Product Certification

A comprehensive guide to BSI's product certification services

bsi.

bsi. KITEMARK™

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Section 1
BSI Overview

BSI Overview

BSI is a UK Business Superbrand with the Kitemark symbol, as well as being a UK super brand, is recognized by **72%** of the UK Adult population. BSI's history and expertise sets it apart from other testing organizations as they have always been at the leading edge of the testing and certification industry, working with organizations to develop compliant products and services. They help organizations make excellence a habit, so they can:

- Perform better
- Reduce risk
- Grow sustainably

We have 2900 employees and over 70,000 clients in 150 countries worldwide, from globally recognized brands to small, local companies.

BSI can help clients achieve more efficient ways of working by:

- Better cost control
- Faster and more effective implementation of working practices

As a fully UKAS Accredited Certification Body, BSI can ensure that the benefits of certification meet their clients' expectations through testing to British, European, or international standards. This will help them reach their objectives by providing technical judgements and physical testing of products, components and processes, at all stages of the production cycle/process. BSI is independently run and is not owned by government, industry or shareholders, giving assessments more authority than those of an organization that has a vested interest in promoting its members.

BSI can help clients with:

- Market Access
- Market Development
- Speed to Market
- Risk Management
- Product Differentiation
- Competitive Edge
- Managed Compliance – BSI offer guidance on the certification process throughout the design and manufacturing process
- Client Confidence – with BSI's globally trusted independence and reputation

For more information on BSI or topics related to Product Certification please click here

Product Certification with BSI gives you the reassurance that your products and services meet the specifications required to bring them to market. Our trusted experts will help you access global markets and grow your business.

What is Product Certification?

Product Certification is the process of certifying that a certain product/system has met specifications required in the appropriate certification process or in some cases in specific contracts, regulations, or laws.

What's involved in Product Certification:

- **Gap analysis** – if you need our help at the outset, we can advise on any areas that may need attention
- **Pre-Assessment** – If a client needs to be reassured that they are ready for a full assessment
- **Type testing** – of the product design against the standard specification involving actual examination of a sample as well as compliance with specific certification requirements where applicable. The results are recorded in a report
- **Assessment** – BSI can assess on site your quality management system against ISO 9001 and/or the manufacturing of a product against factory production control requirements
- **Technical support** – during the certification process BSI will provide some of the best trained and most competent staff available
- BSI can assess a manufacturers/suppliers TCF process to confirm its suitability for the manufacturers/suppliers self declaration of compliance

What is the product certification process:

1. Client enquiry to BSI
2. Application form completed by client
3. Quote prepared
4. Client signs and returns the quote if happy with the content
5. Clients send all relevant paperwork and sample products, where applicable, to BSI
6. Testing/assessment is organized either in house or via external resource
7. A certificate decision is made after an appraisal of all the final report assessments, by Risk & Compliance Department
8. Client is then entitled to mark his products with the appropriate Certification mark.

Why would companies choose BSI for Product Certification?

- BSI is trusted all over the world to ensure that products and services meet the variety of product certification directives and schemes
- BSI is one of the world's most respected and comprehensive certification bodies with unrivalled expertise and experience in helping clients through often complex processes.

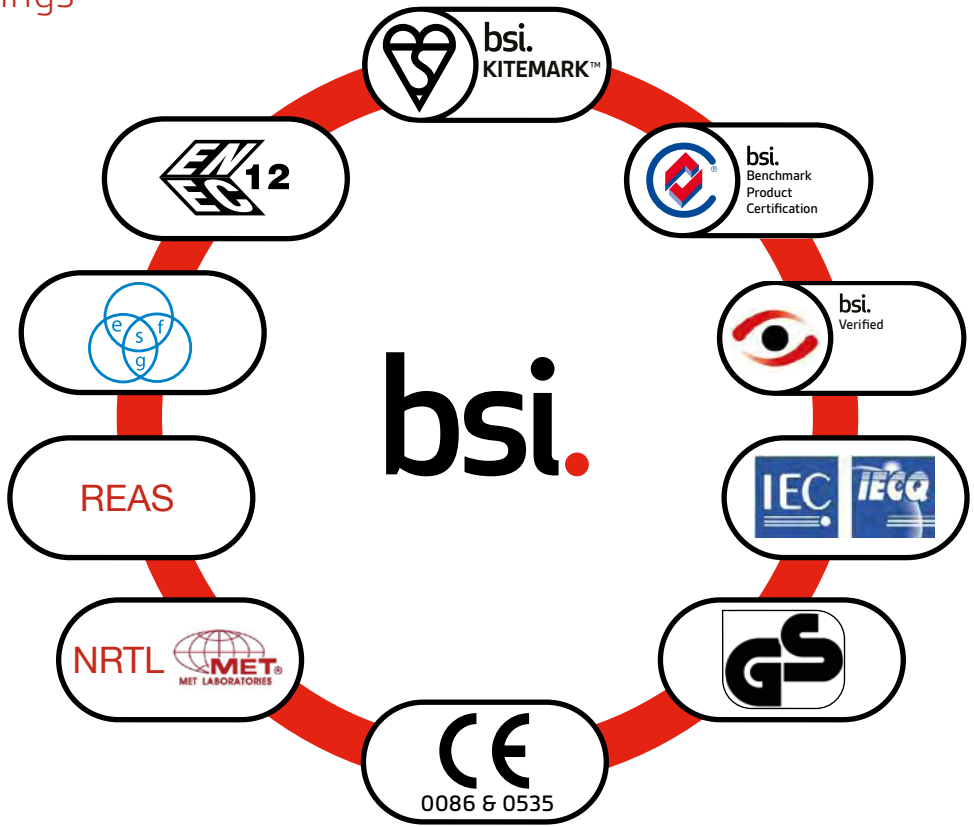
Benefits of Product Certification with BSI include:

- **Accessible and ready** – BSI is ready to help clients comply with their chosen product certification needs
- **Speed to market** – BSI can deliver one of the fastest speed-to-market services available giving clients the competitive advantage
- **Market access** – as a global organization, BSI can help clients gain access to markets and business streams around the world through its network of over 50 global offices and 120 international markets.
- **Market development** – BSI can work with clients to maximize the potential of existing markets and break into new markets
- **Risk management** – BSI can help mitigate the risks and liabilities providing independent assessments and third party certification of products and processes
- **Product differentiation** – BSI test and assessment reports, and certification can provide clients with the means to differentiate themselves in the market
- **Managed compliance** – In partnership with clients BSI can offer guidance on the testing/assessment procedures throughout the design and manufacturing process; often improving client's time to market
- **Competitive edge** – Through BSI's distinguished product certification mark - Kitemark, trusted by **88%** of the UK adult population and recognized and accepted around the world by specifying authorities
- **Client confidence** – BSI's globally acknowledged and trusted independence and reputation achieve client and business reassurance.

Section 2

Product Certification Schemes

Key BSI offerings



BSI Kitemark™

The Kitemark is available for any product, process or service, with a publicly available standard where a company wants independent certification through assessment of their capability to supply a product, service or process and evaluation through testing and inspection. Once certified the capability of the company and the conformance of the product, service or process will be continually assessed.

The Kitemark is a registered trademark owned and operated by BSI. It is one of the most recognized symbols of quality and safety in the world and offers true value to clients. It originated as the British Standards Mark in 1903 for use on tramway rails. Today the Kitemark can be seen on hundreds of products and services from manhole covers to condoms, from security locks to fire extinguishers, riding helmets and vehicle accident repair services.

Organizations with the Kitemark are an elite club of some of world's best companies and brands. There are currently more than 3,600 Kitemark licences, held by, amongst others, Anglian Home Improvements, Chubb Security & Fire Protection, Everest, Hygena, Tarmac and Valor.

Benefits include:

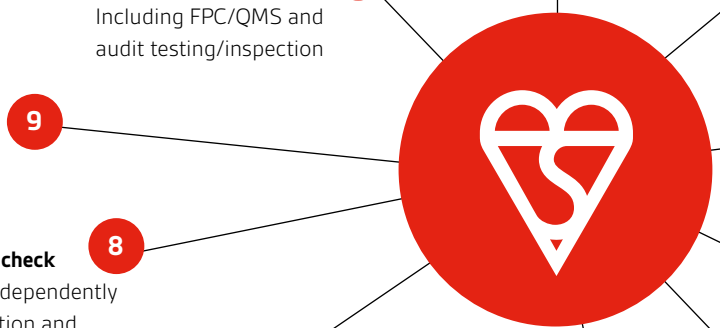
- **Risk reduction** – supporting companies due diligence requirements on liability.
- **Increased cutomer satisfaction** and trust in the product
- **Access to new clients** – as the Kitemark is accepted widely by procurement teams

Kitemark schemes include the following industries and sectors

- Automotive
- Child Safety Online
- Construction products
- Electrical appliances and components
- Energy control
- Fire
- Flood Protection (wastewater, drainage)
- Personal Protective Equipment
- Removal Services
- Windows, doors and glass
- Gas appliances and components
- Telecoms

The BSI Kitemark™ process

BSI Kitemark certification benefits clients and end users as it continually helps to maintain compliance and quality in a constantly changing world. It is more than a one off initial test which adds value to products and services that carry the BSI Kitemark.



1. **BSI develops protocol for Kitemark scheme**
based on BS/EN or international standards or Publicly Available Specification (PAS) etc.

2. **Client application**
Manufacturer/designer/service provider submits application with basic details (inc. range of products/ services covered)

3. **Contract review**
- BSI review Kitemark application
- Requests additional information
- Prepares quote

4. **Client accepts quote**
Manufacturer/designer/service provider accepts quotation

5. **Initial assessment**
FPC or quality management system assessed by BSI

6. **Product testing**
- Initial type testing completed by BSI or evidence of testing submitted
- Inspection of service delivery

7. **Evaluation**
BSI considers all evidence, assesses against product manual/standard and makes recommendation

8. **Risk and compliance check**
BSI and R&C team independently review recommendation and evidence and make a decision

9. **Kitemark certificate**
Certificate is issued if decision is positive

10. **Annual surveillance**
Including FPC/QMS and audit testing/inspection

Benchmark

The Benchmark Mark is a registered certification mark owned and operated by BSI. Benchmark certification is a highly respected and recognized product certification in Australia and New Zealand.
This certification shows that a product has undergone rigorous audit and testing process by an independent third party to recognized standards. Benchmark schemes are available for a wide range of products including:

- **Electrical**
  Appliances
  White goods
  Power tools
- **Personal Protective equipment (PPE)**
  Head protection products (e.g. bicycle, motorcycle, industrial and equestrian helmets)
  Safety footwear and eyewear
  Hearing protection
  Protective clothing
- **Plumbing**
  Pipes and pipe fittings
  Tapwares
  Polyethylene tanks
  Solar hot water systems
  Septic tanks
- **Fire**
  Fire blankets
  Hoses
  Extinguishers
  PPE
- **Safety**
  Harnesses
  Fall arrest systems
  Breathalysers
- **Construction products**
  Insulation
  Plasterboards
  Plywoods
  Plumbing products
  Swimming pools and spas
- **Medical**
  Medial devices
- **Automotive**
  Jacks
  Portable ramps
  Seat belts
- **Children's products**
  Prams
  Restraint systems

CE marking

CE Marking is simply a declaration from the manufacturer that the product complies with ALL RELEVANT European Directives. It is a continual process over the product life and should not be viewed as a "one-off" exercise.

CE marking on a product indicates that the minimum legal requirements for a product have been met and helps the product to move freely throughout the European Single Market. It is a legal requirement and is the responsibility of the manufacturer or the company placing the product on the market:

- **To identify all applicable directives**
- **To follow procedures detailed in each directive**
- **To comply with the requirements of each directive**

Where does it apply?

Applicable in the countries of the "European Economic Area"

Which includes:

- **27 Member States of the EU**
- **Members of EFTA**
- **Member States joining the EU**

How can BSI help?

BSI can help clients gain easier access into the European market by ensuring their products meet all the CE marking requirements.
If a client manufactures or imports products which fall into the scope of the New Approach Directives, they will require professional guidance on how to meet all the essential requirements of these directives.

What do clients need to do?

There are 7 steps to compliance for any product:

1. Determine which EU Directives or restrictions apply to the product
2. Evaluate and/or test the product to cover the essential requirements of each Directive or regulation that applies and determine the requirement for a Notified Body
3. Modify the design as necessary following evaluation and retest if appropriate
4. Decide how conformity will be maintained and ensured for volume production
5. Provide an EC Declaration Certificate showing the product conforms to the relevant requirements
6. Complete the technical file for the product
7. At regular intervals, review the decision to affix the CE mark to the product

The CE marking process

CE 0086 & 0535

1 CE requirements
Manufacturer to assess whether a Notified Body is required for CE marking

2 Client application
Manufacturer submits application

3 Contract review
- BSI reviews application
- Requests additional information
- Prepares quote

4 Client accepts quote
Manufacturer/designer/service provider accepts quote

5 Client accepts quote
Manufacturer/service provider accepts quotation

6 Module or level of attestation
This step differs according to the product category and requirements stated in the EU directive or regulation

BSI can advise clients of the requirements and act as a Notified Body for 18 European directives

Self-declaration
The manufacturer may be able to test own products and/or factory production control

Notified Body (BSI)
A Notified Body may be required for initial inspection and/or continual surveillance, initial type testing and to issue EC certificate.

7 CE marking
Manufacturer applies CE mark for their products

8 Ongoing Surveillance
Determined by the requirements of the regulation or directive

Verification Certificate

If a business has self-declared its products at a global level for conformity to specific regulations and directives , it will have its own test reports or technical data and will compile the technical files required for CE Marking. BSI can verify its test reports and issue a Verification Certificate (VC) to the client. A Verification Certificate (VC) is provided to a client by BSI when:

1. When there is confirmation that a product has been assessed to a certain requirement
2. Documentation (test reports, technical data) has been checked to confirm product compliance
3. A one time assessment has been completed of the product and technical data.

VCs are typically applicable for three years unless any modification is made to the product. (this varies for different product types depending upon the risk assessment).

This is different to Kitemark certification which requires ongoing production system compliance and product surveillance, including annual audits and product sampling.

Benefits to Clients

Gaining a Verification Certificate through BSI can help the business to:

- **Meet the requirements of bids and tenders**
- **Provide independent overview in specific technical areas**
- **Meet procurement specifications**
- **Increase confidence levels for product self declaration**
- **Differentiation in the marketplace**

Next Steps for Clients

- To apply for a Verification Certificate the client must supply BSI with prototypes, test reports, drawings, and full details of products or services
- If they have no test reports or if there are gaps in demonstrating independent conformity, BSI will undertake the testing in partnered laboratories
- A VC would be published following a satisfactory review of test reports/data.

As there may be opportunities in a wide range of industries for Verification Certificates, it may be helpful to initially focus on an area where we have identified opportunities. One of the largest opportunities is in providing Verification Certificates for Electrical Products. This is often where a client has had their product tested for the Low Voltage Directive and Electromagnetic compatibility but the Directives only require self declaration. The verification certificate provides a valuable tool to sell their product.

Who Can Benefit Most from BSI Verification?

- Opportunity to sell VCs to manufacturers that are not ready to purchase Kitemark – use VC's as a first step, with a view to up-sell to Kitemark at a later date
- Organizations which focus on low volume and bespoke products e.g. High value products or new entries to the market where volumes are limited to test the market.
- Manufacturers exporting to the EU who make CE declarations of conformity and want to have a one off third party assessment of their product and process.
- Clients who manufacture products that relate to one of the EU Directives which only require self declaration such as one of the following Directives - Low Voltage Directive - **EMC Directive**
- Clients who have processes who require the process and output assessed where there is no appropriate standard to Kitemark but there is a code of practice or other standard which could be used to adequately make a valid assessment. Such as price promise verification.

When selling VCs you should stress...

- The simple process to obtain a VC – product technical data document sent to BSI who will verify it against the appropriate standard
- How they can help organizations access new markets globally (e.g. Europe, US)
- Why organizations should work with BSI:
  - **80% of clients choose BSI because of our reputation**
  - **91% of clients gave a satisfaction rating for BSI client managers/ auditors**
  - **9 out of 10 of our clients think BSI training is excellent**
  - **As a result BSI have a consistent 90% annual client retention rate**

NB: VCs only to be offered if Kitemark is not an option for the client

Does anyone else offer this service?

Several competitors including SGS, Intertek, BV, mainly outside the EU.

Green Deal

The Green Deal is a UK Government policy to reduce carbon emissions by improving the energy efficiency of domestic and commercial properties in the UK. The Energy Act 2011 provides the legal basis for this policy and it is driven by the Department of Energy & Climate Change (DECC).

The aim of the scheme is to reduce carbon emissions by improving the energy efficiency of both domestic and commercial buildings by retrofitting energy efficient products without the property owners having to pay any upfront costs

Green Deal Providers will own the relationship with the property owner and be responsible for the service delivery, installation and product warranty. The cost of the improvement will be repaid by the occupant of the property using the electricity bill as the means to make regular payments. Green Deal Advisors provide the initial assessment whilst Green Deal Installers will install the product.

The charge for the Green Deal installation will remain with the property and **not** with the occupant

bsi. Energy Efficient Buildings KITEMARK™

Contributors to the Green Deal fall into 3 main categories:-

- **Green Deal Provider:-** the organization who will contract with the applicant and will therefore have responsibility and liability for arranging the financing, the product and the installation
- **Green Deal Advisor:-** the organization who will make the initial assessment of the property and provide an advice report to the applicant on energy saving measure appropriate for the property. There are 26 separate measures which could be recommended by the Advisor to improve the energy efficiency of the property. A Green Deal Advisor working for the organization may be linked to a Provider or could operate independently
- **Green Deal Installer:-** the organization who will provide the installation service in compliance with PAS 2030 to the GD Provider following a contract between the end client and the Provider as a result of acceptance of an advice report. The GD Installer may be employed by a Provider or could operate independently and act as a sub-contractor.

GS Certification (pending)

GS stands for Geprufte Sicherheit (Tested Safety) in Germany. It is a voluntary certification scheme according to GPSG and testing performed due to EN or DIN standards, is a widely recognized safety mark in Europe.

Note: BSI is currently not yet approved to issue GS certificates officially but it's on the way. The scope will be identified later.

Gap Analysis

BSI's Gap Analysis provides an examination of a client's existing products and processes, identifying areas of development. The key benefit to the client is that it will help identify what they still need to do to improve the way it operates, whether that means:

- Increasing market share
- Reducing costs
- Managing risk more effectively
- Improving client satisfaction
- Meeting a specific regulation or standard

BSI's Gap Analysis can provide a business with the information it needs to improve its performance and achieve its corporate objectives by highlighting the "gaps" that exist, implementing strategies required in order to reach their corporate objectives.

Note: GAP analysis is not consultancy and should never be referred to as such

Other Schemes BSI Offer:

IEC Certification Schemes for electrical products

What is it about?

The International Electrotechnical Commission (IEC) "CB Scheme" was the world's first truly international system for mutual acceptance of test reports and certificates dealing with the safety of electrical and electronic components, equipment and products. It is a multilateral agreement among participating countries and certification organizations.

A manufacturer utilizing a CB test certificate issued by one of the accepted National

Certification Bodies (NCBs) - such as BSI - can obtain certification marks of another certification body (usually in another country). So this may be of use to client looking to export to another country where the "local" mark may be more recognisable than BSI's.

The Scheme is essentially based on the use of international (IEC) standards. If some members' national standards are not yet completely harmonized with IEC Standards, then national differences (called "Special National Conditions") are permitted and these must be evaluated as well.

What products can BSI evaluate under the scheme?

Our scope is listed on the IEC website

The detailed scope should always be checked (as new standards are added regularly), but the broad families of electrical products that BSI is a NCB for are:

- Capacitors as components (CAP)
- Household appliances (HOUS)
- Luminaires (LITE)
- Measuring, control and laboratory equipment (MEAS)
- Electrical equipment for medical use (MED)
- IT and office equipment (OFF)
- Portable tools (TOOL)
- Electronics, entertainment (TRON)

IEC Quality Assessment System for Electronic Components

What is it about?

The IECQ scheme is a worldwide certification system covering the supply of electronic components and associated materials, assemblies and processes. It uses quality assessment specifications that are based on International Standards prepared by the IEC.

The IECQ is about providing assurance and reducing operating costs. Electrical and electronic products comprise many (sometimes hundreds) of individual components and sub-assemblies. The well-known brand manufacturers and their purchasing managers need assurance that the electronic components used in their products are of the required quality and reliability. To minimize incoming inspection costs and eliminates the quality auditing of suppliers, they can chose components suppliers who hold IECQ product certifications issued by BSI for their components.

There are two aspects to the IECQ scheme: Facility certification and product certification.

- **Facility certification:** BSI evaluates the supplier's quality management system and grants facility certification for a Process or family (or families) of component(s) concerned to a specific specification or standard.
- **Product certification:** Suppliers have to show through testing that the component conforms to the relevant quality assessment specifications declared by the manufacturers. Some suppliers have their own in-house testing facilities for making all of the tests required by the specification or standard. BSI ensures that these testing facilities are adequate or can use outside testing laboratories that are accepted to the IECQ CB.

IECQ Approved Process (AP) Certification

IECQ AP Certification may be applied to any process which may affect conformity or compliance of electronic components, related assemblies or services. For example this may cover product engineering, printed wiring board manufacture, electronic component manufacturing, printed circuit board assembly, electro-static discharge (ESD) controls or even supply chain management.

IECQ Approved Component (AC) Scheme

IECQ Approved Components Certification may be applied to individual electronic components, products, related materials and/or assemblies for which a technical standard or specification exists or a client specification has been accepted for use in the IECQ system.

So, for example, this may cover silicon wafer slabs, integrated & discrete electronic components, connectors, printed wiring boards, components/products/materials that assist in the construction, installation and use of electronic components. (ceramic insulators, heat sinks etc...).

IECQ Avionics Components (ECMP)

The IECQ ECMP Avionics Assessment Program Requirements are designed to evaluate commercial, military and aerospace (avionics) equipment manufacturers' and related organizations' processes for compliance with IEC TS 62239 Electronic Component Management Plans (ECMP) and/or GEIA/ANSI 4899 Standard for preparing an Electronic component Management Plan.

The avionics industry requirements allow the use of either IEC TS 62239 or GEIA 4899 at the option of the OEM. Such plans are used to develop, document, and implement plan owners' processes for managing the selection and use of electronic components in avionics equipment.

IECQ Hazardous Substances Process Management (HSPM)

The IECQ HSPM Hazardous Substance Process Management Requirements are designed to evaluate equipment manufacturers' and related organizations' processes for compliance with QC 080000 IECQ HSPM (IECQ HSPM) in addition to the compliance of the processes with ISO 9001 QMS.

IECQ HSPM provides the requirements used to demonstrate to the international market place that the organization has developed, documented, and implemented processes for managing the production, selection and use of electronic components, assemblies, processes and related materials in accordance with customer, local, national and international HSF requirements (like Sony SS 00259, Directive 2002/95/EC, Directive 2002/96/EC and other local environmental regulations) for their scope of activity.

IECQ Independent Testing Laboratory (ITL)

The IECQ Independent Testing Laboratory Approval is available to independent testing laboratories intending to carry out tests in support of IECQ activities within the IECQ System. The approval covers the type of tests to be carried out, the component ranges to be tested and the facilities available, and exceeds the relevant requirements of ISO/IEC 17025.

In order to gain approval, independent testing laboratories must demonstrate that their organizations and facilities comply with IECQ requirements for the competence of staff and adequacy of testing facilities, and for performing their functions under the IECQ System.

CCA Certification

BSI is a signatory to the CENELEC (CENELEC is responsible for European standardization in the area of electrical engineering) Certification Agreement (CCA) which together with ETSI (telecommunications) and CEN (other technical areas) forms the European system for technical standardization.

The scheme offers mutual recognition between European certification bodies for testing and ongoing product/factory surveillance of electrical and electronic products covered by the Low Voltage Directive. This two-way scheme allows Test Reports issued by other CCA members to be accepted by BSI as part of a product certification programme.

ENEC Mark

ENEC, the high quality European Mark electrical products demonstrates compliance with European standards (ENs), mainly related to safety. BSI is a founding signatory to the ENEC agreement and can issue the ENEC mark on behalf of CENELEC in the UK. The mark is applicable for Electro technology products such as IT equipment, Lighting fittings and their components and capacitors, mains connector and cord sets.

ENEC benefits:

- **One high quality mark recognized in Europe**
- **Demonstrates compliance with European safety standards**
- **Testing close to manufacturing locations**
- **European full certification scheme (ISO Type 5)**
- **Over 16,000 valid certificates covering more than 85,000 products**
- **Supports responsible application of CE marking**
- **Assists market surveillance authorities**

At present there are 24 signatories to the ENEC agreement ensuring the ENEC mark provides market acceptance throughout Europe. The procedure for obtaining the ENEC mark is similar to that for obtaining the Kitemark and, as such, offers many of the same benefits.

NRTL

NRTL (National Recognized Testing Laboratory) is a mandatory safety certification for workplace equipment on sale in North America. It helps manufacturers to popularize their brand and guide the consumers to select their favourite safe products. The certification scheme protects consumers for safety via construction checks and related tests. The manufacturer also benefits as the certification raises client satisfaction levels. Through an agreement with MET Labs (USA) for some electrical products, BSI is able to offer an NRTL service. The relationship is mutually beneficial:

- **with MET clients gaining access to BSI's services (Kitemark for the British market, CE marking, auditing and certification)**
- **BSI clients in Europe gaining access to MET's services for US and Canadian product certification**
- **BSI clients in North America gaining access to MET's laboratories for product safety and EMC testing services for Medical, Information Technology and Telecomms Equipment.**

MET has been a pioneer in testing certification services and continues to be in the forefront of the standards industry. Over the past 35 years, MET and the MET Label have become recognized by States, local jurisdictions, United States government agencies and international bodies.

Below is a list of products that can be tested:

Standard	Products	IEC standards
UL 60065 **UL 60335-1**	Audio, video and similar electronic apparatus Safety of household and similar electrical appliances, Part 1: General Requirements	**60065** **60335-1**
UL 60335-2-8	Household and similar electrical appliances Part 2: Particular requirements for shavers, hair clippers, and similar appliances	**60335-2-8**
UL 60335-2-34	Household and similar electrical appliances Part 2: Particular requirements motor compressors	**60335-2-34**
UL 60745-1	Hand-held motor operated electric tools Part 1: General	**60745-1**
UL 60950-1	Information technology equipment	**60950-1**
UL 61010A-1	Electrical equipment for laoratory use; Part 1: General Requirements	**61010A-1**
UL 61010C-1	Process control equipment;	**61010C-1**

RADMAC

The RADMAC scheme is an initiative between national certification bodies for manufacturers of domestic radiators and convectors to EN 442. Certificate holders, who hold one or more of the following certification marks to EN 442 at the same location, may benefit from the scheme.

- **AENOR mark - Spain**
- **AFNOR NF mark - France**
- **BSI Kitemark - UK**
- **RAL mark – Germany**

Each of the European Certification Bodies is a signatory to an agreement to accept test reports from RADMAC approved test laboratories and to accept assessment reports from each other when visits are made under the requirements of RADMAC.

STB mark

BSI is able to help clients achieve the STB mark through its cooperative relationship with BelGISS, the Standard Writing Body for electrical products in Belarus. To obtain STB Mark, the certification product has to be registered in advance.

Keymark

The Keymark was created in response to a European Council resolution which invited the European standards organizations (CEN/CENELEC) to establish a harmonized expression of conformity with European standards (ENs). The mark is recognized in the majority of EC countries and is accepted as being equivalent to their own national certification marks.

Keymark certification is available across a diverse range of products in the construction sector. Product assessment covers both safety and, where appropriate, performance requirements defined in the relevant CEN and CENELEC standards.

BSI is empowered by CEN to issue the Keymark against the European standards for thermal insulation products and thermostatic radiator valves.

REAS

The New South Wales Office of Fair Trading Department of Commerce has given authority to BSI to have a Recognized External Approval Schemes (REAS) to certify electrical appliances and equipment. This allows BSI to issue certificates of approval for declared and non-declared electrical products that have proven to comply with the safety requirements of the applicable Australian Standard, and be fully accepted throughout Australia and New Zealand. It helps our clients gain access to Australasian markets to sell their products.

Electrical products that may be approved under the BSI REAS are:

- Declared Electrical Articles –electrical products as defined by legislation as gazetted by the NSW Department of Commerce or listed in Appendix B of AS/NZS 4417.2 and which must be approved prior to sale
- Non-declared Electrical Equipment – all other electrical products that are not Declared Electrical Equipment as detailed above.

EFSG – European Fire & Security Group

The members of EFSG are established certification bodies who work together with associated testing laboratories. The quality marks which are issued by these certification bodies ease market entry for the providers of products, systems and services. The EFSG provides a network of experienced certifiers with well respected quality marks specializing in the fields of fire and security, helping manufacturers to access European and worldwide markets.

By allowing manufacturers to gain the certification marks of the other European certification bodies without duplication of certain aspects of the certification process. This is based on details contained in “Basic Agreements” for each field of activity.

VCA certification

BSI is accredited as a technical service by the VCA (Vehicle Certification Agency) to assist with the application of the "E" mark against ECE Regulations and the "E" mark against EEC Directives. The certification process covers components intended for use on vehicles in the European Economic Area (EEA) and the Geneva-based United Nations organization (ECE). At present the scheme is mandatory for components intended for use on new road vehicles, off road vehicles and agricultural tractors.

BSI offer this service for the following product types:

- **Vehicle Glass**
- **Motor Cycle Helmets**
- **External Rear View Mirrors**
- **Advance Warning Triangles**

NCS International

In May 2013 BSI completed the acquisition of NCS International. NCSI is one of Australia's largest certification bodies and offers a wide array of auditing, training, and accredited certification solutions. They currently provide certification services against 49 programs including food safety, quality, safety, environment and forestry areas amongst others, helping in excess of 2,000 businesses in Australia, the USA and beyond. The combined (BSI & NCSI) organization in Australia will have more than 130 permanent employees and a turnover of over £23 million making it the fourth largest market for BSI after the UK, the USA and Japan. It is a well-established and highly regarded company that was previously a subsidiary of The National Association of Testing Authorities, Australia.

Section 3

EU Directives/Regulations

BSI is a Notified Body for 18 EU Directives and can help manufacturers comply, gaining market access into Europe quicker. BSI also offers one of the most comprehensive services in the world, enabling manufacturers to affix the CE mark confidently and legally to their products

EU Directives/Regulations

BSI is a Notified Body for 18 EU Directives and can help manufacturers comply with these, gaining market access into Europe quicker. BSI also offers one of the most comprehensive services in the world, enabling manufacturers to affix the CE mark confidently and legally to their products.

ATEX Equipment Directive (94/9/EC)

What is the Directive about?

ATEX is an EU directive that improves and maintains health and safety in situations where there is the potential for explosions. It basically ensures products are safe to use in explosive environments. For example:

- **Equipment and protective systems for use within (and outside) potentially explosive atmospheres**
- **Electrical and non-electrical equipment**
- **Protective systems**
- **Components and safety devices**

There are many more products and devices covered by the ATEX Directive. BSI can test the most common ones such as control equipment and sensors, transformers, fans, pumps, compressors, fork lift trucks, and lighting.

To sell these products in the EU it is **mandatory** for them to bear both the **Distinctive Community Mark and CE marking**. ATEX is often specified in contracts for countries outside of Europe.

Who is it for?

- Compliance with ATEX is not optional but it is the manufacturer's responsibility to ensure that their products will not cause an explosion during routine operation. Demonstrating compliance with the ATEX Directive 94/92/EC will provide assurance of product safety.
- If a product is to be used in a potentially explosive environment within the European union, then manufacturers would need to apply the CE and Ex mark to it.
- The regulations apply to all equipment intended for use in explosive atmospheres, whether electrical or mechanical, including protective systems and there are two categories of equipment
  (i) for coal mining and
  (ii) for industrial applications.

What products does it cover?

There are many products and devices covered by the ATEX Directive. We can test the most common ones such as:

- **control equipment and sensors,**
- **fans,**
- **compressors,**
- **lighting**
- **transformers,**
- **pumps,**
- **fork lift trucks,**

Boiler Efficiency Directive (92/42/EC)

What is the Directive about?

The Directive specifies minimum efficiency levels for heating boilers placed onto the European market. Whilst this directive still applies; the limits have, in practice, been made obsolete by other more stringent regulations on energy efficiency (eg: the UK Building Regulations).

The directive is expected to be recast in the near future as an implementing measure under the EU directive on energy-related products.

Who is it for?

This Directive is relevant for manufacturers of hot water boilers wishing to sell products in Europe. Once the requirements of the Directive have been met then a manufacturer will be able to apply CE marking to their products.

Heating boilers from 4kW up to 400kW output, using natural gas, LPG or oil as their fuel source. The directive specifies efficiency limits for "standard", "low temperature" and "condensing" boilers.

What products does it cover?

The directive excludes solid fuel boilers, water heaters (for sanitary purposes), one-off appliances, and appliances using fuels that are not commonly marketed (eg: biogas).

What is the procedure for complying?

Products in the scope of the directive have to be have their efficiency measurements evaluated by a Notified Body (such as BSI) under both "full-load" and "part-load" test conditions to try and simulate real-world use of the product. A two-stage process is specified, as follows:

1 **Type Examination** – Laboratory measurement of the efficiency to ensure it complies with the essential requirements of the directive. This may be at one of BSI labs, the client's lab, or a partner lab.

2 **Production Surveillance** – Ongoing assessment of production processes to ensure the minimum efficiency requirements continue to be met.

Gas Appliances Directive (2009/142/EC)

What is the Directive about?

The Directive is concerned with the safety of gas appliances and related components placed onto the European market, which must comply with the "essential requirements" detailed.

Who is it for?

This Directive is for manufacturers of Gas Appliances who are wishing to sell their products in the European Union. Once a manufacturer meets the requirements of the Directive they will be able to apply CE marking to their products.

What products does it cover?

Appliances that burn gas (of any type) for the purpose of space heating, cooking, water heating, refrigeration, lighting or washing – including small household products up to larger commercial appliances. Also applies to the supply of forced draught gas burners along with safety and control devices that are intended to be used within gas appliances.

What products does it NOT cover?

The directive excludes gas appliances that are used as part of an industrial process on industrial premises (Machinery Directive may apply) and gas appliances that have a normal water temperature exceeding 105°C (Pressure Equipment Directive may apply).

What is the procedure for complying?

All products in the scope of the directive have to be evaluated by a Notified Body (such as BSI) through a two-stage process, as follows:

1. Type Examination – Laboratory evaluation of the product to ensure it complies with the essential requirements of the directive (typically by using an EN standard, but this is not mandatory). This may be at one of BSI labs, the client's lab, or a partner lab.
2. Production Surveillance – Ongoing assessment of production processes to ensure the essential requirements continue to be met.

Lifts (95/16/EC)

What is the Directive about?

The Directive is the legal requirements that have been written by the European Parliament. Each Member State is then required to adopt the Directive into their own National statute laws. This has been done in the UK under Statutory Instrument 1997 No. 831 'The Lift Regulations 1997', which came into force on 1 July 1997, effectively giving the Industry two years to adopt the Directive before it became mandatory. Proof of compliance to the Directive is indicated by the manufacturer (or agent) of the safety component or the installer of the lift placing the CE marking on the product.

Who is it for?

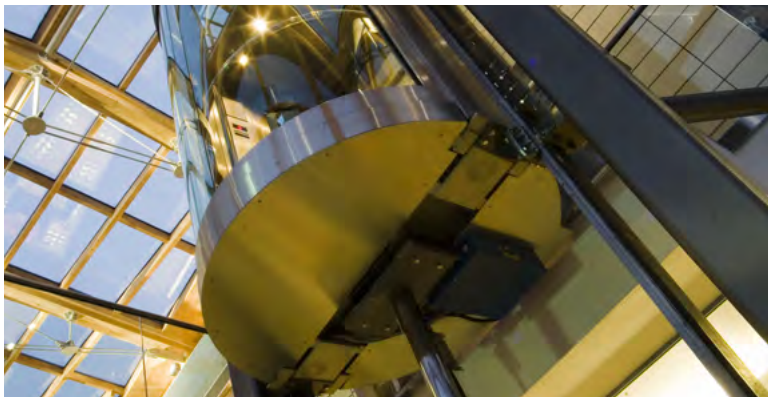
The Lifts Directive covers both safety components and whole lifts and covers the manufacture and installation of the lifts. The directive therefore applies to both manufactures and to installers of lifts within Europe.

What products does it cover?

The Lifts Directive (LD) applies to lifts permanently serving buildings and constructions. It also applies to safety components for use in such lifts. A 'lift' is defined as an appliance serving specific levels, having a car moving along guides which are rigid and inclined at an angle of more than 15 degrees to the horizontal and intended for the transport of:

- **Persons,**
- **Persons and goods,**
- **Goods alone if the car is accessible and fitted with controls situated inside the car or within reach of a person inside.**

Lifts moving along a fixed course even where they do not move along rigid guides fall within the scope of the Directive (for example, scissor lifts).



Marine Equipment (MED 96/98/EC)

What is the Directive about?

The Marine Equipment Directive covers any ship flying a flag of an EEA member state. The UK Competent Body is the Maritime and Coastguard Agency (MCA) formerly the Marine Safety Agency (MSA). Conformity assessment is through BSI, a Notified Body and the compliance mark is the Ship's Wheel.

B-7061
MED Certified

The MED is aimed at ensuring that equipment which has to meet the requirements of international conventions (e.g., SOLAS, MARPOL, etc.) agreed at IMO (the International Maritime Organisation), additionally meets a common standard of safety and performance.

It also ensures that certificates issued by European Union member states, or on their behalf by notified bodies, are acceptable to each member state through the harmonisation of their approval requirements.

Who is it for?

If you manufacture, purchase or supply any of the equipment listed in the MED, then this affects you.

What products do we test?

We are accredited for 42 of the product lines listed in Annex A.1 under Life Saving Appliances and Fire Protection.

This Directive covers a vast array of equipment, covering all aspects of a ships safety. Annex A.1 of the MED lists equipment that requires the assistance of a Notified Body for conformity assessment under the following headings:

- **Life-saving appliances**
- **Marine-pollution prevention**
- **Fire protection**
- **Navigation equipment**
- **Radio-communication equipment**

Annex A.2 - lists equipment for which no detailed testing standards exist in International instruments and as such will require the application of relevant national standards. Therefore, there are no specific conformity assessment requirements.

Low Voltage (LVD 2006/95/EC)

What is the Directive about?

The Directive covers all risks arising from the use of electrical equipment, including not just electrical ones but also mechanical, chemical (in particular, emission of aggressive substances), health aspects of noise and vibrations, and ergonomic aspects as far as ergonomic requirements are necessary to protect against hazards in the sense of the Directive. The LVD lays down 11 "safety objectives", which represent the essential requirements of this Directive.

Products are presumed to conform to the safety objectives of the LVD where the equipment has been manufactured in accordance with a harmonized standard. Alternatively, the manufacturer may construct the product in conformity with the essential requirements (safety objectives) of the LVD, without applying harmonised, international or national standards. In such a case the product will not benefit from presumption of conformity and therefore the manufacturer must include in the technical documentation a description of the solutions adopted to satisfy the safety aspects of the Directive.

Who is it for?

The Directive applies to manufacturers consumer goods that operate within specific voltage parameters (50 - 1000 V AC and 75 -1500 V DC) who wish to sell their product in Europe.

What products do we test?

The Electrical Equipment (Safety) Regulations (LVD) applies to all electrical equipment designed for use with a voltage rating of between 50 and 1000 V AC and between 75 and 1500 V DC. Plugs and Sockets are covered by separate legislation namely the Plugs and Sockets Etc. (Safety) Regulations 1994 (SI 1994 No. 1768).

Broadly, the scope of the LVD covers consumer and capital goods designed to operate within those voltage limits, including in particular:

- **Electrical appliances**
- **lighting equipment including ballasts,**
- **switch gear and control gear,**
- **electric wiring,**
- **appliance couplers and cord sets,**
- **electrical installation equipment, etc.**
- **electrical equipment intended for incorporation into other equipment such as transformers and motors.**

Non-automatic Weighing Machines (NAWI 2009/23/EC)

What is the Directive about?

This Directive relates to non-automatic weighing devices (NAWI), defined as where an operator is involved in some part of the weighing process. Any NAWI placed on the market in EU needs to comply with 2009/23/EC.

NAWI 2009/23/EC directive is the consolidate directive 90/384/ EEC as amended by Directive 93/68/EEC. This is the directive which is in force.

Who is it for?

If you are a manufacturer of non-automatic weighing equipment and you wish to sell into Europe, this Directive is for you.

What products do we test?

The Directive covers a wide range of weighing instruments. What you need to do to comply with the Directive depends on the product that you wish to CE mark.

For some instruments e.g. kitchen or bathroom scales for personal use at home, the requirements are simple, only the manufacturers name and the weighing capacity need be marked on the instrument.

For other weighing instruments the requirements are more stringent, including:

- **Retail and Industrial weighing machines**
- **Supermarket checkout weighing systems**
- **Weighbridges**
- **Laboratory and pharmaceutical balances**
- **Medical weighing machines**
- **Calculations of a toll, tariff, tax, bonus, penalty or similar type of payment**
- **Determination of mass for the application of laws or regulations**
- **Determination of mass for making up medicines on prescription in a pharmacy**
- **Determination of mass in analyses carried out in medical and pharmaceutical laboratories**
- **Determination of price on the basis of mass for the purposes of direct sales to the public and the making up of pre-packages**

Personal Protective Equipment Directive (PPE 89/686/EEC)

What is the Directive about?

The Personal Protective Equipment (PPE) is defined as 'any device to be worn or held by an individual for protection against one or more health and safety hazards'. The regulations also apply to any system placed on the market in conjunction with PPE for its connection to another external, additional device.

Manufacturers must ensure that products conform to either the relevant harmonised European standard, as transposed into a national (BS) or international (BS ISO) standard, or a technical specification deemed to be appropriate by a Notified Body to meet the Basic Health and Safety requirements of the Directive.

Who is it for?

This Directive is for manufacturers of Personal Protective Equipment who are wishing to sell their products in the European Union. Once you meets the requirements of the Directive you will be able to apply CE marking to the products.

The PPE Directive requires all manufacturers of personal protective equipment to meet common standards of quality and performance. It lays down a series of basic health and safety requirements which can be complied with directly for simple equipment and which form the basis of a series of standards for the design and performance of more complex equipment.

What products do we test?

We are actively involved in the below areas of CE marking, Type Examination, Articles 10 & 11A and 11B, (test, certification and quality assurance) of PPE:

- Hearing Protection
- Eye Protection
- Protective Footwear
- Protective Clothing
- Respiratory Protection
- Head Protection
- Protective Gloves
- High Visibility Garments

Pressure Equipment (PED 97/23/EC)

What is the Directive about?

This Directive provides a legal structure so that pressure equipment can be manufactured and sold throughout Europe without having to go through a local approval regime in every member state and makes sure that common safety standards are maintained. . Manufacturers are therefore able to meet the requirements for approval in any member state of the EU, and do not have to repeat the process when selling goods in any other state.

This Directive applies to the design, manufacture and conformity assessment of pressure equipment and assemblies with a maximum allowable pressure greater than 0.5 bar gauge including vessels, piping, safety accessories and pressure accessories.

Not all pressure equipment is covered by this Directive as The Transportable Pressure Equipment Directive and the Simple Pressure Vessels Directive both cover certain equipment and products which present a relatively low hazard from pressurization are covered by the Machinery Directive.

Who is it for?

The Directive applies to manufacturers of pressure equipment and assemblies with a maximum allowable pressure greater than 0.5 bar gauge (i.e. 1.5 bar absolute). This includes manufacturers of vessels, piping, safety accessories and pressure accessories.

What products do we test?

Typical examples of pressure equipment covered include:

- **shell and water tube boilers**
- **heat exchangers**
- **plant vessels**
- **pressurised storage containers**
- **industrial pipework**

Typical examples of safety accessories include:

- **safety valves,**
- **bursting disc safety devices,**
- **buckling rods,**
- **controlled safety pressure relief systems**

and

- **pressure switches**
- **temperature switches**
- **fluid level switches**

where these are used in safety related applications.

Transportable Pressure Equipment (TPED 2010/35/EU)

What is the Directive about?

The Directive covers the placing on the market of transportable pressure vessels and any valves and accessories attached to them.

It provides a legal structure so that pressure equipment can to be can be manufactured, sold and transported across Europe and beyond without having to go through a local approval regime in every member state.

It applies to the design, manufacture, conformity assessment and periodic reassessment of transportable cylinders, tubes, cryogenic vessels and tanks for transporting gases as well as hydrogen cyanide, hydrogen fluoride and hydrofluoric acid. It also covers associated valves and includes both refillable and non-refillable cylinders, applying to both existing and new equipment introduced since 1st July 2001. Existing equipment is checked for compliance during periodic assessments. A specific list of exclusions from this directive exists.

Who is it for?

Its for manufacturers of of transportable cylinders, tubes, cryogenic vessels and tanks for transporting gases as well as hydrogen cyanide, hydrogen fluoride and hydrofluoric acid.

The Directive (also known as the TPED) is one of a series of measures implementing ADR - the European agreement on the International Carriage of Dangerous Goods.

It is implemented in the UK along with ADR by The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2004

What products do we test?

Typical examples of pressure equipment covered include:

- **Fuel gas cylinders**
- **Welding gas cylinders**
- **Road tankers for transport of compressed gases**
- **Battery vehicles containing bundles of cylinders joined by a manifold**
- **Containerized vessels for compressed gases**
- **Cylinders incorporated in life rafts and life jackets**
- **Vessels for cryogenically cooled gases**

Pressure vessels and apparatus used for non-transport related applications will usually be within the scope of the Pressure Equipment Directive 97/23/EC instead.

Equipment placed on the market before 1st July 2001 does not require initial conformity assessment but must be reassessed at the time of its periodic inspection under the ADR regulations (European agreement on the International Carriage of Dangerous Goods) as defined

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in the ADR packing instruction P200 and dependent on the gas carried.

Other specific exclusions are:

- Vessels for non-hazardous gases under 2 bar
- Vessels incorporated into vehicles for their operation
- Vessels for pressurized foodstuffs or fizzy drinks
- Vessels not being used for work
- Aerosol dispensers covered by 75/324/EC
- Gas cartridges
- Lighters and refills
- Refrigerators with less than 12kg of refrigerant
- Shock absorbers and gas springs with a volume less then 1.6 litres and a P.V not exceeding 80 bar.litres subject to certain provisions
- CO2 sparklets of limited pressure and size (derogation 584)
- Unpressurised flasks of certain cryogenic inert gases for cooling of medical and biological specimens.
- Fire extinguishers (which are covered by the PED)
- Equipment designed principally to withstand forces due to other functions than the containment of pressure.
- Cylinders for breathing apparatus (which are covered by the PED)

Simple Pressure Vessels 2009/105/EC

What is the Directive about?

This Directive applies to simple pressure vessels manufactured in series. For the purposes of this Directive, "simple pressure vessel" means any welded vessel subjected to an internal gauge pressure greater than 0,5 bar which is intended to contain air or nitrogen and which is not intended to be fired.

Who is it for?

The purpose of the SPVD is to provide for a legal structure whereby certain types of pressure vessel can be manufactured and sold throughout the European community without having to go through a local approval regime in every member state. The means by which this is achieved is to ensure common standards of safety for all such vessels sold within the European Economic Area. Manufacturers are therefore able to meet the requirements for approval in any member state of the EU, and will not have to repeat the process when selling goods in any other state.

What products does it cover?

'Simple pressure vessels' are vessels which are intended to contain air or nitrogen at a gauge pressure greater than 0.5 bar but less than or equal to 30 bar and not intended to be exposed to heat. They must be manufactured in series production and be of welded steel or aluminium construction with a total pressure volume product not exceeding 10,000 bar.litres.

Although the Directive applies to the vast majority of common pressure containers designed for containing air, the scope is actually very strictly defined. Included would be most compressor receivers, but any vessel not designed for air or nitrogen or not made of ordinary steel or aluminium is automatically excluded, as are any vessels with a design pressure greater than 30 bar or over a certain size.

The Directive applies to any Simple Pressure Vessels 'placed on the market' or 'brought into service' within the EU. This means that they explicitly apply to any vessel which is sold by one company to another, or to a private user, and they also apply to any vessel which is made or imported for the manufacturer/importer's own use.

Products falling outside the scope of the Simple Pressure Vessels Directive will almost certainly fall within the scope of the Pressure Equipment Directive.

The Construction Products Regulation (CPR 305/2011)

What is the Construction Products Regulation about?

The Construction Products Regulation (CPR) has been adopted by the European Commission and UK Government and replaces the Construction Products Directive (CPD). It is now mandatory for products which fall under the scope of the regulation to have CE marking.

Who is it for?

According to the Regulation, the requirement for CE marking applies to: "any product or kit which is produced and placed on the market for incorporation in a permanent manner in construction works or parts thereof and the performance of which has an effect on the performance of the construction works with respect to the basic requirements for construction works."

To find out whether a product falls within the scope of CPR, a product has to comply with the intended use of the harmonised European Standard published in the Official Journal of the European Union (OJEU).

What products do we test?

Manufactures or importers of products that are within the scope of the Regulation will be required to declare that the product complies with the Regulation and display the CE mark before they can be sold in the UK and Europe. There are currently over 400 Harmonized standards (hEN's) that are covered by CPR. Products covered range from windows to traffic furniture.

Next steps

For products that are within the scope of the Regulation, manufacturers or importers are required to declare that the product complies with the Regulation and display the CE mark, before they can be sold in the UK and Europe.

The BSI Kitemark can help with compliance to CPR. BSI Kitemark certification exceeds the basic requirements of CE marking and demonstrates the quality and reliability of products. The BSI Kitemark includes the initial type testing required for CE marking, so we can provide the evidence needed to comply with the new Regulations

The Medical Device Directives

CE marking is the medical device manufacturer's claim that a product meets the essential requirements of all relevant European Directives and is a legal requirement to place a device on the market in the European Union. The three medical devices directives are:

- **Medical Devices Directive (MDD)**
- **Active Implantable Medical Devices Directive (AIMDD)**
- **In Vitro Diagnostics Directive (IVDD)**

The EU is currently reviewing medical device regulations.

Medical Devices (MDD 93/42/EEC)

What is the Directive about?

'Medical device' means any instrument, apparatus, appliance, software, material or other article ... intended by the manufacturer to be used for human beings for the purpose of: diagnosis, prevention, monitoring, treatment or alleviation of disease, diagnosis, monitoring, treatment, alleviation of or compensation for injury or handicap, investigation, replacement or modification of anatomy or physiological process, control of conception, and which does not achieve its principal intended action ... by pharmacological, immunological or metabolic means, but which may be assisted in its function by such means.

Who is it for?

The manufacturer is responsible for ensuring their products comply with the Essential Requirements of the Directive before affixing the CE marking and legally gaining access and free movement within the EEA. A Notified Body will be required for all but the lowest risk products (Class 1 non-sterile and non-measuring) for conformity assessments before placing the device on the European market.

What products do we certify to the Directive?

It covers an extremely wide range of products, in the following areas:

- **Active devices**
- **Dental**
- **Microbiology**
- **Ophthalmic**
- **Orthopaedic**
- **Vascular**
- **Woundcare**
- **Device drug**
- **Products utilizing Animal derivatives**

Active Implantable Medical Devices (AIMDD 90/385/EEC)

What is the Directive about?

AIMDs are subject to strict standards and definitions before they can reach global markets. Directive 90/385/EEC regulates the market readiness and service parameters for active implantable medical devices (AIMDs). In order to meet regulations under 90/385/EEC, a product must meet the directive's definition of an AIMD: a medical device that is – at the same time – both "active" and "implantable."

This definition may apply to an entire system or to interchangeable parts intended to form a system (together along with other devices). In these cases, each part belonging to a system is covered under the Directive, regardless of whether such part on its own is "active," "active and implantable" or neither.

Who is it for?

The AIMD Directive must be met by all organizations who manufacture a product that meets the AIMD definition above. AIMD products cannot be sold into the EEA without a CE mark for AIMDD.

A Notified Body is required for ALL AIMD products for conformity assessments before placing the device on the European market.

What products do we certify to the Dirctive?

- Active medical devices
- Diaphragm stimulators
- Implantable cardiac pacemakers
- Cochlear implants
- Implantable defibrillators
- Implantable active drug administration device
- Leads, electrodes, adaptors for implantable cardiac pacemakers and defibrillators
- Catheters, sensors for implantable active drug administration device
- Implantable nerve stimulators
- Implantable active monitoring devices
- Bladder stimulators
- Programmers, software, transmitter accessories to a device that is active and implantable
- Sphincter stimulators

In Vitro Diagnostics Directive (IVDD 98/79/EC)

What is the Directive about?

IVDs are medical devices and accessories used to perform tests on samples, such as blood, urine, tissue, taken away from the human body to help detect infection, diagnose a medical condition, prevent disease or monitor drug therapies.

The Directive provides regulatory requirements that facilitate the free trade within the European Economic Area (EEA). The IVDD specifically addresses the safety, quality and performance of In Vitro Diagnostic medical devices(IVDs). The aim of the Directive is to ensure that IVDs do not compromize the health and safety of patients, users and third parties and attain the performance levels specified by the manufacturer.

Who is it for?

The manufacturer is responsible for ensuring their products comply with the Essential Requirements of the Directive before affixing the CE marking and legally gaining access and free movement within the EEA. However, for some devices the use of a Notified Body may be required for conformity assessments before placing the device on the European market.

What products do we assess against the Directive?

- **HIV test kits**
- **Immunoassay analysers**
- **Blood gas analysers**
- **The calibrators and control materials used to verify the performance of the analysers**
- **Specimen receptacles and blood collection tubes**
- **Blood glucose meters and strips**

Radio Equipment & Telecommunications Terminal Equipment (RTTE 1999/5/EC)

What is the Directive about?

The European Radio equipment and Telecommunications Terminal Equipment (R&TTE) Directive (1999/5/EC) was published on 7 April 1999. It covers all radio equipment and all equipment intended to be connected to public telecommunications networks. As a Notified Body for the RTTE Directive, we are well placed to offer guidance to manufacturers or importers on the most applicable and practical routes to compliance that best fit your current structure.

Who is it for?

This Directive is relevant for manufacturers of all radio communication apparatus.

It is important to note that equipment within the scope of this Directive must meet the essential requirements of both the Low Voltage Directive and the Electromagnetic Compatibility Directive. The Directive also requires equipment to be constructed for efficient use of the radio spectrum, and to avoid interference with terrestrial and orbital communications. Additional requirements are made for certain classes of equipment.

What products do we test?

The Directive applies to "radio equipment" and to "Telecommunications Terminal Equipment". TTE is equipment that can be connected directly or indirectly to the public telecommunications network. The method of connection can be by wire, optical fibre, radio or any other electromagnetic means.

The Directive includes provisions that apply to equipment which is capable of being connected to a public telecommunications network even if that is not its intended purpose.

Examples of equipment which are included within the scope of the Directive are mobile radio transceivers, telephones, fax machines, private exchanges (PABX), modems, terminal adapters and extension bells. Cordless and mobile phones are included as are satellite transceivers.

It's important to realize that equipment which is within the scope of this Directive may also fall within the scope of other Directives (in particular the Medical Devices directives) and the requirements of these directives must also be met if appropriate.

Certain equipment is specifically **excluded** from the Directive. These are:

- **Equipment for police, military and state-security purposes**
- **Radio equipment for radio amateurs, unless it is commercially available**
- **Equipment within the scope of directive 96/98/EC on Marine Equipment**
- **Cables and wiring**
- **Receive-only equipment intended solely for the reception of sound and TV broadcasts**
- **Certain apparatus for civil aviation and air traffic management**

Measuring Instrument Directive (MID 2004/22/EC)

What is the Directive about?

The Measuring Instrument Directive came into force in 2006 and aims to create common measuring standards across the EU. In order to display the CE marking under this Directive, you must prove the products are durable, reliable, suitable for intended use and sensitive to the required measurement with repeatable results.

Who is it for?

This Directive is for manufacturers of Measuring Instruments who are wishing to sell products in the European Union. Once you meet the requirements of the Directive you will be able to apply CE marking to the products.

What products do we test?

Devices include:

- gas, water and electricity meters
- material measures
- gas exhaust analysers
- taximeters
- automatic weighing instruments.

Electromagnetic compatibility (EMC 2004/108/EC)

What is the Directive about?

The main objective of the Directive is to regulate the compatibility of equipment regarding EMC. The EMC Directive first limits electromagnetic emissions of equipment in order to ensure that, when used as intended, such equipment does not disturb radio and telecommunication as well as other equipment.

The Directive also governs the immunity of such equipment to interference and seeks to ensure that this equipment is not disturbed by radio emissions when used as intended.

Who is it for and what does it cover?

The Directive is for manufacturers of apparatus liable to cause electromagnetic disturbance, or the performance of which is liable to be affected by such disturbance who want to sell products in Europe.

Section 4
Industry Sectors

Construction
Personal Safety
Electrical
Services/Other

Construction

The principal certification in the UK for construction is the **Kitemark**.

BSI can offer a wide range of construction certification, assessment and testing services including polymeric plastic pipes and fittings, windows, doors, insulation materials, concrete and glass products.

Many of BSI's test facilities have UKAS accreditation and BSI offers a complete CE marking service.

Construction certification schemes:

- **Windows and doors**
- **Glass and insulating glass units**
- **Window installations**
- **Building materials**
- **Drainage products**
- **Concrete, masonry and ancillary components**
- **Cements**
- **Ladders and access equipment**
- **Insulation materials**
- **Masonry, concrete, and ancillary components**
- **Plumbing and heating**
- **Polymeric plastic pipes**
- **Road products**

There are over 400 construction standards that BSI can certify against.
The most common ones include:

BS EN 206-1 and BS 8500	Ready mixedconcrete
BS 7412	Windows
PAS 24 / BS 7412	Enhanced security performance of windows
PAS 24	Doors
BS EN 1279-2 & BS EN 1279-3	Insulated glass
BS EN 12150	Safety glass
BS EN 124	Manhole covers
BS 8213-4:2007	Window installation
BS EN 1401-1	Plastic piping
BS EN 197-1	Portland cement
BS EN 1057	Copper tubes

Construction Products Regulation (CPR)

The CPR has been adopted by the European Commission and UK Government and replaces the Construction Products Directive (CPD). As a result of the change, CE marking will soon become mandatory in the UK for construction products. Manufacturers and importers have until July 2013 to ensure that their construction products meet the CE requirements of the new Regulation. The move to CPR builds on the success of the CPD, allowing construction products that have been assessed against harmonized standards to be placed legally on the market anywhere in the European Economic Area.

How does CPR affect BSI clients?

Any client, who manufactures or imports products that are within the scope of the Regulation, will be required to declare that the product complies with the Regulation and display the CE mark, before it can be sold in the UK and Europe.

The responsibility for ensuring that a product has the correct characteristics for a particular application rests with the building designers, contractors and local building authorities, and manufacturers and importers will be required to provide the necessary testing evidence.

How can BSI help clients prepare for CPR?

Kitemark can help you prepare for 2013, when CE marking will become mandatory under the Construction Product Regulations. Kitemark certification exceeds the basic requirements of CE marking and demonstrates the quality and reliability of your products. Kitemark includes the initial type testing required for CE marking, so we can provide the evidence that you need to comply with the new regulations

Window and Door BSI Kitemark™

BSI provides a complete testing and certification service for doors and windows made out of a range of materials including aluminium, steel, timber and PVC-U. BSI test facilities enable assessment of these products to both British and European test methods. These services are UKAS accredited and include a modern, computer operated weather tightness test facility. BSI's full testing (EN14351 – Windows and Doors) and assessment service, offers Kitemark certification for the following products:

- PVC-U doors, windows and profiles
- Steel and composite doors and windows
- Timber doors and windows
- Aluminium doors and windows

BSI test for the following characteristics:

- Weather tightness
- Durability
- Impact strength
- Installation
- Noise penetration
- Enhanced security
- Lock cylinders
- Security
- Temperature cycling heat retention and radiation
- Operation and strength performance testing
- Thief resistant locks

BSI have been providing Kitemark certification, CE marking and product testing for more than 25 years.

Specifiers Choice

Some of the major specifying organizations such as London Housing Consortium (LHC), National House Building Council (NHBC) and National Building Specification (NBS) express strong preferences for Kitemark and in many instances insist on Kitemark products or services.

SBD Scheme

The Secured by Design (SBD) scheme was introduced in 1989 by the Association of Chief Police Officers to help them stem the rising tide of burglaries. The SBD document requires that all windows and door assemblies are covered by Kitemark or equivalent certification to BS 7950 for domestic windows and PAS 24 for residential doors.

Windows are tested by replicating the forces that would be applied by an adult male intruder using implements such as a screwdriver and crowbar. All hardware and potential access points on the window are tested in an attempt to create a hole through which an average adult male could enter. The test for enhanced security is purely against intruder attack rather than a test of an individual hardware component.

Windows and Doors standards:

PAS 24:2012	Enhanced security performance requirements for doorsets and windows in the UK
BS 644: 2009	Timber windows
BS 4873:2009	Aluminium alloy windows and doorsets
BS 6510:2010	Steel-framed windows and glazed doors
BS 7412:2007	Windows and doorsets made from unplasticized polyvinyl chloride (PVC-U) extruded hollow profiles
BS 8529:2010	Composite doorsets - Domestic external doorsets - Specification
EN 12209:2003	Locks and latches for doors in buildings - CE marking
BS 3621:2007+A2:2012	Thief resistant lock assembly. Key egress
BS 8621: 2007+A2:2012	Thief resistant lock assembly. Keyless egress
BS 10621: 2007+A2:2012	Thief resistant dual-mode lock assembly
TS007	Enhanced security lock cylinders

BS 7386:1997	Draught strips for the draught control of existing doors and windows in housing
BS EN 12608:2003	PVC-U profiles for the fabrication of windows and doors
BS 4787-1:1980	Internal and external door sets, door leaves and frames
BS EN 1935: 2002	Building hardware, single-axis hinges
BS EN 1154:1997	Controlled door closing devices
BS EN 179:1998	Emergency exit devices
PAS 3621:2011/ PAS 8621:2011/PAS 10621	Multipoint locking assemblies Keyed/ Keyless/Dual mode egress

Glass and insulating Glass

BSI has a wealth of experience in the certification and testing of glass related products for the construction industry. Our Kitemark and CE marking services cover a wide range of glass related products in the construction industry including:

- **Safety glass (toughened, heat soaked, laminated glass)**
- **Insulating glass units**
- **Vehicle glass**
- **Glass for domestic appliances**

Window Energy Rating BSI Kitemark™

This BSI Kitemark is based on the approved document L1B of the Building Regulations. This stipulates that all replacement windows must have:

- **A Window Energy Rating (WER) of at least band C**
- **A declared U value of 1.6 W/m²K**

To comply with the installation requirements for replacement windows after October 2013, fabricators must provide evidence of energy efficiency. BSI's Kitemark scheme for Window Energy Rating provides a quality assured process and supporting audit trail from simulation of the WER through to installation. The WER Kitemark label can be used on the product down the supply chain ensuring that retailers and installers can use Kitemark Window Energy Rating certified windows.

Fabricator Scheme

Individual fabricators can supply BSI with the appropriate simulation information and then undergo a visit if necessary, allowing fabricators to gain a WER Kitemark quickly and efficiently.

System Supplier Scheme

There are two additional options to assist systems suppliers and their fabricators achieve Kitemark Window Energy Rating Scheme.

Option 1- The full group scheme

This scheme offers system suppliers their own branded Kitemark scheme label and the ability for their fabricators to be sub-licensees of their main licence. The System Supplier will pay an application and assessment fee and upon approval a Kitemark will be awarded. BSI will then offer a very competitive package to their Fabricators as a sub-licensee.

Benefits of the full group scheme

- System Suppliers will have their own bespoke labelling
- System Suppliers can add additional windows during the year with no additional charge
- Reduced administration for System Suppliers as the simulation information will be applied to all fabricators negating the need to supply individual fabricator simulations
- Fabricators with different window simulations
- Reduced application fee for Fabricators
- Quicker certification timescales
- Companies achieving a B rating under the BSI scheme will be eligible to apply for the Energy Savings Trust Recommended scheme

Option 2 - Evaluation of system simulations

This option allows the System Supplier to obtain approval for all their current window simulations, but will not result in a System Supplier WER Kitemark Licence. As the necessary evaluation has already been undertaken, BSI can offer a competitive package to Fabricators who apply for a Kitemark licence.

Benefits of the evaluation of system simulations

- Reduced administration for the System Supplier as the simulation information be applied to all Fabricators negating the need to supply individual Fabricator simulations
- Reduced administration fees for Fabricators
- Quicker certification timescales
- Companies achieving a B rating under the BSI scheme will be eligible to apply for the Energy Savings Trust Recommended scheme

Vehicle Glass Testing

BSI Kitemark certification for vehicle glass testing includes road vehicle safety glass BS AU 178a. This standard specifies requirements for safety glass for installation as windscreens, other windows or as partitions in motor vehicles and trailers, includes tests. This edition aligns with ECE Regulation 43.

Vehicle Component Testing

Before they can be on the market, vehicle components are tested and approved. Most countries insist on proof of compliance with national or international standards, regulations or directives covering safety and/or environmental performance.

Approval for the UK and Europe involves testing samples of the product and assessing the manufacturer's quality system to ensure that ongoing production meets the appropriate requirements such as ECE Regulations or EU Directives.

Manufacturers wishing to market vehicles within Europe can take advantage of the quick approvals service operated by BSI with the UK Vehicle Certification Agency (VCA).

Services Provided:

- VCA approval of Vehicle Glass Products
- Society of Automotive Engineers and Federal Motor Vehicle Safety Standards approval for components for US market

Drainage

BSI offers a wide variety of Kitemark schemes and testing for a range of drainage products for the collection and conveyance of wastewater. Manhole covers and gully tops with a clear opening up to and including 1000mm for installations within areas subjected to pedestrian and/or vehicular traffic, are rigorously tested for materials, design, construction, function, dimensions and marking.

Concrete and Masonry

BSI operates a wide range of Kitemark schemes covering concrete and masonry as well as offering a full CE marking service for cement based products, aggregates, admixtures, building limes and other similar products

Personal Safety

Impact Protection – Helmets & Industrial Safety Helmets

Head protection ranges from a basic impact helmet such as used by a cyclist, to a sophisticated helmet with integrated respiratory and communications equipment. For legal road use all helmets and visors must be certified as specified by the Road Traffic Act (see Regulation 22.05, BS 6658, BS EN 4110:1999). As one of the world's leading test laboratories in protective headwear, BSI is accepted as a technical service provider for the Vehicle Certification Agency, the UK approval authority for Regulation 22.05. In addition, BSI is the UK test authority for Standards Australia Quality Assessment Systems for vehicle user helmets and visors to AS 1698 and AS 1609 respectively. BSI has agreements with many countries worldwide. Kitemark certification is also available for vehicle user helmets.

Helmets and Industrial Safety Helmet standards:

UN ECE Reg 22.05	Protective helmets of mopeds and motor cycles
BS 6658: 1985	Protective helmets for vehicle users
BS EN 4110: 1979	Visors for vehicle users
BS EN 1078:2012	Helmets for cyclists, skateboards and roller skate Users
BS EN 397: 2012	Industrial safety helmets
BS EN 812: 2012	Industrial bump caps
PAS 017: 1995	Riot helmets for police use
PAS 028: 2002	Marine safety helmets

Sports Helmets

The sports market is becoming increasingly global, with national and international regulations to which manufacturers need to comply with. BSI's client portfolio covers a complete cross section of sports manufacturing, from large multinational corporations to small ventures covering such sports as Cycling, Rugby, Cricket, Motorsports, Equestrian and more.

Sport Helmet standards:

BS EN 7928: 1998	Head protectors for cricketers
BS EN 1384: 2012	Helmets for equestrian activities
PAS 015: 2011	Equestrian helmets
BS EN 966:2012	Helmets for airborne sports
BS EN 1077: 2007	Helmets for alpine skiers and snowboarders

Body Armour & Playground Equipment

Everybody, at some time in their life, will require protection from the potential of injury. When a product is called into action that saves, limbs, vital organs and other body parts, knowing that the product has been tested to conventional limits means everything. BSI Impact Protection Laboratory tests a wide range of protective products for the body, whether work or sport/leisure related.

BSI certification includes:

- **Knee, elbow pads (Motorcycling) and back protectors**
- **Knee and elbow pads (Sport)**
- **Gaiters and protective footwear**
- **Rugby clothing**
- **Cricket boxes**
- **Football shin pads**

Body armour standards:

BS EN 1177: 1998	Impact absorbing playground surfacing
BS EN 1621-1 & 2	Motor cycle protectors
IRB/REG12/Iss 1/2005	Specific items for rugby players' clothing (headgear, shoulder padding & banned items)
BS EN 1176-various parts	Playground equipment and surfacing

Respiratory Equipment

All respiratory equipment must undergo type examination using a Notified Body before CE marking can be affixed. Where the respiratory device is incorporated with headwear, eyewear or hearing protection BSI can offer an integrated test and certification package.

Typical testing BSI can provide includes:

- Breathing resistance
- Flammability
- Filter penetration (solids)
- Dust clogging
- Filter penetration (liquids)
- Field of vision
- Total inward leakage (TIL)
- Mechanical strength testing
- CO2 build up
- Practical performance testing

Respiratory product standards:

BS EN 140: 1999	Half/ quarter masks
BS EN 14387: 2004+ A1:2008	Gas filters & combined filters
BS EN 143: 2000	Particle filters
BS EN 149: 2001+ A1:2009	Filtering half masks to protect against particles
BS EN 12941: 1998 + A2:2008	Powered hoods and helmets
BS EN 12942: 1998 + A2:2008	Powered air for full/half masks
BS EN 405: 2001 + A1:2009	Valved combined filtering half mask
BS EN 136: 1998	Full face masks - Class 1, 2, or 3
BS EN 137: 2006	Self contained breathing apparatus
BS EN 138: 1994	Fresh air hose for use with face mask
BS EN 14594: 2005	Continuous flow compressed airline breathing apparatus
BS EN 402: 2003	Self contained breathing apparatus escape mask
BS EN 1146: 2005	Self contained open-circuit compressed air breathing apparatus with escape hood

Hearing Protection

BSI has Notified Body status and can test earmuffs, earplugs, earmuffs with electrical audio input and level dependent earmuffs. The level at which employers must make a workers' risk assessment and provide information and training is now 80 decibels. There is also a ceiling of 87 decibels (taking into account hearing protection) above which workers should not be exposed.

Hearing Protection standards:

BS EN 352 – 1: 2002	Earmuffs
BS EN 352 – 2: 2002	Earplugs
BS EN 352 – 3: 2002	Earmuffs on safety helmet
BS EN 352 – 4: 2001	Level dependent earmuffs
BS EN 352 – 5: 2002	Active noise reduction earmuffs
BS EN 352 – 6: 2002	Earmuffs with electrical audio input
BS EN 352 –7: 2002	Level dependent earplugs

Eye Protection

BSI test for personal eye protection equipment including welding filters, mesh face screens, sunglasses & swimming goggles. Eye protection equipment is used in many situations from industrial to recreational. In many instances the eye protection is integrated into head protection. The PPE Directive (89/686/EEC) for CE marking usually classifies eyewear as that of intermediate design and is graded according to the level of protection it provides. In the case of EN 166:2002 this is marked on the product as a series of letters or numbers to help the purchaser select the correct type of eye protection for the relevant hazard. 'Non-Safety' prescription spectacles may not afford the wearer the appropriate level of protection.

Eye Protection standards:

BS EN 166: 2002	Personal eye protection
BS EN 169: 2002	Welding filters
BS EN 170: 2002	Ultraviolet filters
BS EN 171:2002	Infrared filters
BE EN 172: 1995	Sun glare filters for industrial use
BS EN 175: 1997	Welders eye and face Protection
BS EN 1731: 2006	Mesh face screens
BS EN 1836: 2005	Sunglasses and sun glare filters
BS 4110: 1979	Visors for vehicle users
BS 5883: 1996	Swimming goggles
BS 7930-1 1998	Racket sports – squash players eye protection

Protective Workwear

BSI certifies against combined risks, flame retardant and high visibility warning clothing, chemical, biological, radiological and nuclear (CBRN) protection clothes. As with all protective equipment, protective clothing will only perform within specified parameters and it is important that all users are familiar with the limitations of the equipment.

Protective Clothing Standards:

BS EN 464: 1994	Protection against liquid and gaseous chemicals, including aerosols and solid particles
BS EN ISO 15025: 2002	Protective clothing against heat and flame
BS EN 14605: 2005	Protection against chemicals with spray tight connections(Type 4 Equipment)
BS EN 533: 1997	Protective clothing against heat and flame
BS EN 14605: 2005	Protection against liquid chemicals with liquid tight connections (Type 3 Equipment)
BS EN 702: 1995	Protective clothing against heat and flame
BS EN 14605: 2005	Protection against liquid chemicals
BS EN 943-1:2002	Protective clothing against liquid and gaseous chemicals, aerosols and solid particles
BS EN 468: 1995	Protection against liquid chemicals
BS EN 943-2: 2002	Protective clothing against liquid and gaseous chemicals
BS EN 469: 2005	Protective clothing for firefighters
BS EN 1073-1: 1998	Protective clothing against radioactive contamination
BS EN 510: 1993	Protective clothing for use with risk of entanglement with moving parts
BS EN 1073-2:2002	Protective clothing against radioactive contamination
BS EN 530: 1995	Abrasion resistance of protective clothing material
BS EN 1149-1: 2006	Protective clothing -electrostatic properties
BS EN 531: 1995: 1998	Protective clothing for workers exposed to heat
BS EN 1149-2: 1997	Protective clothing -electrostatic properties
BS EN ISO 6529: 2001	Protection against permeation by liquids and gases (ISO 6529:2001)
BS EN ISO 10819: 1997	Mechanical vibration and shock (ISO 10819: 1996)
BS EN ISO 13995: 2001	Protection against mechanical properties (ISO 13995: 2000)

BS EN ISO 13997: 1999	Resistance to cutting by sharp objects (ISO 13997: 1999)
BS EN 342: 2004	Protection against cold
BS EN 343: 2003	Protection against foul weather

High Visibility Clothing

The standard for high visibility requires that clothing must provide visibility of the user in a hazardous situation under any light conditions by day, and under illumination by vehicle headlights in the dark (24hr visibility). This is especially the case for incidents on or near roads or motorways.

The tests for garments and materials within the standard include:

Material Tests

- Colour - chromaticity and luminance
- Colour fastness and physical tests
- Dimensional stability and breathability / waterproof properties

Garment Tests

- Design assessment
- Minimum areas of material

High Visibility Clothing Standards:

BS EN 471: 2003	High visibility clothing

Protective Gloves

Protective gloves are often an integral part of the required personal protection kitbox. Many gloves are designed to protect against one specific type of hazard. Firefighters gloves are multi hazard resistant including additional protection against upper hand impact and the inclusion of high visibility strips. Add to this the watertight anti-slip capacity and the firefighters gloves offer protection against almost any hazard.

Protective Glove standards:

BS EN 60903:2003	Live working. Gloves of insulated materials
BS EN 659: 2003 + A1:2008	Protective gloves - Firefighters
BS EN 374-1: 2003	Protective gloves - chemicals & micro organisms
BS EN 374-2: 2003	Protective gloves - micro organisms
BS EN 374-3: 2003	Protective gloves - chemical permeation
BS EN 388: 2003	Protective gloves - mechanical risks
BS EN 407: 2004	Protective gloves - heat and fire
BS EN 420: 2003 + A1:2009	Gloves - general requirements
BS EN 511:2006	Protective gloves - cold

Footwear

The correct safety footwear, whether it be for a construction worker, a motorcyclist or a fireman, is vital to ensure that feet are adequately protected. Some types of footwear are deemed a PPE Complex category. In addition to satisfying the initial requirements of the directive, the manufacturer must also demonstrate annually to a Notified Body that the product continues to comply with the requirements of the standard against which it was initially tested.

Footwear standards:

BS EN 15090:2006	Footwear for firefighters
BS EN ISO 20345:2011	Safety footwear
BS EN ISO 20346:2004	Personal protective equipment. Protective footwear
BS EN ISO 20347:2011	Occupational footwear

Fall Arrest Equipment

BSI certifies against several standards covering fall arrest equipment

BS EN 361	Harnesses
BS EN 358	Work Positioning Belts
BS EN 795	Anchor Points

Condoms & Medical Gloves

BSI offer Kitemark to a range of standards for surgical and examination gloves for medical purposes and condoms made from latex and other materials such as polyisoprene.

BS EN 455 various parts	Surgical glove
BS EN ISO 4074:2002	Natural latex rubber condoms. Requirements and test methods
BS ISO 23409:2011	Male condoms. Requirements and test methods for condoms made from synthetic materials

Fire Detection and Suppression:

BAFE Approval

As well as offering Kitemark and CE marking services to the fire industry BSI provides certification services, through UKAS approvals to EN45011 product certification and EN45012 quality management for the following BAFE Schemes:

- **SP101** - Contract maintenance of portable fire extinguishers.
- **SP203** - Design, installation, commissioning and maintenance of fire detection & alarm systems, suppression systems and emergency lighting systems

Key steps to achieve Kitemark for SP203:

1. Application

Clients must complete a quotation request form (available in the SP203 sales pack) and return it to BSI.

2. Assessment

Once the client has accepted the proposal, an assessor will contact them for an initial assessment to the scheme.

- **Pre-Assessment Gap Analysis**

  This analysis is available if the client as any concerns about their readiness for a full initial assessment. It also gives them the chance to talk through any queries they may have before the initial assessment takes place.

- **Initial Assessment**

  This involves different activities including two site visits to inspect recent installations. Further details are listed in the application pack.

3. BSI Kitemark Licence Issue

Once the Kitemark Assessment process has been completed the licence will be awarded, together with the BAFE Certificate, raised via the member's area of our website.

BSI Kitemark™ for Fire Alarm Installations

The Chief Fire Officers Association now strongly recommends third party certification by a UKAS accredited organization for companies who design, install, commission and maintain fire detection and alarm systems. This now applies to all fire detection systems, as of September 2008.

The SP203 Kitemark Scheme, recognizes that many companies specialize in certain aspects of fire alarm services and this is reflected in the scheme. By using a flexible modular structure, SP203 allows clients to gain Kitemark certification in all the scheme modules listed OR just those modules under which they are competent to work.

The four modules are:

1. **System design**
2. **Installation**
3. **Commissioning & handover**
4. **Maintenance**

SP203 standards	
BS 5839-1:2002 +A2:2008	Fire detection and fire alarm systems for buildings. Code of practice for system design, installation, commissioning and maintenance
BS 5839-6:2004	Fire detection and fire alarm systems for buildings. Code of practice for the design, installation and maintenance of fire detection and fire alarm systems in dwellings
BS 5839-8: 2008	Fire detection and fire alarm systems for buildings. Code of practice for the design, installation, commissioning and maintenance of voice alarm systems
BS EN 15004-1:2008	Fixed fire fighting systems. Gas extinguishing systems. Design, installation and maintenance. Also includes where applicable BS 6266, BS 7273-182 Parts 1 and 2.
BS 5266-1:2011	Emergency lighting. Code of practice for the emergency escape lighting of premises.
BAFE	BAFE approval can also be achieved for the above Design, installation and maintenance schemes.

Smoke Detectors

Smoke Detectors or sensors are sensitive to smoke in the surrounding atmosphere. Photoelectric/optical smoke sensors use a Light Emitting Diode (LED) and a photodiode sensing element. Smoke particles entering the chamber cause the LED light to scatter, thus triggering an alarm status. Ionization smoke detectors use an ionization chamber. Smoke particles entering the chamber attach themselves to the ions impeding the generated current flow and causing the alarm to trigger.

Heat Detectors

Heat detectors detect changes in ambient temperature, and send an alarm state to the control & indicating Equipment panel.
There are two main types:

- **rate of rise detectors** which measure the speed with which the air temperature rises
- **fixed temperature** detectors which react when a set temperature is reached.

Multi-Criteria Detectors

These detectors are a combination of smoke and heat or CO sensors and can be addressable or conventional, the difference being their level of communication to the main fire control panel.

Smoke alarms for the deaf and hard of hearing

There are 2 types of these smoke indicators, usually combined together:

1. **Visual with the use of a beacon**
2. **Tactile in the form of a vibrating pad placed under a pillow.**

Installation of a visual smoke alarm in sleeping accommodation satisfies Part M of the Building Regulations. The certification is available for the Smoke/Heat or CO detectors and/or the individual component parts which make up the kit.

BS EN 5446-3:2005	Fire detection and fire alarm devices for dwellings. Specification for smoke alarm kits for deaf and hard of hearing people

As the only quality mark in this field, gaining the Kitemark will give manufacturers product differentiation and enhanced market reputation. The Kitemark is highly regarded and specified by many local authorities, and will help give manufacturers the competitive advantage with those designing and refurbishing local authority care homes.

BSI's Testing Facilities for Smoke and Heat Detectors

BSI can offer full compliance testing for CE and Kitemark schemes against the required standards for smoke and heat detectors. For multi-criteria detectors combined testing can be undertaken. This can be complemented with full compliance testing under LVD, EMC and

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ATEX Directives. Kitemark certification schemes for these products will automatically qualify against CE marking compliance.

Smoke & Heat Tunnel Capabilities

- **Heat generation up to a class C heat detector**
- **Software aerosol smoke generation**
- **Automated alarm registering**
- **Three-phase for heat generation and single phase for smoke generation**
- **Tests two detectors at any one time**
- **Data logging throughout the test cycle for repeatability**
- **Optical and ionization alarms**
- **Temperature tests from 0°C to 55°C for elevated and depressed temperature cycles**

Smoke Detector standards:

BS EN 54-7: 2001	Fire detection and fire alarm systems. Smoke detectors. Point detectors using scattered light, transmitted light or ionization

Heat Detector standards:

BS EN 54-5: 2001	Fire detection and fire alarm systems. Heat detectors. Point detectors

Sounders

These devices alert the occupants of a building to potential or imminent danger from fire. Sounders vary in size and shape but all must comply with the requirements of the same product standard.

There are two types of Sounder – outdoor or indoor use. The main difference between the two being the level of protection against the ingress of water or foreign bodies by the use of rubber seals, exterior housing design and the severity level of environmental tests applied. The majority of sounders are designed for connection to fire alarm system control panels and are usually rated to operate from a 24V supply.

BSI's Testing Facilities for Sounders

BSI's anechoci and reverberation chambers enables testing of sounders to BS EN 54-3 and satisfies product requirements in domestic/ commercial markets for size, frequency and sound level.

Sounder standard:

BS EN 54-3:2001	The requirements, test methods and performance criteria for fire alarm sounders in a fixed installation – interior and exterior

Visual Alarm Devices

EN 54-23:2010 defines the requirements, test methods and performance of visual alarm devices. There is also a Kitemark certification scheme available for visual alarm devices. Commercial and public buildings are required to meet the requirements of the Disability Discrimination Act (DDA) ensuring that reasonable adjustments are made to accommodate disabled people.

BSI's specialist facilities for testing visual alarm devices at its Hemel Hempstead laboratories can also be used by manufacturers for pre-assessment or developing testing prior to full type approval. These facilities can also be hired by clients to undertake indicative testing for design development in the quest for products to meet requirements of new standards or regulations.

BS EN 54-23:2010	Test methods and performance criteria for visual alarm devices in a fixed installation

Voice Alarms and Loudspeakers

With the introduction of the new European standard for voice alarm control and indicating equipment in 2008, manufacturers of products needing to conform to this standard, now have the opportunity to enhance their product reputation and gain market advantage with Kitemark certification.

Voice Alarm standard:

BS EN 54-16:2008	Voice alarm control and indicating equipment
BS EN 54-24:2008	Components of voice alarm systems and loudspeakers

Manual Call Points (MCP)

Despite advanced technology, still the most reliable form of fire detection is human observation. For this reason fire detection and alarm systems always include the Manual Call Point (MCP), which allows a building occupant to raise the alarm to evacuate the building.

Manual Call Point standard:

BS EN 54-11: 2001	Fire detection and fire alarm systems manual call points

Control & Indicating equipment and power supplies

CIE's are at the heart of a fire alarm system. They constantly monitor the state of the system, they indicate fires, faults or warnings on the system installed in a building and where the problem exists. They can also be used to alert authorities and fire services automatically of a fire.

Power supplies can be used by any application in a fire system that requires a supply, including CIE and other fire detection devices.

Fire alarm control and indicating equipment is the main switchboard of the fire detection and alarm system. An addressable CIE will display a variety of information about a fire including the exact location, while the less sophisticated conventional CIE will only display the general area of fire activation.

System compatibility approval is a growing requirement with European national regulatory authorities to meet their national installation guidelines. There is also a need from specifiers for fire detection and alarm systems equipment installed in commercial premises to be BS EN 54-13 compliant.

Control and Indicating Equipment & Power Supply standards

BS EN 54-2:1997+A1:2006	Fire detection and fire alarm systems. Control & Indicating equipment
BS EN 54-4: 1998	Fire detection and fire alarm systems. Power supply equipment
BS EN 54-13:2005	Determines that components of a fire detection/alarm system are compatible and/or connectable with each other

Fire Extinguishing Panels

Fire Extinguishing Panels or Electrical Automatic Control and Delay Devices (ECD), are used to protect specific high risk or high asset value areas such as computer suites.

Fire Extinguisher Panel standards:

BS EN 12094-1: 2003 Combustible Alarms	Fixed fire fighting systems – components for gas extinguishing systems – requirements and test methods for electrical automatic control and delay devices.

Input/Output Devices

These devices are used to add extra functionality to a fire system, acting as an interface between the fire system and its devices during an alarm condition. For example, these devices can operate magnetic door holders on fire doors, initiate plant shutdown and activate smoke dampers etc.

Input/Output Devices standard:

BS EN 54-18: 2005	Fire detection and fire alarm systems. Input/output devices

Short Circuit Isolators

These are used to protect the detection loop from damage due to short circuit fault conditions. The isolators enable the loop to continue to operate, whilst raising a fault warning at the CIE for an engineer to attend.

Short Circuit Isolator standard:

BS EN 54-17: 2005	Fire detection and fire alarm systems. Short-circuit isolators

Domestic Alarms

With its Smoke & Heat Tunnel capabilities, BSI can offer full compliance testing for CE and Kitemark schemes against the required standards for smoke and heat detectors. This can be further complemented with full compliance testing under LVD, EMC and ATEX Directives.

Alarm Types	Standard	Description
Smoke Alarms	**ISO 12239:**	Specification for fire protection equipment. Self contained smoke alarms
	BS EN 14604: 2005	Self contained smoke alarms devices
Heat Alarms	**BS 5446-2: 2003**	Fire detection and alarm devices for dwellings.
Carbon Monoxide (CO) Alarms	**BS EN 50291-1 & & 2: 2010**	Electrical apparatus for the detection of carbon monoxide in domestic premises
Domestic	**BS EN 50194-1 & 2:2009**	Electrical apparatus for the detection of combustible gases in domestic premises

Fire Extinguishers

As well as compliance testing, BSI offers a complete testing package including:

1. **On-site witness testing**
2. **Integrated multi-assessment visits covering CE (pressure equipment and marine directives) and Kitemark certification.**

BS EN 1866-1 can be tested against the Pressure Equipment Directive and/or the Transportable Pressure Equipment Directive.

Fire Extinguisher standards:

BS EN 3-7: 2004	Portable fire extinguishers. Characteristics, performance requirements and test methods.
BS EN 3-8: 2006	Additional requirements to EN3-7 construction, resistance to pressure and mechanical tests for extinguishers with a maximum allowable pressure equal to/ lower than 30 bar.
BS EN 3-9: 2006	Additional requirements to EN3-7 for pressure resistance of CO2 extinguishers
BS 6165: 2002	Specification for small disposable fire extinguishers of the aerosol type
BS EN 1866-1: 2001	Mobile fire extinguishers. Characteristics, performance and test methods.
BAFE	BAFE approval can be achieved for the above fire extinguishers schemes.

Water Mist and Gas Extinguishing Systems

Water mist systems operate in a similar way to standard sprinkler systems.

There are 3 types of mist systems:

1. **Low pressure: <12.5 bar**
2. **Medium pressure: >12.5 and <35 bar**
3. **High pressure: >35 bar**

BSI can provide Kitemark Certification based on approved water mist systems, but not against system components.

Water Mist System standards:

FM 5560	Water mist systems
BS ISO 15371	Ship and marine (protection of galley deep fat cooking equipment)

Gas Extinguishing Systems

These are complete systems, normally installed in sensitive areas, to protect delicate equipment such as computer rooms. BSI can provide product certification against BS EN 15004-1. This covers the system rather than specific certification of the components themselves

Gas extinguishing standards

BS EN 15004-1	Fixed firefighting systems. Gas extinguishing systems. Design, installation and maintenance

Fire Blankets

There are 2 types of fire blankets:

1. **Industrial for commercial kitchens**
2. **Domestic for home use**

Full compliance testing to BS EN 1869 and BS 7944, plus Kitemark certification on the above scheme.

Fire Blanket standards:

BS EN 1869:1997	Fire blankets
BS 7944: 1999	Type I heavy duty fire blankets and Type 2 heavy duty heat protective blankets

Fire Hoses and Connectors

All fire hoses with Kitemark certification will conform to the standard requirements below:

- **Construction**
- **Dimension**
- **Weight**
- **Burst Pressure**
- **Abrasion Resistance**
- **Adhesion**
- **Moisture Absorption**
- **Flexibility**
- **Heat Ageing**
- **Ozone Resistance**

Fire Hoses and Connectors standards:

BS 6391 -Type 1	Fire hoses - no heat treatment applied liquid absorbable
BS 6391 -Type 2	Fire hoses - external coating against liquid absorption
BS 6391 -Type 3	Fire hoses - external coating against abrasion
BS EN 694: 2001	Fire-fighting hoses. Semi-rigid hoses for fixed systems
BS 336: 1989	Fire Hose Connectors Fire hose couplings and ancillary equipment

Fire Hose Reels

There are 2 main types of reels:

1. **Automatic**
2. **Manual**

As well as BSI Kitemark certification to the above standards, full compliance testing can be done against the Construction Products Directive.

Fire Hose Reel standards:

BS EN 671-1: 2001	Hose reels with semi rigid hose
BS EN 671-2: 2001	Hose systems with lay flat hose

Fire Hydrant Valves

Testing can be undertaken both on-site or at BSI's extensive test facilities. This can be further complemented with full compliance testing against the Construction Products Regulation (CPR) for BS EN 14339 or BS EN 14384.

Fire Hydrant Valve standards:

BS 750: 2006	Specification for underground fire hydrants and surface box frames and covers
BS EN 14339: 2005	Underground fire hydrants
BS EN 14384:2005	Pillar Hydrants
BS 5041-1: 1987	Fire hydrant systems equipment. Specification for landing valves for wet risers
BS 5041-2: 1987	Fire hydrant systems equipment. Specification for landing valves for dry risers
BS 5041-3: 1975	Fire hydrant systems equipment. Specification for inlet breechings for dry riser inlets
BS 5041-4: 1975	Fire hydrant systems equipment. Specification for boxes for landing valves for dry risers
BS 5041-5: 1974	Fire hydrant systems equipment. Specification for boxes for foam inlets and dry riser inlets

Emergency Lighting

Shops, offices and other premises previously excluded from legislation require the installation of additional emergency lighting to satisfy the Emergency Lighting and the New Fire Safety legislation – the Regulatory Reform (Fire Safety) Order 2005. Not only must premises contain emergency lighting and escape route signage, the equipment installed must be the correct type, installed in the correct location and satisfy the requirements of BS 5266. These systems are most commonly linked to Fire Detection and Alarm Systems and, as such, are mentioned in the Regulatory Reform Order.

What is the Emergency Lighting Kitemark Scheme?

This Kitemark scheme inspects the quality and safety of work carried out by businesses engaged in the design and/or installation and/or inspection, test, certification, and/or maintenance of emergency lighting systems.

Emergency Lighting standards:

BS EN 60598-1 :	Luminaires. General requirements and tests
BS EN 60598-2-22:	Luminaires. Particular requirements. Luminaires for emergency lighting
BS EN 61347-2-7:	Lamp control gear. Particular requirements for d.c. supplied electronic ballasts for emergency lighting
BS EN 61347-2-13:	Lamp control gear. Particular requirements for d.c. or a.c. supplied electronic control gear for LED modules
BS EN 50171: 2001	Central power supply systems

Flood Protection

BSI offers Kitemark certification for flood protection equipment to the various parts of PAS 1188. Products covered by this Kitemark scheme include:

- **Removable products for installation as barriers across building apertures, such as doors and airbricks.**
- **Temporary, freestanding barriers which are assembled close to, but not in contact with, buildings.**
- **Property flood skirt systems**

Child Safety Online BSI Kitemark™

The Kitemark for Child Safety Online has been developed through a collaboration between BSI, the Home Office, Ofcom and representatives from ISPs and application developers.

The scheme covers the below for internet access control products, services, tools or other systems:

- Easy installation, configuration and use
- Effective filtering
- Essential features
- Easy updating of software
- Easy to understand instructions
- Consumer communications and support

BSI Kitemark Benefits for Software Developers:

- Proof that the product is of Kitemark quality
- Increased consumer confidence in the product
- Demonstration of the commitment to quality and child safety
- Enhancement of brand image
- License to display the Kitemark logo on filtering products
- Competitive advantage through consumer choice of Kitemark products
- Access to wider markets and tenders

What is BSI Kitemark certification for Child Safety Online?

This is a certification scheme for internet website filtering software produced by software manufacturers. These products can be bought as stand-alone from computer stores or come as part of an operating system or ISP package. The software's performance, reliability and user-friendliness are tested to the scheme's criteria.

As a filtering software manufacturer - why do I need a BSI Kitemark?

With parents' fears rising over the content of websites, the need for reassurance that a product will offer the protection it claims is becoming more critical. BSI Kitemark certification will give your clients reassurance. BSI will test for software ability to block the following categories of websites:

- Adult (sexually explicit) content
- Violence (including weapons and bombs)
- Racist and hate material
- Illegal drug taking and the promotion of illegal drug use
- Criminal skills/activity
- Gambling

Laboratory testing will also check that the product or service:

- Does not unduly block access to suitable internet content
- Configuration settings that are adequately protected so that the product cannot be disabled
- Security settings that are not compromised by any tools provided by the hardware, operating system or browser
- Regain control procedure that is effective should the security system fail.

Electrical

Electrical BSI Kitemark and product certification schemes

BSI currently has the capability to test in the following areas:

- **IT equipment**
- **Lighting technology**
- **Controls and wiring accessories**
- **Electronic components**
- **Environmental**
- **Brown goods**
- **Medical equipment**
- **EMC**

The following is an overview of some of the services offered by BSI for the electrical and electronic business sectors.

1. CE marking as a Notified Body for the Low Voltage Directive. BSI can offer support for CE marking (including Type Testing) for many electrical and electronic products.
2. Environmental testing is also well supported at the Hemel Hempstead site, with IP testing, climatic, temperature and vibration testing all available.
3. BSI Kitemark certification schemes are available for selected products, and reports from other test organizations may be taken into consideration to achieve the mark.
4. BSI can test a products in its laboratory and if the product complies with IEC standard requirements, a CB (Certification Board) report can be issued. This report, together with an accompanying certificate, may then be submitted to another National Certification Board who may issue its own national certification mark through a simplified procedure.
5. BSI is a signatory to the CENELEC Certification Agreement. The CCA scheme offers mutual recognition between European certification bodies for testing and ongoing product/factory surveillance of electrical and electronic products. This agreement is accepted throughout the EC, EFTA and much of Eastern Europe.
6. The ENEC mark for electrical/electronic products is also available from BSI to complement the Kitemark if required or as a stand-alone certification depending on the clients' requirements.

Environmental RoHS Trusted BSI Kitemark™

BSI understands the impact of the RoHS (Restriction of Hazardous Substances) and has developed the RoHS Trusted Kitemark Service which helps clients through the compliance process and demonstrate conformity to the RoHS Directive. It is a two-part scheme that helps clients through the Directive every step of the way.

The RoHS Trusted Kitemark provides:

- **Gap Analysis & RoHS readiness reports**
- **A route to focussed testing based on risk**
- **RoHS awareness & training**
- **A licence to use the RoHS Trusted Kitemark**

MCS Kitemark Certification

What is it about?

The Microgeneration Certification Scheme (MCS) is an internationally recognised quality assurance scheme, supported by the UK's Department of Energy and Climate Change. MCS certifies microgeneration technologies used to produce electricity and heat from renewable sources and provides important reassurance to specifiers and consumers that these products will perform as claimed.

MCS is also frequently an eligibility requirement for the Government's financial incentives, which include the Feed-in Tariff and the Renewable Heat Incentive. For applicable products, MCS will also be linked strongly to the Green Deal.

BSI is an MCS Certification Body for:

- **Heat-led micro combined heat and power (CHP) units (MCS 014)**
- **Electricity-led micro combined heat and power (CHP) units (MCS 015)**
- **Micro and small wind turbines (MCS 006)**
- **Solar thermal panels (MCS 004)**
- **Solid biomass heating appliances (MCS 008)**
- **Heat pumps (MCS 007)**
- **Solar photovoltaic (PV) panels (MCS 005)**

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- Pitched roof kits for PV panels (MCS 012)
- Bespoke building integrated solar PV panels (MCS 017)

As with all BSI schemes, product evaluation can be scheduled to suit the needs of our clients on a project by project basis – including BSI's own test labs, client's labs or our global network of selected partner labs.

Solid Biomass Fired Heating System (MCS 008) standards:

BS EN 13240:2001 +A2:2004	Room heaters fired by solid fuels
BS EN 14785:2006	Residential space heating appliances fired by wood pellets. This can be used for boilers and room heaters inside or out.
BS EN 303-5:1999	Heating boilers : Heating boilers with forced draft burners. Heating boilers for solid fuels - hand and automatically fired, nominal heat output of up to 300 KW. The performance and emission criteria detailed in MCC 008 issue 1.0 clause 7
BS EN 13240:2001 +A2:2004	or when tested in accordance with BS EN 14785:2006 Efficiency and emissions of solid
BS EN 12809:2001 +A1:2004, or BS EN 303-5:1999	(for boilers operating on sealed systems) as applicable efficiency and emissions of solid biomass fired boilers (up to 50KW)

Micro & Small Wind Turbine (MCS 006) standards:

British Wind Energy Association small wind turbine performance and safety standard, 29 Feb 2008 requires:

- **BS EN 61400-12-1:2006**
- **BS EN 61400-11:2003**
- **BS EN 61400-2:2006**

Heat Pump (MCS 007) standards:

BS EN 14511:2007	Air conditioners, liquid chilling packages and heat pumps with electrically driven compressors for space heating and cooling

Solar Photovoltaic Module (MCS 005) standards:

BS EN 61215:2005	Crystalline silicon terrestrial photovoltaic modules
BS EN 61646:1977	Thin film terrestrial photovoltaic modules Note: for roof integrated modules see also MCS 005 clause 5b.

Solar Collector (MCS 004) standards:

BS EN 12975-1:2006	Thermal solar systems and components
BS EN 12976-1:2006	Thermal solar systems and components. Factory made systems. Note: for roof integrated modules see also MCS 004 clause 5b.

Gas and Electrical Appliances evaluation

BSI's test laboratories are equipped and accredited to perform safety, performance and energy consumption tests and measurements on a wide range of gas and electrical products for domestic, commercial and industrial use.

Cooking appliances

Methods of cooking have become much more sophisticated over the years and continue to evolve rapidly. The arrival of induction cooking and pyrolytic self-cleaning has meant that cooking appliances often present new risks and incorporate complex electronic systems, so the need for technical capability and testing expertise has never been higher.

BS EN 30-1:	Domestic cooking appliances burning gas - safety.
BS EN 30-2:	Domestic cooking appliances burning gas – rational use of energy.
BS EN 498:	Barbecues burning gas
BS EN 484:	Hotplates for outdoor use
BS EN 60335-2-6	Safety of household and similar electrical cooking appliances.
BS EN 15181	Energy performance of household gas ovens
BS EN 6035-2-36, 37, 38, 39, 42, 48, 49	Safety of commercial electrical cooking appliances
BS EN 203-1	Gas heated catering equipment – general safety requirements
BS EN 203-2- (Parts 1 to 4)	Gas heated catering equipment – specific requirements
AS 4551:	Australian Standard for gas cooking appliances
AS 4557:	Australian Standard for gas barbecues
AS/NZ 60335-2-6	Australian/New Zealand standard for electrical cooking appliances
AS 4563	Australian standard for gas heated catering equipment
ANSI Z21.1	USA & Canadian standard for household cooking appliances
SANS 1539	South African National Standard for safety of gas appliances
NZS 5262	New Zealand Standard for safety of gas appliances

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Water Heating appliances

BSI has extensive facilities and experience with gas, electric and oil-fired water heating products, including those featuring new technologies (such as small-scale CHP or fuel cells) or those with complex control systems to provide high levels of efficiency or user comfort.

BS EN 297	Type B11 and B11BS gas boilers not exceeding 70 kW
BS EN 483	Type C gas boilers not exceeding 70 kW
BS EN 625	Domestic combination boilers not exceeding 70 kW
BS EN 677	Condensing gas boilers not exceeding 70 kW
BS EN 50465	Fuel cell heating appliances
BS 7977-2	Combined gas fire/back boiler or circulator
BS EN 26	Gas fired instantaneous water heaters
BS EN 89	Gas-fired storage water heaters
BS EN 13203-2	Gas-fired water heaters – assessment of energy consumption
BS EN 60335-2-21	Household electrical storage water heaters
BS EN 60335-2-35	Household electrical instantaneous water heaters
BS EN 304	Heating boilers with atomizing oil burners
BS EN 15034	Condensing heating boilers for fuel oil
BS EN 15035	Oil-fired room sealed units up to 70kW
BS EN 303	Heating boilers with forced draught gas burners.
BS EN 676	Automatic forced draught burners
BS EN 656	Type B boilers exceeding 70 kW, but not exceeding 300 kW
BS EN 13836	Type B boilers exceeding 300 kW, but not exceeding 1 000 kW
BS EN 15417	Condensing boilers greater than 70 kW but not exceeding 1000 kW
AS 4560	Australian standard for pool heaters, heating boilers and combi boilers
AS 4552	Australian standard for water heaters

Space Heating & Air-conditioning appliances

BSI evaluates a wide range of household and commercial gas-fired and electric space heating and cooling appliances.

BS EN 509	Decorative fuel-effect gas appliances
BS EN 613	Independent gas-fired convection heaters
BS EN 1266	Independent fanned gas-fired convection heaters

BS 7977-1	Radiant/Convector gas fires
BS EN 13278	Open-fronted gas-fired space heaters
BS EN 14829	Gas-fired flueless space heaters
BS EN 449	Flueless LPG space heaters
BS EN 778	Gas-fired domestic air heaters without fan
BS EN 1319	Gas-fired domestic fan-assisted air heaters
BS 1196	Condensing gas-fired air heaters
BS EN 60335-2-30	Household electrical room heaters
BS EN 60335-2-40	Household electrical heat pumps, air-conditioning units etc
BS 5990	Direct gas-fired convection air heaters up to 2MW.
BS 5991	Indirect gas-fired convection air heaters up to 2MW
BS EN 525	Direct fired forced convection air heaters up to 300kW
BS EN 621	Forced convection gas-fired air heaters up to 300kW
BS EN 1020	Fan-assisted gas-fired air heaters up to 300kW
BS EN 12669	Gas-fired agricultural air heaters
BS EN 461	LPG non-domestic space heaters up to 10kW
BS EN 1596	Mobile and portable non-domestic LPG air heaters

BS EN 416-1	Gas-fired overhead radiant tubes – safety
BS EN 416-2	Gas-fired overhead radiant tubes – rational use of energy
BS EN 419-1	Gas-fired overhead luminous heaters– safety
BS EN 419-2	Gas-fired overhead luminous heaters – rational use of energy
AS 4553	Australian standard for gas-fired room heating appliances

Leisure appliances

BSI performs safety testing on a range of gas, solid fuel and electric products intended for use in the leisure industry, such as:

- **Gas barbecues and patio heaters**
- **Outdoor heating and lighting appliances**
- **Electric and solid fuel barbecues**
- **Equipment for use in caravans and recreational vehicles**
- **Vapour-pressure camping equipment**

BS EN 521	Portable vapour pressure gas appliances
BS EN 498	LPG gas barbecues for outdoor use

BS EN 484	Independent LPG hotplates for outdoor use
BS EN 15033	LPG storage water heaters for vehicles and boats
BS EN 624	LPG space heaters for vehicles and boats
BS EN 14543	Flueless gas-fired patio heaters
BS EN 1860-1	Charcoal barbecues
BS EN 60335-2-78	Household electrical barbecues for outdoor use
AS 4557	Australian standard for gas-fired barbecues
AS 2658	Australian standard for mobile and portable LPG appliances
SANS 1539	South African National Standard for safety of gas appliances
NZS 5262	New Zealand Standard for safety of gas appliances

Other appliances

In addition to all the major categories below, BSI can frequently adapt its extensive test equipment to new types of product where needed.

We have facilities to evaluate:

- **Gas and electrical refrigeration equipment;**
- **Household washing machines**
- **Household and commercial gas and electric tumble dryers**
- **Household and commercial dishwashing machines**
- **Pumps**
- **Gas-proving and extraction systems for commercial kitchens and schools**

BS EN 1458-1	Household gas-fired tumble dryers - safety
BS EN 732	LPG gas absorption refrigerators
BS EN 12752-1	Commercial gas-fired tumble dryers - safety
BS EN 60335-2-7	Household and similar electrical washing machines
BS EN 60335-2-11	Household and similar electrical tumble dryers
BS EN 60335-2-15	Household appliances for heating liquids
BS EN 62301	Measurement of standby power consumption
AS 4555	Australian standard for gas-fired refrigerators
AS 4554	Australian standard for gas-fired tumble dryers

Controls and Ancillary items

All appliances are only as safe as the control and safety devices used within them. At the choice of our client, control devices may be tested as a component part of an appliance, or the control device can be independently tested prior to being supplied to OEMs for inclusion with an appliance.

BSI has particular expertise in the field safety-related electronic control systems, and BSI experts have provided training and support to blue-chip companies and overseas certification bodies in the EU, Japan, USA, Australia, Korea and China. This expertise, coupled with our customer-friendly approach, is used to reduce time to market for our clients.

In addition to our electronic control expertise, we perform a range of testing services on most gas and electrical components intended for use in household and commercial gas and electrical appliances.

BS EN 298	Electronic burner control systems for gas and oil appliances
BS EN 12067-2	Electronic gas/air ratio controls
BS EN 607030-1	Controls for household electrical appliances – General
BS EN 607030-2-9	Temperature sensing controls for household electrical appliances
BS EN 14459	Electronic control systems used in gas appliances
AS 4625	Australian standard for electronic flame safeguards
ANSI Z21.20	USA standard for automatic gas ignition systems
ISO 23550	International standard - Safety devices for gas burners
ISO 23552-1	International standard – Fuel/Air ratio controls for gas/oil appliances
BS EN 331	Manually operated ball valves
BS 1552	Taper plug valves
BS EN 161	Automatic shut-off valves for gas appliances
BS EN 88	Pressure regulators for gas appliances
BS EN 126	Multifunctional controls for gas appliances
BS EN 125	Flame supervision devices for gas appliances
BS 6047 Part 1	Flame supervision devices for gas appliances
BS EN 1106	Gas taps for gas appliances
BS EN 13611	Safety and control devices intended for use in gas appliances
BS EN 257	Gas-carrying thermostats
BS EN 12067-1	Pneumatic gas/air ratio controls for use in gas appliances
BS EN 12864	LPG pressure regulators
AS 4617	Australian standard for manual shut-off valves
AS 4629	Australian standard for automatic shut-off valves

BS EN 1856	Metal chimneys
BS EN 14471	Plastic chimneys for gas appliances
BS EN 13502	Masonry flue blocks and terminals
BS EN 15069	Safety gas connections for hose assemblies
BS EN 14800	Corrugated metal hose assemblies
BS 669-1 & 2	Flexible hoses, end fittings and sockets for gas appliances
BS EN 15266	Corrugated stainless steel flexible tubing used for gas supply

Services/Other

Vehicle Damage Repair Kitemark - PAS 125

Automotive bodyshops can now carry the BSI Kitemark for vehicle damage repair. The Vehicle Damage Repair BSI Kitemark is based on a technical specification (PAS 125) dealing with processes and procedures directly related to the repair of accident damaged vehicles.

BSI Kitemark Scheme

This Kitemark was developed by BSI and is a UKAS-accredited PAS 125. Run by BSI, the Kitemark scheme is completely independent and impartial. Any vehicle damage repair business – large or small, independent or franchise operating from fixed premises or mobile facilities can apply for a BSI Kitemark Licence.

A BSI Kitemark License for vehicle damage repair can be awarded in any of the three repair types:

1. **Category 1** – The repair of dents, paint scratches and gouges or trim such that the damaged area can be returned to its pre-damaged condition without the need for replacement parts. This category excludes road wheels.
2. **Category 2** - The repair of dents, paint scratches and gouges or trim such that the damaged area can be returned to its pre-damaged condition including the removal, re-fitting or replacement of "auto glazing units and bolt on" parts, examples of which includes, but is not restricted to, bonnets, doors, road wheels, wings, tailgates, bumpers, bumper reinforcing bar. Excludes replacement of chassis, steering and suspension parts.
3. **Category 3** - The repair of dents, paint scratches and gouges or trim such that the damaged area can be returned to its pre-damaged condition including the removal, re-fitting or replacement of "auto glazing units and bolt on" parts.

Benefits of the BSI Kitemark

- **More work and business security** – so that clients retain and grow their business.
- **Reduces costs** and improve profit.
- **Reduces risk** and enhances corporate responsibility.
- **Management** – the management of a body-shop business should be able to view the adoption of PAS 125 as a business investment, not just as a required certification issue.
- **Commitment** – the Kitemark allows body-shops to prove that they are serious about safety
- **Powerful marketing tool** – Kitemark is recognized by 82% of people in the UK. 69% of them would pay more for a Kitemark product

Client Benefits

1. **Trust** – that the vehicle will be repaired to the highest standards
2. **Consistency** – in the quality of repair work
3. **Reassurance** – that their vehicle has been repaired safely
4. **Lifestyle** – the Kitemark means that safe repairs will be carried out, protecting the lives of consumers.

Energy Reduction Verification BSI Kitemark

The ERV provides organizations with a means to prove their reductions in CO2 emissions resulting from energy use. The Kitemark for ERV is based on the implementation of key elements of an energy management system using ISO 50001 and BSI will independently verify the management and measurement of the system, as well as verify the reduction in CO2 emissions resulting from energy use. A company achieving a reduction of at least 2.5% per annum calculated from three years worth of data will be awarded the Kitemark.

In addition to satisfying internal stakeholders, Kitemark certification will enable those organizations required to participate in the Government's Carbon Reduction Energy Efficiency Scheme to benefit from the Early Action Metric and a better position on the Performance League Table.

Key features and benefits of the scheme include:

- The Kitemark ERV scheme focuses on CO2 emissions
- The scheme is based on ISO 50001
- The ERV Kitemark scheme will gives a good basis for those organizations that have not yet implemented an energy/ environmental management system
- For those organizations that already have an environmental management system certified to ISO 14001, the two standards are very similar - making it an easy transition to implement the requirements of ISO 50001 and meet these elements of the Kitemark scheme.

Furniture Removal Services BSI Kitemark

The European standards for furniture removal services, BS EN 12522 Parts 1 and 2 allows clients to identify and compare the services offered by a removal company. The Kitemark displayed by a removals company demonstrates their ongoing commitment to service quality, giving confidence to potential clients that furniture removal services will be carried out in a professional manner.

BS EN 12522-1 & 2 Furniture removal activities – Furniture removal for private individuals

The standards define requirements for:

- **Initial contact and preliminary information**
- **The furniture removal service specification**
- **Contractual and statutory documents**
- **Provision of the furniture removal service**
- **Staff competences and training**
- **After sales service i.e. post-contract client feedback**
- **Control of service quality**

The requirements include the professionalism of personnel, suitability of transport material and packaging equipment and compensation procedures and formalities in the event of claims for loss or damage. In addition, BSI will carry out independent evaluation of the premises, processes and service delivery to establish that all requirements are met. The assessments include feedback from clients and the measures taken to resolve problems should they arise. Periodic inspection visits to premises and mystery shopping techniques also ensure that service quality is being maintained on an on-going basis.

In addition having a Kitemark means that:

- Staff should be punctual, courteous and honest in their dealings with clients
- Detailed written quotations will be provided, with terms of payment
- Suitable packaging materials, equipment and vehicles will be used
- Assistance with compensation procedures will be made available in the event of claims for loss or damage.

Section 5
Direct Testing

What products do BSI test?

Products are tested against appropriate standards in one of the BSI laboratories in Hemel Hempstead or Loughborough, on site where witness testing is conducted or by a fully accredited sub-contract or BSI Associated Laboratory Scheme Laboratory.

The extent of the testing/assessment varies greatly depending upon the product or process being assessed and therefore it is not possible to provide detailed information in this document. It is recommended that BSI sales staff visit the laboratories to witness some of the tests being performed as this will provide you with a wealth of information supporting your ability to promote the BSI services to your clients.

Locations

Hemel Hempstead

- Construction products
- Fire detection
- Materials
- Fire suppression
- PPE
- Environmental testing

Loughborough

- Gas products
- Electrical products

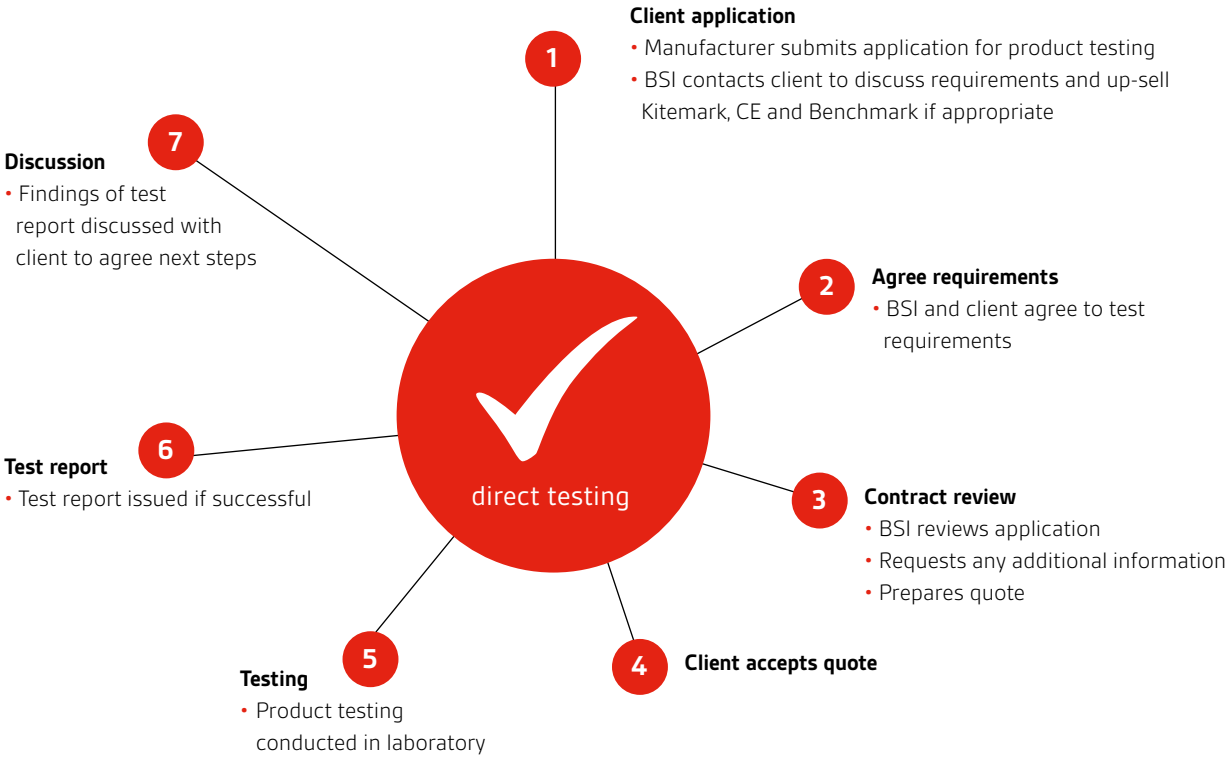
The Associate Laboratory Programme

The Associate Laboratory Programme consists of a network of some of the best test laboratories around the world who have been rigorously audited by BSI to ensure that they meet the highest standards possible.

Our Associate Laboratory Programme (ALP) is a partnership which enables our clients to benefit from our partners' excellence in product testing in addition to BSI' expertise and experience in product certification. Our ALP members share the same commitment to excellence as BSI and through our ALP network we can support you throughout the product testing and certification journey, helping to bring robust and compliant products to market.

Once a laboratory has successfully passed the criteria specified by BSI, they will need to pass an annual inspection to maintain their status as an ALP member. All ALP members are issued with individually numbered certificates issued by BSI, which are different and separate to our Assurance Mark. In addition members receive an ALP plaque which can be displayed at their premises. Members of the programme will also be able to use the prestigious new BSI ALP member logo on their website, in their publicity and collateral. When BSI works on a project with an ALP partner, testing will be conducted at the ALP member's site whilst the certification process will continue to be conducted by BSI.

The direct testing process



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