PORTABLE APPLIANCE TESTING POLICY

Policy Statement

The policy of Sentinel Group Security Limited is to provide and maintain safe and healthy working conditions, equipment and systems of work for all employees, and to provide such resources, information, training and supervision as needed for this purpose. SGS will provide resource and maintain appropriate management systems, systems of work and equipment to ensure that electrical risks to all employees and others associated with the use of portable electrical appliances are controlled.

SGS will adopt the principles of control as set out in the Health & Safety at Work Act 1974, the Management of Health & Safety at Work Regulations 1999, the Electricity at Work Regulations 1989, the Workplace (Health, Safety and Welfare) Regulations 1992 and the Provision and Use of Work Equipment Regulations 1998.

The management of portable electrical appliances will be a continual commitment by SGS and will involve regular monitoring and progress meetings, a risk assessment programme, monitoring, inspection and record keeping.

Introduction

To prevent danger arising from electrical work equipment a pre-planned preventative maintenance programme is essential, an important element of which is portable appliance testing.

This policy lays out the duties of SGS and employees and the procedures for fulfilling them in relation to portable appliance testing.

Definitions

Portable and Transportable equipment

A Portable Electrical Appliance is, literally, any electrical equipment capable of being carried and, in general, connected to the mains supply by a flexible lead and a plug. The definition includes appliances with their own power sources, e.g., "intrinsically safe" equipment used in potentially explosive environments and equipment designed to operate at 110 volts. The definition does not include equipment which is "hard" wired, e.g., heavy equipment supplied by a fixed, armoured, power cable, which is tested using other regimes.

Equipment Classes

CLASS I Electrical equipment is provided with one layer of insulation over the live conductors, and exposed metalwork is bonded to earth so that it cannot become live in the event of an insulation failure. The external metal casing of any item of electrical equipment must be earthed as a legal requirement. With correctly earthed supply installations and equipment, the risk of electric shock is virtually nil.

CLASS II Equipment and Appliances are commonly known as double-insulated equipment. These items have live parts encapsulated in basic and supplementary insulation (double), or one layer of reinforced insulation equivalent to double insulation.

CLASS II Equipment and appliances that are supplied from a Separated Extra Low Voltage (SELV) source, which will not exceed 50V and are usually required to be less than 24 or 12V.

Equipment that Needs Testing

SGS has adopted the definitions used in The Institute of Electrical Engineers (IEE) Code of Practice for In-service Inspection and Testing of Electrical Equipment (4th Edition) guidance.

a) **Portable appliance -** These are appliances which are capable of being easily moved whilst in an energised state and/or operation or an appliance which can easily be moved from one place to another, e.g. vacuum cleaner, toaster, kettles, angle poise lamps.
b) **Hand held equipment or appliances -** These items are of a portable nature which require control / use by direct hand contact. Examples include: drills, soldering irons, saws, hand held food mixers and glue guns.
c) **Moveable equipment (transportable**) - These items are either: 18 kg or less in mass and not fixed or may have wheels to facilitate movement, e.g. electric fire, small air conditioning unit, shredder.
d) **Stationary equipment or appliances -**These items are appliances with a mass exceeding 18kg and are not intended to be moved, e.g. refrigerator, incubator, large vacuum pumps, pillar drills.
e) **Information technology equipment -** These items include electrical business equipment, e.g. computers, scanners, photocopiers.
f) **Extension leads (portable) -** These items must be tested as a Class I appliance and also require a polarity test. In terms of use, these items must be used in accordance with the manufacturer's guidance and must not be 'daisy chained'.

Competent Person

Competent Person is a person who is employed or contracted by SGS who has received suitable and sufficient training in Portable Electrical Appliance Inspection and Testing.

Equipment that should be inspected and tested

Equipment owned by SGS:

This policy covers both new and existing single phase equipment up to 230 volts that is intended to be connected to a fixed installation or a generator by means of a flexible cable and plug.

Testing of:

a) Three phase equipment
b) Equipment operating at voltages greater than 230 volts
c) Equipment operating at currents in excess of 13 amps
d) Equipment which is connected to a power supply through a spur or breaker box
e) Fixed equipment/appliances that are fastened to a support or otherwise secured in a specific location
f) Built-in appliances/equipment

should be carried out by a qualified electrician.

Personal Equipment brought into office premises:

Employees should be discouraged from bringing personal items of electrical equipment to work (e.g. radios, kettles and fridges). However, there may be circumstances when this is approved by the management, in which case this equipment must be inspected and tested before use and then at intervals as specified in this Policy. Equipment which fails the test must be removed from the office premises.

Equipment excluded from this Policy

This policy applies to items of work equipment and not personal property of employee. Where electrical equipment is brought into the office for their personal use (e.g. laptops and mobile phone chargers) then these do not need to be tested by SGS. It is, however, important that these personal items of electrical equipment are in good condition and electrically safe. Employees therefore need to be made aware of this as part of their induction. Where electrical equipment is brought into the office premises by contractors, their company is responsible for the testing and maintenance. Equipment Hire Companies are legally required to ensure that equipment supplied by them is safe for

use at work and is regularly inspected and tested before and after use. Therefore equipment that is leased by SGS should not normally need to be tested by SGS.

Responsibility

Zahid Chaudhry, Director Innovation and Compliance is responsible for ensuring that equipment owned by SGS are tested in accordance with this policy.

Frequency of Testing

Portable appliances shall be inspected prior to being put in to use within the office premises and there after the frequency shall depend on the usage and movement of the equipment. No Combined Test is normally required provided the new equipment is purchased from a reliable source and new equipment is visually inspected for signs of obvious damage. New equipment can, in most environments and situations, be tested during the next "round" of PAT Testing at a frequency determined depending on the use/environment etc.

The frequency of testing is based on the following Health & Safety Executive guidance:

a) HSE Guidance Note Ind 236 "Maintaining portable electrical equipment in low risk environments" http://www.hse.gov.uk/pubns/indg236.pdf
b) HSE Guidance Note Ind 107 "Maintaining portable and transportable electrical equipment " http://www.hse.gov.uk/pubns/priced/hsg107.pdf

The factors to be considered when choosing an appropriate testing frequency are:

a) **The environment** – equipment used in benign environments will suffer less damage than equipment used in an arduous environment.
b) **The users** – if equipment is likely to receive unreported abuse, more frequent inspection and testing may be required.
c) **The equipment construction** – the safety of class 1 equipment is dependent on the fixed electrical installation; the safety of class 2 equipment is not. If equipment is known to be Class 2, in a low risk environment, such as an office, recorded testing (but not inspection) may be omitted.
d) **The equipment type** – appliances which are hand held are more likely to be damaged than fixed appliances.

In order to provide a basis for the initial testing regime, the following testing frequencies have been established:

Equipment category	User check	PAT Combined formal visual and electrical tests
1 (H) Portable equipment, which is held in the hand while in use.	Before use	6 Months
2 (P+) Equipment used in fixed positions but frequently moved during use, or which is used in wet or hazardous locations.	Before use	12 Months
3 (P, IT, M) Portable or Transportable, seldom moved or less hazardous items.	Weekly	36 Months
4 (S) All other electrical plant and equipment	Weekly	36 Months

H: Handheld equipment

M: Moveable equipment

P: Portable equipment

S: Stationary equipment

IT: Information technology and Business Equipment

+ : High usage of extreme environment

New equipment in Categories 1, 2 and 4 should be formally visually inspected and tested before being put into use. Category 3 equipment should have at least a user inspection for physical damage.

Recording of Inspection and Testing Results

Test results

The Electricity at Work Regulations requires that the results of electrical safety tests are recorded. A computer will often be a suitable medium for record keeping. The advantage of the more expensive portable appliance test instrument is that each has a memory in which the results of a large number of tests can be stored. This stores the date of each test, the unique number assigned to each piece of equipment, and the pass/fail and numerical results. Data from the memory can be sent to a printer or can be exported directly to a computer.

A dated test label must be affixed to the appliance (and to the plug, if the lead is detachable). The label should show the following:

a) PASS or FAIL
b) Test given (e.g. Combined Inspection & Test)
c) Unique identification for the equipment (e.g. Inventory number)
d) A “Do not use after ‘date’ warning, where ‘date’ is the due date of the next test.

Equipment failure

Equipment, which fails the test, shall be

1) Clearly labeled with a FAIL Label
2) Cable or plug removed to ensure it cannot be used.
3) Removed from area and service immediately by the organisation.
4) Shall not be put back in to service until fault rectified and retested.
5) Equipment is deemed redundant and disposed of by the organisation. All "failed" equipment must be removed immediately for repair or disposal.

Assessment of Risk

High Risks

High risks would result from the use of an electrically- powered pressure water cleaner outside, powered by 240 volt electrical supply, with the cable trailing on the ground, where it can be damaged by vehicles and other equipment, and where water is present.

Damage to the cable or other parts is likely to result in the operator or others receiving an electric shock. Similar risks result when other electrical equipment such as drills and portable grinders are used in harsh environments, e.g. construction sites, where there is a high probability of mechanical damage resulting in danger.

Medium Risks

Medium risks would result from floor cleaners or kettles which are usually used in a more benign environment, e.g. offices, but can be subject to intensive use and wear. This can eventually lead to faults which can also result in a shock, burns or fire.

Low Risks

Specialised equipment, e.g. information technology (IT) equipment (computers and printers), photocopiers, fax machines etc. are considered low risk; they are usually double insulated, are used in dry clean environments and are infrequently moved or stressed.

Other Factors to Consider

Equipment which is held by hand or is handled when switched on will present a greater degree of risk because, if a dangerous fault occurs, then the person holding it will almost certainly receive an electric shock.

The risk of receiving an electric shock will be greater when the equipment user is standing on the ground outside or a concrete floor, scaffolding or similar which is a good conductor, than if standing on a wooden floor or dry carpet and not in contact with earthed metal work (i.e. using double insulated appliances or 110 volt tools which have a center tapped transformer to give 55 volts between live and earth).

Because the consequences of an accident are so serious - potentially fatal electric shock, or fire affecting the whole premises - the inspecting and testing system is designed to be proactive, i.e. planned to prevent incidents arising, rather than reactive where action is taken following an incident/accident. The frequency of inspection and testing is directly related to risk.

The greatest overall reduction of risk will take place when the inspection and testing regime is first put into practice. Thereafter it will take time to establish the appropriate test frequency based on experience. A low failure rate would indicate that the test interval can be increased and a high failure rate that the interval should be shortened.

Signed:

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Date: 6th April 2015

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