

Tom Thumb

ISO 60601-1



Produced by

Derek Lamb

Date: 20/03/12

Version: 1332256919

4.30 Essential performance

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.40 Expected Life

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.50 Equivalent safety for ME equipment & ME systems

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.60 Parts that contact the patient

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.70 Single fault conditions

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.80 Are all components used within their specified ratings

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.90 Are there any Components of high integrity in ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.10 Supply mains for ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.10.1 Has the instrument an internal supply

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.10.1 Is the instrument connected to an external supply

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.10.1 Is the instrument connected to the mains supply

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.10.1 Source of power for ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

4.11 Power input

Applicable No

Status

(15/Aug/11 Derek Lamb)

5.10 Type tests

Applicable No

Status

(15/Aug/11 Derek Lamb)

5.20 Number of samples

Applicable No

Status

(15/Aug/11 Derek Lamb)

5.30 Ambient Temperature Humidity Atmospheric pressure

Applicable No

Status

(15/Aug/11 Derek Lamb)

5.40 Other conditions

Applicable No

Status

(15/Aug/11 Derek Lamb)

5.50 Supply voltages type of current nature of supply frequency

Applicable No

Status

(15/Aug/11 Derek Lamb)

5.9.2.1 Test Finger

Applicable No

Status

(15/Aug/11 Derek Lamb)

5.9.2.2 Test Hook

Applicable No

Status

(15/Aug/11 Derek Lamb)

5.9.2.3 Actuating mechanisms

Applicable No

Status

(15/Aug/11 Derek Lamb)

6.20 Is the classification Class II

Applicable No

Status

(15/Aug/11 Derek Lamb)

6.20 Is the classification Class I

Applicable No

Status

(15/Aug/11 Derek Lamb)

6.20 Protection against electric shock

Applicable No

Status

(15/Aug/11 Derek Lamb)

6.30 Protection against ingress of water or particulate matter

Applicable No

Status

(15/Aug/11 Derek Lamb)

6.40 Methods of Sterilisation

Applicable No

Status

(15/Aug/11 Derek Lamb)

6.50 Suitability for use in an Oxygen rich environment

Applicable No

Status

(15/Aug/11 Derek Lamb)

6.60 Mode of operation non continuous

Applicable No

Status

(15/Aug/11 Derek Lamb)

6.60 Mode of operation (continuous or non -continuous)

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.1.1 Usability of the identification marking and documents

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.1.2 Legibility of markings Drawings

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.1.2 Legibility of markings Safety signs

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.1.2 Legibility of markings Instructive statements

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.1.2 Legibility of markings Warning statements

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.1.3 Durability of Marking 15 seconds with a cloth soaked in isopropyl alcohol

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.1.3 Durability of Marking 15 seconds with a cloth soaked in distilled water

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.1 Minimum requirements for marking of ME equipment and interchangeable parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.2 Identification of manufacturer

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.3 Is the advisory symbole used

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.4 Is packaging marked with a Trademark of manufacturer or supplier

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.4 Are Accessories marked with a Trademark of manufacturer or supplier

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.5 ME equipment intended to receive power from other equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.6 Is label permanent next to connection point

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.6 Does label state phase for more than single phase

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.6 Does range have between max & min

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.6 Connection to the supply mains

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.7 Is rating plainly identified in documents

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.7 Is mean given if range is >10%

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.7 Are upper and lower ratings given for each

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.7 Does equipment have several rated voltages

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.7 Is wattage under 0.9 watts is rating in volt amps

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.7 Is wattage over 0.9 watts is rating in watts

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.8.2 Is output frequency rated when applicable

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.8.2 Is outputcurrent rated

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.8.2 Is output voltage rated

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.9 Is the device marked with the correct IP classification

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.10 Are Applied parts marked Defibrillator proof

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.10 Are Applied parts marked BF

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.10 Are Applied parts marked B

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.10 Applied parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.12 Are Fuses marked breaking capacity

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.12 Are Fuses marked speed

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.12 Are Fuses marked current

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.12 Are Fuses marked voltage

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.13 Is a warning in documentation

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.13 Is a warning sign prominently located

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.13 Can the equipment produce non obvious Physiological effects

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.14 Are High Voltage terminals marked with symbol

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.14 High Voltage terminal devices

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.15 Are requirements for Cooling conditions marked

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.15 Cooling conditions

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.17 Is Protective packaging marked for Hazardous substances

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.17 Is Protective packaging marked for Humidity

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.17 Is Protective packaging marked for special handling measures in transport

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.17 Protective packaging

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.18 Is maximum supply pressure from an External pressure source marked adjacent to each input

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.18 External pressure source

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.19 Is Functional earth terminal marked

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.20 Removable protective means are they marked "replace"

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.2.20 Removable protective means

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3 Are maximum power loading of Heaters & Lamps removable without a tool marked near device

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.1 Heating elements or lampholders

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.2 Is the presence of High Voltage parts marked with symbol

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.3 Is the hazard of LIthium batteries or fuel cells marked

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.3 Is type of Battery and mode of insertion marked

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.3 Batteries

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.4 Are Fuses Thermal cutouts and over current releases accessable only by a tool marked

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.4 Fuses Thermal cutouts. and over current releases

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.5 Is Protective earth terminal marked with symbol on fixed part of equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.5 Protective earth terminals

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.6 Functional earth terminals

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.6a Is Functional earth terminal marked with symbol

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.7 Is marking for 3 phase in accordance with IEC 60445

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.7 Are terminals exclusively for neutral marked

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.7 Are Supply terminals marked adjacent to terminals

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.7 Supply terminals

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.8 Temperature of Supply terminals & compartment must be < 75C

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.3.8 Temperature of Supply terminals

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.40 Are any push momentary switches indicated indicated by other unambiguous means

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.40 Are any push momentary switches indicated by an adjacent indicator light
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.40 Are momentary switches marked with symbol 60417-5011
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.40 Are all push switches indicated by other unambiguous means
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.40 Are all switches indicated by an adjacent indicator light
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.40 Are all switches Marked
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.40 Do all switches have ON OFF positions
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.4.1 Power switches see 080a-h
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.4.2 Are different positions of Control devices marked by numbers or symbols IEC60417-524
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.4.3 Are Units of measure in SI units ISO31
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.50 Are Safety Signs selected from ISO7010

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.50 Safety Signs

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.6.1 Does an Explanation of symbols appear in the instructions for use

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.6.2 Are Symbols from Annex D used

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.70 Colours of the insulation of conductors

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.1 Are all Protective earth conductor identified by Yellow & Green

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.1 Is Protective earth conductor Yellow & green throughout its length

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.2 Protective earth connections

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.3 Are any other wires Green and Yellow insulation

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.3 Green and Yellow insulation

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.4 Is Neutral conductor coloured light Blue

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.4 Neutral conductor

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.5 Are colours of Power cord conductors in accordance with IEC60227-1 or IEC 60245-1

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.8.1 Is Colour of Indicator Lights Ready for use Green

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.8.1 Is Colour of Indicator Lights Caution Yellow

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.8.1 Is Colour of Indicator Lights Warning RED

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.8.1 Colours of Indicator Lights

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.82 Is RED used only in emergency

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.82 Colours of controls

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.2 Do Instructions fo use include warning on multiple socket outlets

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.2 Do Instructions fo use include risks of interference by EMC

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.2 Do Instructions fo use include risks of interference by other ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.2 Do Instructions fo use include risks of electric shock & protective earth

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.2 Do Instructions fo use include Warning and safety notices

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.3 Is equipment specified for connection to a separate power supply

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.3 ME equipment specified for connection to a separate power supply

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.4 Is there a warning on loss of power

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.4 if unit contains a battery are there instructions for its replacement

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.4 if unit contains a battery are there warning to remove battery if not in use for some t.

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.4 if unit contains a battery are there warning statements for periodic checking or replacement

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.4 Electrical power source

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.5 Do Instructions include restrictions on applied parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.5 Do Instructions include restrictions on other equipment and networks etc.

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.5 Do Instructions include expected materials the operator or patient may be exposed to

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.5 Do Instructions include expected positions of the operator or patient

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.5 Do Instructions include physical, and performance characteristics of the equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.5 Do Instructions include how the equipment functions

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.5 Do Instructions include a brief description

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.6 Do instructions contain contact information for persons qualified for Installation

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.6 Do instructions contain Installation instructions

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.7 Do Instructions contain instructions on obstruction to disconnection from the supply main

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.7 Isolation from the supply mains

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.8 Do instructions contain A pre-use checklist

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.8 Do instructions contain information for treatment or handling before use incl. accessories

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.8 Do instructions contain necessary information for Start up procedure

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.9 Do Instructions contain information the replacement of materials consumed

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.9 Do Instructions contain information the connection & disconnection of accessories

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.9 Do Instructions contain information the connection & disconnection of detachable parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.9 Do Instructions contain information the sequence of operation

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.9 Do Instructions contain information the function of controls display and signals

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.9 Do Instructions contain information necessary to operate the equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.10 Do instructions include an explanation of messages incl. important causes and possible

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.10 Do instructions include system & error & fault messages

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.11 Do instructions include Shutdown procedure

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.12 Do Instructions include Cleaning, disinfection and sterilisation appropriate parameters

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.12 Do Instructions include Cleaning, disinfection and sterilisation

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.12 Cleaning disinfection and sterilisation

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.13 Do Instructions cover rechargeable batteries

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.13 Do Instructions cover frequency of parts on which preventive maintenance should be performed

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.13 Do Instructions cover parts on which preventive maintenance should be performed

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.13 Do Instructions cover routine maintenance

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.13 Do Instructions cover calibration

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.13 Do Instructions cover calibration frequency

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.13 Do Instructions cover preventive maintenance inspection frequency

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.13 Do Instructions cover preventive maintenance inspection

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.13 Maintenance

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.14 Does instructions include information on external power supplies

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.14 Does instructions include a list of Accessories supplementary equipment used material

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.14 Accessories supplementary equipment used material

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.15 Does Instruction contain information on minimizing these risks

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.2.15 Does Instruction contain information on disposal of waste products residues etc
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include classifications of equipment
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include description of equipment and functions
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include warning "If modified appropriate testing is required"
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include warning "Do not modify without authorisation"
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include warning "No modification allowed"
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on oil levels
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on isolating the equipment
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on cooling liquid chemical composition
Applicable No
Status
(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on cooling liquid flow

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on cooling liquid pressure

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on special installation requirements

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on range, accuracy, and precision of values

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on environmental conditions for storage

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on environmental conditions for transport

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information on environmental conditions for use

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3 Does Technical description include information required in 7.2

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.3.2 Does Technical manual include info on replacing special components

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.3.2 Does Technical manual include info on replacing of interchangeable & detachable parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.3.2 Does Technical manual include info on replacing non detachable mains cords

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.3.2 Does Technical manual include full rating and type of fuses

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.7.3.2 Replacement of fuses Power supply cords and other parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3.3 Are Circuit diagrams, components parts list etc made available in Technical manual.

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3.3 Circuit diagrams, components parts list etc.

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3.4 Does Technical manual describe compliance with 8.11.1

Applicable No

Status

(15/Aug/11 Derek Lamb)

7.9.3.4 Mains isolation

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by accidental detachment of conductors and connectors breaking

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by unintended movement of a component

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by interruption of any one power carrying conductor between sepa

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by interruption of any one supply conductor

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by o/c of any one protective earth 8.61

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by s/c and o/c circuit of any componentconnected in parallel

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by any one creepage or air clearance complying to 8.9

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by short circuit of any one insulation complying to 8.8

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by open circuit of any or all earth connections not complying v

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by creepage or air clearance not complying with 8.9

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by short of any or all insulation not complying with 8.8
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by any Transposition of supply connections
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.10 Will safety be compromised by any external voltage or current on the signal input
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.2.1 Has the unit been tested with the correct PSU
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.2.1 Connnection to a separate power sorce
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.2.2 Wil it be hazardous if the polarity of the external psu is reversed
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.2.2 Connection to an external d.c.power source
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.30 If used to deliver electrical energy is Classification of Applied parts BF
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.30 If used in a direct cardiac application is Classification of Applied parts CF
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.40 Can any access covers be removed without the use of a tool

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.40 Can any parts inside be touched with the test pin.

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.40 Do Instructions warn operator about touching the patient and accessible parts eg. fuses, lig

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.40 Does current from to or between patient connections exceed 8.7.4

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.4.2 Accessible parts including Applied parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.4.3 Does voltage between pins of a disconnected plug exceed 60v after 1 sec.

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.4.3 ME equipment intended to be connected to a power source by a plug

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.4.4 If automatic discharge is not possible does the capacitor have the symbol IEC60417-5037

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.4.4 Do any capacitive circuits have a residual voltage >60v after de-energising

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.4.4 Internal capacitive circuits

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.1 Does the equipment have two Means of protection (MOP)

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.1.2 Does protective earth comply with 8.6

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.1.2 Do creepage distances comply with Table 12

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.1.2 Does solid insulation comply with dielectric strength 8.8

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.1.2 Means of patient protection (MOP)

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.1.3 Do creepage distances comply with Table 13-16 or IEC 60950-1

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.1.3 Does solid insulation comply with 8.8 or IEC 60950-1

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.1.3 Means of operator protection (MOOP)

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.2 Separation of parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.2.1 Do F-Type Applied parts comply with 8.7.4 and 8.8.3

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.2.1 F-Type Applied parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.5.2 Do Type B Applied Parts comply with 8.7..4 and 8.8.3

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.5.2 Type B Applied Parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.2.3 Test finger application

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.2.3 Is air clearance between connector pins and flat surface >0.5mm

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.2.3 Can any connector/conductive part come in contact with a 100mm diameter plate

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.2.3 Can any connector/conductive part on a patient lead Patient Leads become earthed while

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.2.3 Patient Leads

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.3 What is aximum mains voltage internally powered 250v max

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.3 What is aximum mains voltage polyphase 250v max

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.3 What is aximum mains voltage single phase 250v max

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.4 If double insulated what is insulation voltage subjected to

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.4 Does ripple on DC voltage exceed 10% of average

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.4 Working voltage what is the highest measured voltage

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.4 Working voltage

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.5 Defibrillation-proof Applied parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.5.1 Defibrillation protection

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.5.5.2 Energy reduction test

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6 Protective earthing function earthing and potential equalisation of ME

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.2 Is Protective earth terminal used as a mechanical connection between parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.2 Are Protective earth terminal clampscrews insulated

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.2 Does Protective earth terminal need a tool to loosen cable clamp

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.3 Is Protective earthing used as a moving part

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.3 Protective earthing of moving parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.4 Does Impedance between protective earth and protected earth in mains plug < 100mohm

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.4 Does Impedance between protective earth and any earthed part < 100mohm

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.4 Does Impedance between protective earth and any appliance inlet earth pin < 100mohm

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.4 Impedance and current carrying capability

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.5 Are Surface coatings removed at point of contact of protective earth

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.7 Does the mains cord incorporate a Potential Equalisation conductor

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.7 Does information on a Potential Equalisation conductor appear in the Instruction manual

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.7 Is a Potential Equalisation conductor marked with a symbol IEC60417-5021 provided

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.7 Is a Potential Equalisation terminal used as a protective earth connection

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.7 Can the Potential Equalisation conductor be detached without the use of a tool

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.7 Is risk of Potential Equalisation accidental disconnection minimised

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.7 Is a Potential Equalisation terminal accessible to the operator in any position

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.7 Is a Potential Equalisation conductor provided

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.8 Is Functional earth terminal used as a protective earth connection

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.9 Class II ME Equipment Is there an explanation in the Instruction manual

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.9 Class II ME Equipment are there two means of protection

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.9 Class II ME Equipment are the insulation screens Green & Yellow

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.9 Class II ME Equipment is the earth connected only as a functional earth

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.6.9 Class II ME Equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.7.0 Are Leakage currents and patient auxillary currents limited to 8.7.3
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.7.2 Do allowable values in 8.7.3 apply in Single fault conditions
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.7.2 Single fault conditions
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.7.3 Allowable values 8.7.3b
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.7.4.1 General
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.7.4.2 Measuring supply circuits
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.7.4.3 Connection to the measuring supply circuit
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.7.4.4 Measuring device
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.7.4.5 Measurement of earth leakage
Applicable No
Status
(15/Aug/11 Derek Lamb)

8.7.4.6 Measurement of touch current

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.7.4.7 Measurement of the patient leakage current

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.7.4.8 Measurement of patient auxillary current

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.7.4.9 ME equipment with multiple patient connections

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.8.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.8.2 Distance through solid insulation or use of thin sheet material Is working voltage <71v

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.8.2 Distance through solid insulation or use of thin sheet material

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.8.3 Dielectric strength

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.8.4 Insulation other than wire insulation

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.8.4.1 Mechanical strength and resistance to heat

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.8.4.2 Resistance to environmental stress

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.2 Creepage distance and air clearances complying with IEC 60950-1

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.3 Creepage distances across glass mica ceramic and similar materials

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.4 Minimum creepage distance

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.5 Is equipment rated for high altitudes over 2,000 mtrs

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.6 Interpolation

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.7 Material groups classification

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.8 Pollution degree classification

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.9 Overvoltage category classification

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.10 Air clearance for main parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.11 Supply overvoltage

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.12 Secondary circuits

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.13 Peak working voltages above 1400v peak or DC

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.14 Minimum creepage distance for two means of operator protection

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.1.15 Creepage distances & air clearances for defibrillator proof applied parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.2 Application

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.3.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.3.2 Insulating compound forming solid insulation between conductive parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.3.3 Insulating compound forming a cemented joint with other insulating parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.3.4 Thermal cycling

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.9.4 Measurement of creepage distances and air clearances

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.1 Fixing of components could unwanted movement result in a hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.1 Fixing of components

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.2 Fixing of wiring, are clamped stranded conductors soldered

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.2 Fixing of wiring, could accidental detachment result in a hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.2 Fixing of wiring

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.3 Connections between different parts of ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.4.1 Is maximum voltage on cord connected foot switches and held held controls 42.4V peak a

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.5 Are internal cables & wiring protected against contact with a moving part, friction or sha

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.5 mechanical protection of wiring

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.6 Guiding rollers for insulated conductors

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.10.7 Insulation of internal wiring

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1 Is a fuse or a semiconductor used as an isolating means

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1 Is a switch incorporated in the mains lead

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1 If external is it described in the Instruction manual

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1 Can all circuitry Isolation from the supply mains on all poles simultaneously

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1 Isolation from the supply mains

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1a Subclause

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1b Subclause

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1c Subclause

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1.h Subclause

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.1.i Subclause

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.2 Do Multiple socket outlets comply with 16.2d and 16.9.2.1

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.2 Multiple socket outlets

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.1 Is the mains plug only fitted with one cord

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.1 Application

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.2 Does cord comply with IEC60345-1:2003 Annex A or IEC60227-1:1993 Annex A

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.2 Types

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.3 Does Cross-sectional area of supply cord conductors comply with table 17

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.3 Cross-sectional area of supply cord conductors

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.4 Do Appliance couplers comply with 8.11.3.5 & 8.11.3.6

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Does the cord anchorage prevent the cord being pushed into the equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Is the cord anchorage used to fix any other component the cord insulation

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Is the cord anchorage designed so that a screw bears directly on the cord insulation

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Is the cord anchorage made from metal but insulated

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Is the cord anchorage made from metal but insulated by a means of protection

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Is the cord anchorage made from insulating material

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Is the cord relieved from abrasion

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Is the cord relieved from twisting

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Is the cord relieved from strain

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.5 Cord anchorage

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.3.6 Are Cord guards protected against excessive bending at the inlet

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.1 Are clamps used on external conductors used to fix any other component

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.1 Are terminals alone used to maintain the conductors in position

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.2 If a wire escapes is short circuiting of a means of protection likely

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.2 Are terminals accessible without the aid of a tool

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.2 Are terminals marked 7.3

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.2 Are terminals for re-wirable cords grouped together for convenient connection

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.2 Arrangement for main Terminal devices

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.3 Is internal wiring subject to stress when the conductors are tightened or loosened

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.3 Fixing of mains terminals

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.4 Connections to mains terminals with clamping require special preparation of conductors

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.4.5 Accessibility of the connection

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.5 Is there adequate room to allow the conductors to be easily connected 8.10.5

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.5 is a Mains fuse or over current release in each supply lead

Applicable No

Status

(15/Aug/11 Derek Lamb)

8.11.6 Cross sectional area of Internal wiring of the mains part

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.1 Mechanical hazards of ME equipment & systems

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.2 Do Gaps comply with Table 20

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.3 Safe distance

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.4.1 Access to trapping zone 15.3

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.4.1 Access to trapping zone

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.4.2 can Fixed guards be dismantled without a tool

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.4.2 Fixed guards

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.4.3 Is there an interlocking device preventing starting and stops.

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.4.3 Do Movable guards remain attached when guard is open

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.5 Continuous activation

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.2.6 Speed of movements

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.3.1 Unintended movement

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.3.2 Overtravel

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.2.4 Emergency stopping devices

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.30 Are there any Hazards associated with surfaces corners and edges

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.4.2.1 Instability in transport position

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.4.2.2 Instability excluding transport

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.4.2.3 Instability form horizontal and vertical forces

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.4.2.4 Castors and wheels

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.4.2.4.2 Forces of propulsion

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.4.2.4.3 Movement over a threshold

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.4.3 Instability from unwanted lateral movement (including sliding)

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.4.3.2 Instability excluding transport

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.4.4 Grips and other handling devices

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.5.1 Protective means

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.5.2 Cathode ray tubes

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.6.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.6.2 Acoustic energy

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.6.2.1 Audible Acoustic energy

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.6.2.2 Infrasound & ultrasound energy

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.6.3 Hand Transmitted Vibration

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.7.2 Pneumatic & hydraulic parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.7.3 Maximum pressure

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.7.4 Pressure rating of ME Equipment parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.7.6 Pressure control devices

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.7.7 Pressure relief device

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.8 Hazards associated with support systems

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.8.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.8.2 Tensile Safety factor

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.8.3.2 Static forces due to loading from persons

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.8.3.3 Dynamic forces due to loading from persons

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.8.4.2 Use after activation of a mechanical protective device

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.8.4.3 Mechanical protective device intended for single activation

Applicable No

Status

(15/Aug/11 Derek Lamb)

9.8.5 Systems with mechanical protective devices

Applicable No

Status

(15/Aug/11 Derek Lamb)

10.1.1 ME equipment not intended to produce diagnostic or therapeutic X-radiation

Applicable No

Status

(15/Aug/11 Derek Lamb)

10.1.2 ME equipment intended to produce diagnostic or therapeutic X-radiation

Applicable No

Status

(15/Aug/11 Derek Lamb)

10.2 Alpha,Beta,gama.neutron and other particle radiation

Applicable No

Status

(15/Aug/11 Derek Lamb)

10.3 Microwave radiation

Applicable No

Status

(15/Aug/11 Derek Lamb)

10.4 Lasers and LEDs

Applicable No

Status

(15/Aug/11 Derek Lamb)

10.5 Other visible electromagnetic radiation

Applicable No

Status

(15/Aug/11 Derek Lamb)

10.6 Infrared radiation

Applicable No

Status

(15/Aug/11 Derek Lamb)

10.7 Ultraviolet radiation

Applicable No

Status

(15/Aug/11 Derek Lamb)

10.7 Ultraviolet radiation

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.1.1 Maximum temperature during normal use

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.1.2 Temperature of applied parts

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.1.2.2 Applied parts not intended to supply heat to a patient

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.1.4 Are Guards only removable with a tool

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.1 Do enclosures have Strength and rigidity to prevent fire in ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.2.1 Risk of fire in an oxygen rich environment

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.2.1a Subclause

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.2.1b 2 Subclause

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.2.1b 3 Subclause

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.2.2. Are External exhausts for oxygen rich environment located so that a risk of ignition

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.2.2. External exhausts for oxygen rich environment

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.2.3 Electrical connections in oxygen rich environments

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.3 Would failure of insulation be detrimental

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.3 Would failure of a pneumatic component be detrimental

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.3 Would failure of a component be detrimental

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.3 Would failure of a barrier be detrimental

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.3 Would failure of a ventilation sytemem be detrimental

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.2.3 Single fault conditions related to oxygen rich environments

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.30 Are insulated wires classified to FV-1

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.30 Are connectors pcbs insulating component mounts classified to FV-2

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.30 Constructional requirement for fire enclosures of ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.40 Is the Me equipment & ME systems intended for use with flammable anaesthetics
Applicable No
Status
(15/Aug/11 Derek Lamb)

11.40 Me equipment & ME systems intended for use with flammable anaesthetics
Applicable No
Status
(15/Aug/11 Derek Lamb)

11.50 Is the Me equipment & ME systems intended for use with flammable agents
Applicable No
Status
(15/Aug/11 Derek Lamb)

11.6 Does the equipment incorporate a reservoir or liquid storage chamber
Applicable No
Status
(15/Aug/11 Derek Lamb)

11.6.1 General
Applicable No
Status
(15/Aug/11 Derek Lamb)

11.6.2 Can overfill or Overflow in ME equipment cause a hazard
Applicable No
Status
(15/Aug/11 Derek Lamb)

11.6.2 Overflow in ME equipment
Applicable No
Status
(15/Aug/11 Derek Lamb)

11.6.3 Spillage on ME Equipment wet parts that could cause a hazard
Applicable No
Status
(15/Aug/11 Derek Lamb)

11.6.3 Spillage on ME Equipment
Applicable No
Status
(15/Aug/11 Derek Lamb)

11.6.5 Can Ingress of water and particulate matter into ME equipment be hazardous

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.6.6 Will Cleaning and disinfection of ME equipment cause damage (see 7.9.1.12)

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.6.7 Will Sterilisation of ME equipment and ME systems cause damage ISO11134/35/37

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.6.7 Sterilisation of ME equipment and ME systems

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.6.8 Compatibility with substances used with ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.7. Biocompatibility of ME equipment & ME systems

Applicable No

Status

(15/Aug/11 Derek Lamb)

11.80 Will Interruption of the power supply/supply mains to ME equipment cause a hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.1 Accuracy of controls & instruments

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.2 Useability

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.3 Alarm system

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.1 Intentional exceeding of safety limits

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.2 Indication of parameters relevant to safety

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.3 Can Accidental selection of excessive output values cause a hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.3 Does equipment have High intensity and low intensity outputs

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.3 Accidental selection of excessive output values

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.4 Incorrect output

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.5.1 Limits

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.5.2 Diagnostic X-ray equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.5.3 Radiotherapy equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.5.4 Other ME equipment producing diagnostic or therapeutic radiation

Applicable No

Status

(15/Aug/11 Derek Lamb)

12.4.6 Diagnostic or therapeutic acoustic pressure

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.1 Can the failure of any one component result in a hazardous situation

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.2 Can temperatures of other components exceed the allowed values in Table 26/27/31/22

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.2 Can temperatures of non applied parts exceed the allowed values in Table 23

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.2 Can temperatures of applied parts exceed the allowed values in Table 24

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.2 Can deformation of enclosures impair 15.3.1

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.2 Emissions, deformation or exceeding maximum temperature

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.2 Can Emissions of flames, molten metal, poisonous or ignitable substances in hazardous quantities

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.3 Exceeding leakage current or voltage limits see 8.7.3. & 8.4.2

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.1.3 Exceeding leakage current or voltage limits

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.2.6 Leakage of liquid

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.2.7 Can blocking of filters result in hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.2.7 Can interruption of flow of cooling fluid result in hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.2.7 Can Impairment of ventilation through covering of openings etc result in hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.2.8 Are moving parts or Applied parts likely to be operated while unattended

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.2.8 Has one or more motors with a locked rotor torque smaller than the full load torque
Applicable No
Status
(15/Aug/11 Derek Lamb)

13.2.8 Are moving parts or Applied parts likely to jam
Applicable No
Status
(15/Aug/11 Derek Lamb)

13.2.8 Locking of moving parts
Applicable No
Status
(15/Aug/11 Derek Lamb)

13.2.9 Is equipment single fault safe during short circuiting & open circuiting of motor capacitors
Applicable No
Status
(15/Aug/11 Derek Lamb)

13.2.9 Interruption and short circuiting of motor capacitors
Applicable No
Status
(15/Aug/11 Derek Lamb)

13.2.10 Additional test criteria for motor operated ME Equipment see 13.2.8 & 13.2.9 and 13.1.1
Applicable No
Status
(15/Aug/11 Derek Lamb)

13.2.10 Additional test criteria for motor operated ME Equipment
Applicable No
Status
(15/Aug/11 Derek Lamb)

13.2.13.1 General overload test conditions
Applicable No
Status
(15/Aug/11 Derek Lamb)

13.2.13.2 Me equipment with heating elements
Applicable No
Status
(15/Aug/11 Derek Lamb)

13.2.13.3 Me equipment with motors

Applicable No

Status

(15/Aug/11 Derek Lamb)

13.2.13..4 Me equipmet rated for non continuos operation

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.20 Documentation

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.30 Risk management plan

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.40 PEMS development cycle

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.50 Does a problem resolution system exist

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.6.2 Risk control

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.70 Does system have a specification

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.70 Requirement specification

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have NETWORK/DATA COUPLING specification

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have maintainability,

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have protection from reasonably foreseeable misuse

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have test interval duration and diagnostic coverage

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have allocation of RISK CONTROL measures to subsystems and components of the I

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have defensive design

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have diversity

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have partitioning of functionality;

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have redundancy

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have fail-safe functions

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Does system have COMPONENTS WTH HIGH-INTEGRITY CHARACTERISTICS;

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.80 Architecture

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.90 Desing and implementation

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.10 Does a Verification plan exist

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.11 Does a PEMS validation exist

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.12 Modification

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.13 Are Connection of PEMS by Network/data coupling to other equipment specified

Applicable No

Status

(15/Aug/11 Derek Lamb)

14.13 Connection of PEMS by Network/data coupling to other equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.10 Arrangement of controls and indicators of ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.20 Are replaceable parts easily inspected Serviceability

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.30 Does Mechanical Strength comply with Table 28

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.1 General

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.2 Does equipment comply with Push test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.3 Does equipment comply with Impact test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.4 Does equipment comply with Drop Test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.4.1 Does Hand held ME equipment comply with free fall test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.4.1 Hand held ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.4.2 Does Portable ME equipment comply with free fall test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.4.2 Portable ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.5 Does equipment comply with Rough handling test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.5 Rough handling test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.6 Does equipment comply with Mould stress test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.6 Mould stress test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.3.7 Have all materials been taken into for Environmental influences

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.1 Can connectors be be incorrectly connected to other outlets with other functions

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.1 Do tubular heating elements have protection against overheating

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.1 Does the equipment incorporate a fluid container and is it protected against overheating?

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.1 Do cut outs affect the safety of the equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.1 Are there any capacitors or spark suppression devices across cut outs

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.1 Will loss of function due to non self restable cut outs cause a hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.1 Are restable non self restable cut outs used in addition to Thermostats

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.1 Are cut outs automatically reset

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.1 Are cut outs reset by a soldering operation

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.1 Application

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.2.2 Is Temperature setting clearly indicated

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.3.1 Is there a possibility of accidental short circuits

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.3.1 Is there a possibility of gas build up during charge and discharge Housing

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.3.1 Housing

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.3.2 Can incorrect connection or reversal of polarity cause a hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.3.2 Connection

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.3.3 Is Protection against overcharging employed

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.3.4 Do Lithium batteries comply with IEC600086-4 (7.3.3

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.3.4 Lithium batteries

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.3.5 Is internally power source protected against Excessive current and voltage protection

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.4 Are indicators used when equipment is charging

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.4 Do separate Indicators indicate no luminous heaters are operational

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.4 Are indicators used when an output exists where prolonged or accidental operation is a hazard

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.4 Do Indicators indicate ready for use

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.4 Do separate Indicators indicate warm up state

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.4 Indicators

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.5 Preset controls

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.6.1 Does disconnection of indicating device need a tool

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.6.1 Are all controls corresponding to scale at all times

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.6.1 Are all actuating parts secured so they cannot be pulled off or work loose

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.6.2 Are stops of adequate mechanical strength

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.6.2 Limitation of movement

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.7.1 Does hand-held devices comply with 15.3.4.1

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.7.1 Will Foot-operated devices support the weight of an adult

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.7.2 Accidental operation of ME equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.7.3 Entry of liquids

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.8 Are any Aluminium wires less than 16mm cross section used in Internal wiring of ME Equipment

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.9 Are partially sealed Oil containers provided with an oil level check

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.9 Oil containers in mobile equipment fitted with a pressure release device

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.9 Oil containers in mobile equipment sealed to prevent leakage

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.4.9 Are Oil containers in portable equipment adequately sealed to prevent loss of oil in any

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.5.1.1 Are Transformers protected against overheating in event of short circuit or overload

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.5.1.1 Transformers

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.5.1.2 Short circuit test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.5.1.3 Overload test

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.5.2 Do transformer windings have adequate Dielectric strength

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.5.2 Dielectric strength

Applicable No

Status

(15/Aug/11 Derek Lamb)

15.5.3 Construction of transformers used to provide separation as req by (8.5)

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.10 General requirements for the ME systems

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.20 Accompanying documents of an ME system

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.30 Power supply

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.40 Enclosures

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.50 Separation devices

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.6.1 Touch current

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.6.2 Earth leakage current of multiple socket output

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.6.3 Patient leakage current

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.6.4.1 General condition for ME systems

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.6.4.2 Connection of the ME system to the measuring supply circuit

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.70 Protection against mechanical hazards

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.9.1 Connection terminals and connectors

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.9.2.1 Multiple socket outlet

Applicable No

Status

(15/Aug/11 Derek Lamb)

16.9.2.3 Protection of conductors

Applicable No

Status

(15/Aug/11 Derek Lamb)

17.00 Electromagnetic compatibility of ME equipment and ME systems

Applicable No

Status

(15/Aug/11 Derek Lamb)
