or upper limit of RATED voltage range for specified time:	UC SUC	anc T
TIM.	Temperatures of windings determined at the end of specified test periods or at the instant of operation of fuses, THERMAL CUT-OUTS, motor protective devices	UC "UC	
110	Temperatures measured as specified in 11.1.3 d)	- 11. 1	4
	Temperatures did not exceed limits of Table 26	, ,	
MINC	no one one one	L WILL WILL	12.
13.2.11	Failures of components in ME EQUIPMENT used in conjunction with OXYGEN RICH ENVIRONMENTS:	_	_
ain C	anc anc anc	nc sinc	MC.
In.	14, 14, 14, 1	n. 14. 1	4.
13.2.12	Failure of parts that might result in a MECHANICAL HAZARD (See 9 & 15.3):	_	_
1611	Les Les Les	n. 16, 1,	10, 1
,nC	20, 20, 20,	nC -nC	, C

Supplementary information:

Information from Risk Management, as applicable:

¹ Test with short-circuited capacitor not performed when motor provided with a capacitor complying with IEC 60252-1 and the ME EQUIPMENT not intended for unattended use including automatic or remote control. See Attachment # and appended Table 8.10.



15.3.6

Mould Stress Relief

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		EN 60601-1				
Clause	Requirement + Test Result			Result - Remark		
15.3	TABLE: Mechanical St	trength tests ¹⁾	1	b. 10	Р	
Clause	Name of Test	Test conditions	Observed result	s/Remarks		
15.3.2	Push Test	Force = 250 N ± 10 N for 5 s		PASS		
15.3.3	Impact Test	Steel ball (50 mm in dia., 500 g ± 25 g) falling from a 1.3 m		PASS	,	
15.3.4.1	Drop Test (hand-held)	Free fall height (m) = 5	PASS	C .		
15.3.4.2	Drop Test (portable)	Drop height (cm) =	~	N/A		
15.3.5	Rough handling test	Travel speed (m/s) =		PASS	12.7	

Supplementary information: ¹⁾As applicable, Push, Impact, Drop, Mould Stress Relief and Rough Handling Tests (delete not applicable rows).

7 h in oven at temperature (°C) =

PASS

15.4.6	TABLE: ac	E: actuating parts of controls of ME EQUIPMENT – torque & axial pull tests					
Rotating control under test		Gripping diameter "d" of control knob (mm) ¹	Torque from Table 30 (Nm)	Axial force applied (N)	Unacceptable RISK occurred Yes/No	Remarks	

Supplementary information: ¹ Gripping diameter (d) is the maximum width of a control knob regardless of its shape (e.g. control knob with pointer)

15.5.1.2	TABLE: transformer short circuit test short-circuit applied at end of windings or at the first point that could be short circuited under SINGLE FAULT CONDITION	N/A		
Primary voltage (most adverse value from 90 % to 110 % of RATED voltage)(V) ¹ :				
RATED inp	ut frequency (Hz):	_		

Winding tested	Class of insulation (A, B, E, F, or H)	Type of protective device (fuse, circuit breaker) /Ratings	Protective device operated Yes/No	Time to THERMAL STABILITY (when protective device did not operate)(Min)	Maximum allowed temp from Table 31 (°C)	Maximum winding temp measured (°C)	Ambient (°C)
Line	1 lill	1 km	1 km	14/1	1 km	Lin	<'
THIC	TANC	1 MC	TINC	TANC	1 WC	Z BUC	

Supplementary information:

¹Loads on other windings between no load and their NORMAL USE load. Short-circuit applied at end of windings or at the first point that could be short circuited under SINGLE FAULT CONDITION.



TMC Testing Services(Shenzhen) Co., Ltd Report No.: TMC200313115-S EN 60601-1 Clause Requirement + Test Verdict Result - Remark 15.5.1.3 TABLE: transformer overload test – conducted only when protective device N/A under short-circuit test operated Primary voltage, most adverse value between 90 % to 110 % of RATED voltage (V)1...: RATED input frequency (Hz).....: Test current just below minimum current that would activate protective device & achieve THERMAL STABILITY under method a) (A).....: Test current based on Table 32 when protective device that operated under method a) is external to transformer, and it was shunted (A).....:

	· · · · · · · · · · · · · · · · · · ·				
Winding tested	Class of insulation (A, B, E, F, H)	Type of protective device used (fuse, circuit breaker)/Ratings	Maximum allowed temp from Table 31 (°C)	Maximum winding temp measured (°C)	

Supplementary information:

Time durations: - IEC 60127-1 fuse: 30 min at current from Table 32.

Non IEC 60127-1 fuse: 30 min at the current based on characteristics supplied by fuse manufacturer, specifically, 30 min clearing-time current. When no 30 min clearing-time current data available, test current from Table 32 used until THERMAL STABILITY achieved.

- Other types of protective devices: until THERMAL STABILITY achieved at a current just below minimum current operating the protective device in a). This portion concluded at specified time or when a second protective device opened.

15.5.2	TABLE	E: Transformer dielectric strength	after humid	ity precondit	ioning of 5.7	N/A
Transf Model/Ty No	pe/ Part	Test voltage applied between	Test voltage, (V)	Test frequency (Hz)	Breakdown Yes/No	Deterioration Yes/No
110	1	Primary & secondary windings	1/4	4.	. <	
		Primary winding & frame		,	j.	
- NIA		Secondary winding & frame	120	V . 6	NC .	SUC.
11,	1	. 1, 1,	11.			
		, , ,		r.	/	

Supplementary information: Tests conducted under the conditions of 11.1, in ME EQUIPMENT or under simulated conditions on the bench. See Clause 15.5.2 for test parameters & other details

¹ Loads on other windings between no load and their NORMAL USE load.



Clause Requirement + Test F	Result - Remark	Verdict
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16.6.1	TABLE: LEAKAGE	CURRENTS IN ME	SYSTEM _ TOU	ICH CURRENT MEASUREMENT	s N/A
or between	rea where TOUCH easured (i.e., from parts of ME SYSTEM ENT ENVIRONMENT)	Allowable TOUCH CURRENT in NORMAL CONDITION (µA)	Measured TOUCH CURRENT IN NORMAL CONDITION (μΑ)	Allowable TOUCH CURRENT in event of interruption of PROTECTIVE EARTH CONDUCTOR, (µA)	Measured TOUCH CURRENT in event of interruption of PROTECTIVE EARTH CONDUCTOR, (μA)
1,	1.	100	1	500	1, 1
-	/	100		500	-
NINC	N	100	MIL	500	W
	./.	100		500	./.
- /	-	100	-	500	-
Supplemen	ntary information:	N	- W	in in	W

Clause and Name of Test		Test type and condition			Observed results		
THIC	THIC	THIC	THIC	THE	THE	THIC	-
CAUC	ary information	MC	THIC	THIC	TINC	THIC	×5

The following 4 pages are only the instructions on how to complete the new version "J" of TRF for IEC for 60601-1 3rd edition with Amendment 1.

The TRF version "H" can still be used in the CB Scheme. For version "H" these instructions do not apply. After review of the Instructions on how to compete Risk Management Clauses in TRF version "J", the instruction pages shall be removed. There is only a section break after the instructions. Deleting these four pages will not change the formatting of the TRF.

The new TRF version "J" is intended to be used with OD-2044. However, the means in which the RM documentation reviewed during the investigation has been changed. The TRF records the relevant information in each specific clause instead of the tables in the back of the TRF except for clause 4.2.2 of IEC 60601-1:2005 + Amendment 1:2012.

Table 4.2.2 has been revised to include the additional items from ISO 14971:2007 as noted in the Clause 4.2.2 of the standard. The OD-2044 has not yet been updated but the concept for ensuring all the steps of ISO 14971:2007 (except as noted in the 60601-1) is still documented in Table 4.2.2. It is anticipated that under the "Document Ref. in RMF" column more than one document may be listed.



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Below is Table 4.2.2. Each document noted in the table must include the revision date or revision number of the document reviewed as shown in examples.

Each clause after 4.2.2 that requires a review of the Risk Management File documents the specific line of the device specific documentation reviewed. In addition, the specific clauses of ISO 14971:2007 reviewed for that items would be entered. Each clause with Risk Management includes the specific clauses from ISO 14971 noted in the OD-2044 document that need to be reviewed.

The following is an example sub clause for Clause 7.2.2 which shows the ISO 14971 references added to the "Requirement + Test" section which is in line with the OD-2044 Document. When completing the "Result – Remark" section, the specific risk line item reviewed form the particular medical device specific documents would be recorded. In addition, the clauses of ISO 14971 with respect to the specific line item reviewed shall be recorded. Any risk controls or other important information for a Recognizing NCB should be included in the "Result – Remarks" column. The following provides both an example of what is expected for a product that indicates "P" and "F".

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Requirement as stated in TRF version J.

1611	EN 60601-1	in Lin Lin	
Clause	Requirement + Test	Result - Remark	Verdict
THIC	RISK MANAGEMENT FILE includes an assessment of the RISKS relating to misidentification of all detachable parts	RMF Reference to specific RISKS:	_ <
	(ISO 14971 Cl. 4.2-4.4, 5, 6.4)		
	and and	(ISO 14971 Cl)	/

The following is an example of the line item noted above completed with a "Pass" verdict.

Clause	Requirement + Test	Result - Remark	Verdict
THIC	RISK MANAGEMENT FILE includes an assessment of the RISKS relating to misidentification of all detachable parts	RMF Reference to specific risks: RA-150 to RA-153 –	Р
THIC	(ISO 14971 Cl. 4.2-4.4, 5, 6.4)	RA 150: (ISO 14971 CI. <u>4 to 5</u>) RA 151: (ISO 14971 CI. <u>4 to 5</u> , <u>6.4</u>) RA152: (ISO 14971 CI. <u>4 to 5</u>) RA153: ISO 14971 CI. <u>4 to 5</u>)	

The following is an example of the line item noted above completed with a "Fail" verdict. In this example, the recorded reference to ISO 14971 indicates, there was an issue with Cl. 4.2.

Clause	Requirement + Test	Result - Remark	Verdict
THIC	Detachable components of the ME EQUIPMENT not marked; misidentification does not present	RMF Reference to specific risks: RA-150 to RA-153 –	Р
	an unacceptable risk	Manufacturer did not correctly identify characteristics related to	
THE	(ISO 14971 CI. 4 to 5, 6.4),	safety (ISO 14971 Cl. <u>4.2</u>)	_

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The following is an example for sub-clause 11.6.3 which shows the ISO 14971 references added to the "Requirement + Test" section; again in line with the OD-2044 Document and the corresponding Table 11.6.1. When completing the "Result – Remark" section, the specific risk line item reviewed for the device under investigation in the Risk Management File would be recorded indicating the specific hazard no. Additionally, the clauses of ISO 14971 with respect to the specific line item reviewed shall be recorded. Any risk controls or other important information for an accepting NCB should be included in the "Result – Remarks" column.

irement + Test	Result - Remark	150
	Result - Remark	Verdict
age on ME EQUIPMENT and ME SYSTEM	((
QUIPMENT and ME SYSTEMS handling liquids tructed that spillage does not wet parts as mined by review of the RISK	See appended Tables 11.6.1; 8.7, 8.8.3 and RMF Reference to specific RISK:	P
AGEMENT FILE and test: 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	Hazard No. 22 Spillage of liquids may occur. (ISO 14971 Cl. 4.2-4.4. 5. 6.2-	· <
	QUIPMENT and ME SYSTEMS handling liquids tructed that spillage does not wet parts as mined by review of the RISK AGEMENT FILE and test	CUIPMENT and ME SYSTEMS handling liquids tructed that spillage does not wet parts as mined by review of the RISK AGEMENT FILE and test

Moving to the Appended Table 11.6.1, the specific test condition indicated in the Risk Management File should be indicated under Test Condition. Any additional information needed from the Risk Management File is also recorded under the section "Additional information from Risk Management"

Clause /	Test Name	Test Condition	Part under test	Remarks
Spillage	THI	Type of liquid: mineral water Volume: 1 litre Duration of spill: 15 s	Point of contact: on the end of the belt above the drum motor from a height not exceeding 5 cm	No wetting of uninsulated electrical parts or electrical insulation of parts could result in a Hazardous Situation.
1. 121.	1. 64.	14, 14,	14, 14,	10, 1

Additional information from Risk Management:

The possible hazard of electric shock to the patient caused by the insulation breakdown.

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EUT Photo 1



EUT Photo 2





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EUT Photo 3

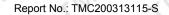


EUT Photo 4



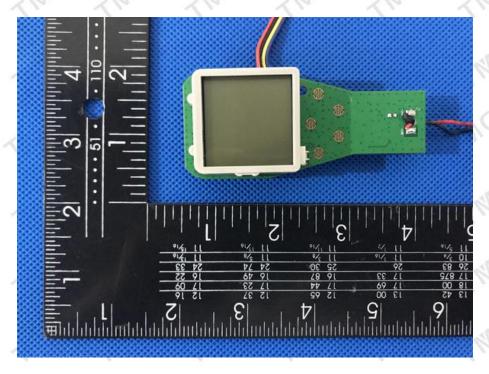


EUT Photo 5





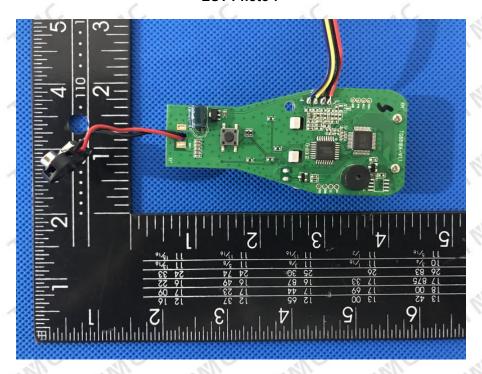
EUT Photo 6





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EUT Photo 7



-END OF TEST REPORT-